Usenet Newsgroup Archive: rec.radio.amateur.space

1996

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Date span: 1996-01-01 through 1996-12-31

Source text: rec.radio.amateur.space.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 2,877

Message records with no readable body available in the source text: 1

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Amsat Phase 3D

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4c7en9$ibo@news.mcn.net>
Source record: 23268
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Thanks to all who donated time and money to the Amsat Phase 3d project in 1995. Time before launch is getting short, and donations are still needed. Do what you can in 1996 to help us get the Phase 3D satellite off the ground.

Thanks 73, & Happy new year!

kb7adl@amsat.org

2. About HAMCPACE-DIGEST

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: ea4abb@linux.ea4abb.ampr.ORG
Message-ID: <Pine.LNX.3.91.960101110458.1164A-100000@linux.ea4abb.ampr.org>
Source record: 23269

I am subscribed to ham-space digest on ucsd.edu list server.

Is it possible to receive this mailing-list on non digest format ??

Any comments are welcome..

73 Roberto

e-mail: ea4abb@ea4rct.clubs.etsit.upm.es

3. Re: Best antennas for rs-15 ???/Rs-10 gives up.!!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: n7tcf@primenet.com
Message-ID: <4c93bq$c72@nnrp1.news.primenet.com>
Source record: 23270

I have used both beams and 5/8 wave verticals for RS-10. For the beginner
and budget-limited, verticals work well. They have a higher noise-level and won't
DX as well. But while learning to handle doppler you don't want to divert brain-power
to moving the beam also. Beams and rotors cost a lot more also. I worked RS-10 for
1-1/2 years with verticals. Now I have beams, both AZ & EL types, and find the
plain old horizontal beam works fine without the need for a third hand to control the
rotors.

Jim N7TCF
n7tcf@primenet.com

In <4bhqon$jue@news-e1a.megaweb.com>, BKille@gnn.com (Bruce Kille) writes:
>
>In article <4bgig1$kn5@sisko.dnaco.net> Johnny Miller wrote:
>>Date: Sat, 23 Dec 1995 09:34:59 GMT
>>From: millerj@dnaco.net (Johnny Miller)
>>Newsgroups: rec.radio.amateur.space
>>Subject: Best antennas for rs-15 ???/Rs-10 gives up.!!
>>
>>Does any one have any comments or ideas on the best Tx and Rx
>>antennas
>>for use with on Rs-15. Also we have noticed that Rs10 will stop Tx
>>about half way through a pass. It acts just like some one turned
>>it
>>OFF. Please any ideas.
>>TIA
>>
>>
>>Mr. Satellite
>>RS-10/11/RS-15
>>N8RTW
>>Johnny Miller
>>millerj@dnaco.net
>>Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
>>Dayton, Ohio area 145.490(-) = Drake Machine
>>
>
>Of course the best setup would be some sort of AZ/EL array...but
>not many of us have that, especally for an HF downlink. I have
>worked RS-10, RS-15, MIR, and several Shuttle missions using an
>eleven element beam for 2meters and a two element beam for HF,
>both mounted on the same mast and up only 25 ft. My point being
>that it can be done with a modist station. I have noticed many
>times on both the sats and shuttle that the apparent orentation
>of their antennas makes a BIG difference and I have lost them

>after only half the pass many times. So, if you can use beam
>antennas and have access to a sat. tracking program, that is the
>best way to go...but I have heard the RS birds on my dipole ok.
>Just stay with it and keep trying...good luck OM.
>
>73, Bruce WA4JAV
>
>

4. Satracker 4 Satellite Antenna Control device

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: durham@lobby.ti.com
Message-ID: <4c94e2$2g7@superb.csc.ti.com>
Source record: 23271

This system has been recommended as an optimum solution
to satellite antenna aiming and automatic transceiver tuning
for doppler compensation. There are no ads or descriptions in
any of the recent Ham magazines. Does anyone know if cables for
interface to the G-5400B rotors and the FT736 transceiver are
included with the package? The system is described as a stand
alone box that does not require computer interface. Does this
mean that the Keps have to be loaded somehow by hand? Could the
box be interfaced to the computer to load the Keps file?

Any information about this or similar devices would be
useful. I'm running out of hands to tune the radio, aim antennas,
hold my beer bottle, and write down call signs.

Ken K5MBV mbv@ti.com

5. DL0ART/am - launch cancelled

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: Oliver Welp <welp@uni-muenster.de>
Message-ID: <4c9ajd$1522@majestix.uni-muenster.de>
Source record: 23272

> DL0ART/am - The Nienberge Amateur Radio Group (Germany) plans
> another balloon launch on monday, 01-01-96.

I forgot the words "weather permitting" - and that is not the case.
The balloon has to stay below the clouds, and on 01-01-96 that would
mean below 1,000 ft. Of course, that doesn't make too much sense, so
the launch will be postponed. All the equipment is ready for launch,
so we hope that will be able to start on

sunday, 01-07-96

We'll decide about that friday night, and if we do it, another
announcement will follow.

Best 73,
Oliver

[Oliver Welp, DL9QJ, N3NSF
Internet: n3nsf@amsat.org or welp@uni-muenster.de
PR: DL9QJ@DB0EA.#NRW.DEU.EU
phone/fax: +49-2533-7312]

6. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: js@ibbs.av.org
Message-ID: <DKHrzy.2AE@ibbs.av.org>
Source record: 23273

Keith Knipschild - LI ,N.Y (Keith@unix.asb.com) wrote:

: >Oh, BTW. What happend to NASA Select? The only thing that has been on is
: >"NASA WASH" with a color pattern. Did even NASA get laid off? If so what
: >about the people that are military that happen to be assigned to NASA duty?
: >I ask since there has been no lack of work for me. We have continued as
: >normal. Humm..
: >--
: >Jeff Stillinger - KB6IBB js@ibbs.av.org

: Can you say GOVERNMENT SHUTDOWN ????

<snip>

Yha, the reason I asked was we have not had any shutdown at all. All is 100%
normal here at Edwards.

--

Jeff Stillinger - KB6IBB js@ibbs.av.org
PSC Box 3429 js@red-eft.la.ca.us
Edwards AFB, CA 93524 +1 805 258 7303 8N1
Flight Test Center, crashing aircraft so you don't have too.
----

7. Re: EVA's on STS-72

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4c8aun$qc6@usenet1.interramp.com>
Source record: 23274
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Space Shuttle EVA operations are conducted on frequency 279.0 MHz. These are the crews one-watt space suit communications channel. And yes, people have heard them in the past during spacewalks.

--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

8. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: Richard Rohrer <rrohrer@mail.bcpl.lib.md.us>
Message-ID: <Pine.SOL.3.91.960101143537.15884A-100000@mail>
Source record: 23275

Jeff,

I believe that STS-72 is going first or second week of Jan. I can double check when I get to work on Tuesday.

As for NASA Select, I believe it probably is shutdown do to gov work stopage. I don't know what NASA center it orginates from.

I work for one of the contractors at Goddard and we are still working, or at least till Jan 15, 1996 when our funding runs out.

Dick Rohrer, KC3EF

On Sun, 31 Dec 1995,
Jeff Stillinger wrote:

> I signed up on a mailing list out of San Diego, CA. The elements are very
> good and up to date. Needless to say, I am impressed. However, the set
> sent before a launch has no launch date. :-) So when is STS-72 going to
> launch?
>
> Oh, BTW. What happend to NASA Select? The only thing that has been on is
> "NASA WASH" with a color pattern. Did even NASA get laid off? If so what
> about the people that are military that happen to be assigned to NASA duty?
> I ask since there has been no lack of work for me. We have continued as
> normal. Humm..
>
> --
> --
> Jeff Stillinger - KB6IBB js@ibbs.av.org
> PSC Box 3429 js@red-eft.la.ca.us
> Edwards AFB, CA 93524 +1 805 258 7303 8N1
> Flight Test Center, crashing aircraft so you don't have too.
> --
>
>

9. Re: Hubble Downlink

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4c8afg$qc6@usenet1.interramp.com>
Source record: 23276

As you can see from the first two replies your not going to be able to decode Hubble's data. But if your still interested in the frequencies they are:

Downlink: 2255.5 MHz or 2287.5 MHz (plus or minus 10 MHz).

But as the others have said, this link goes to the Tracking and Data Relay Satellite (TDRS) and then to the ground. So a direct signal from Hubble is not possible but in emergency conditions.

--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

10. Re: MIR Christmas Greetings audio files

Newsgroup: rec.radio.amateur.space
Date: 1996-01-01 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4c89v9$qc6@usenet1.interramp.com>
Source record: 23277

I heard the Christmas message around 9 p.m. eastern time Christmas Eve
Dec 24th at my QTH.

--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

11. Re: STS-74 heard/worked lists

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4ca4n7$4ga@paperboy.ids.net>
Source record: 23278

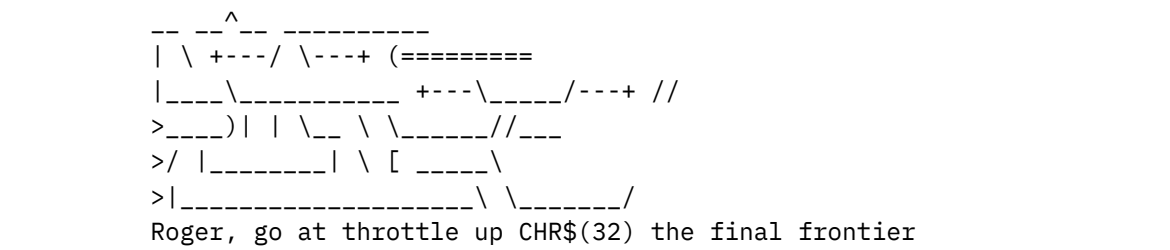
In article <DK86wz.75x@scn.org> SCN User, bd703@scn.org writes:
>Does anyone have the heard/worked lists for STS-74?

not for quite some time!

With a voice-only SAREX mission somebody has to manually transcribe each of the audio tapes, listening for call signs and entering them in to a database.

With a couple of extremely active hams on board (Bill McArthur KC5ACR, Chris Hadfield VA3OOG, and Ken Cameron KB5AWP) there were certainly *lots* of voice contacts made, and it's going to take a while for some volunteer to transcribe those tapes.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

12. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4ca4ir$4ga@paperboy.ids.net>
Source record: 23279

In article <DKH1F1.7B3@ibbs.av.org> Jeff Stillinger, js@ibbs.av.org writes:
>So when is STS-72 going to
>launch?

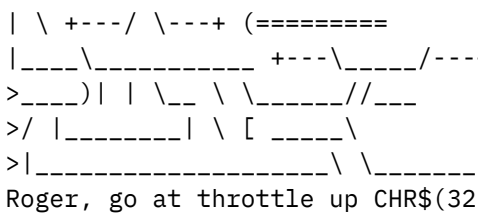
January 11th 4:18 am Eastern Time - ought to be a nice night launch. Since this mission is a grounds-up rendezvous the window moves forward by about 30 minutes each day to match the plane of SFU's orbit. (SFU = Space Flyer Unit, the Japanese freeflyer which will be returned in the shuttle's cargo bay).

>Oh, BTW. What happend to NASA Select?

NASA TV is shutdown due to the government furlough. Only critical government functions have been permitted during the furlough - which fortunately includes preparing STS-72 for launch and the downstream missions. If you look on Spacenet 2 Transponder 3 (channel 5) you can occasionally see some engineering video, or a scrambled signal.

Last week's launch of a Delta with the X-Ray Timing Explorer spacecraft was the only NASA launch in a *long* time not to be carried live via satellite. There were about three NASA public affairs working that day - in comparison with the dozen or so for a typical launch.

I checked and the contractor personnel who operate the satellite uplink facilities would have been available - even though it was during the end-of-year holidays, however the decision was made that the launch of an uncrewed rocket did not justify the satellite uplink as a critical government function.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

13. New Home page For SAREX and Space hams

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: swt@lava.net
Message-ID: <4ca91o$5rn@malasada.lava.net>
Source record: 23280

Aloha,

I have developed a new home page for Satellite folks, and space science folks.
It has things like equipment sites, and othe rham pages that are unique.

Stop in and visit !

http://www.lava.net/~swt/index.html

Steve W. Teegarden
WH6IC
swt@lava.net

14. School info for Spartan Packet Radio Experiment

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4cccdh$a0p@hertz.isr.umd.edu>
Source record: 23281
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,misc.education,rec.radio.amateur.digital.misc,sci.space.shuttle

For more information on SPRE, go to World Wide Web URL
http://w3eax.umd.edu/spre.html or the SPRE ftp site w3eax.umd.edu in /pub/spre

STS-72 should launch Jan. 10, 1996!!!

SPARTAN PACKET RADIO EXPERIMENT (SPRE)

Setup Information for Participating School Ground Stations

By: Ken McCaughey (N3FZX)
File: school01.txt
Date: 20-DEC-95

1.0 INTRODUCTION

The Spartan Packet Radio Experiment (SPRE) is open to amateur radio operators and schools who want to participate. This document will guide you in your preparations for the SPRE mission. Included are some guidelines that will help you to determine if you can hear SPRE and what level of equipment you will need. Please read this document thoroughly. If you have any additional questions please contact the SPRE Project (see Section 10.0).

2.0 MISSION PROFILE

SPRE is one of four experiments on-board NASA Goddard's Spartan OAST-Flyer spacecraft, also known as SP-206. The Spartan spacecraft is one of the primary payloads on the STS-72 shuttle mission slated to launch January 11, 1996.

SPRE is designed to relay ground station positions and transmit telemetry containing the GPS location of the spacecraft and housekeeping data. The GPS data is generated by another Spartan experiment and sent to SPRE via a serial connection. Special software called APRtrak (tm) will be used at SPRE ground stations to provide a mechanism to plot the positions of stations and objects world-wide using SPRE transmissions. Ground stations can transmit their locations to SPRE, and if heard, SPRE will relay GPS information back to Earth. All ground stations within range of SPRE will see the relayed station locations plotted on a map. APRtrak system can plot and track both fixed and mobile ground stations. The APRtrak software will decode and display SPRE housekeeping telemetry including temperatures, voltages, and system status, along with the geographical positions.

SPRE can be used as an educational tool in many classes including math, science, and geography. The APRtrak software with its colorful graphics and maps is available on Internet for installation on IBM compatible computers. Even if a school is not in session during a fly-over, a simple packet radio station can be set up to listen to the SPRE telemetry and record the data for later use.

The spacecraft will be deployed by the robot arm 3 days and 2 hours (3/02:00:00) Mission Elapsed Time (MET). After deployment the shuttle will distance itself away from Spartan (up to 100 miles). The battery powered spacecraft will perform its mission following a preprogrammed routine.

SPRE operations will start 2 hours and 41 minutes after the deployment and continue for approximately 46 hours. During the mission the attitude of the spacecraft will be changing. The spacecraft will make about 33 orbits before retrieval.

Near the End-of-Mission (EOM) the shuttle will approach the spacecraft for pickup. At approximately 5/00:30:00 MET the spacecraft will be grappled by the robot arm and returned to its berth in the cargo bay, thus ending the Spartan 206 mission.

Mission Summary

Mission: STS-72, Space Shuttle Endeavour (OV-105)
Launch: January 11, 1996 at 09:18 UTC (60 minute launch window)
Orbit: 28.45 Degrees Inclination
Landing: January 20, 1996 at 04:54 UTC at KSC

Spartan Deploy: ~3/02:23:00 MET
SPRE mission: Starting 2 hours 40 minutes after Spartan deployment operational for approximately 46 hours
Operating Mode: FM, AFSK 1200 baud packet radio
Frequencies: 145.550 MHz Simplex
Callsign: W3EAX, unproto mode only, do not connect!
Retrieval: ~5/00:30:00 MET

3.0 BASIC SATELLITE COMMUNICATIONS TUTORIAL

This short tutorial is written with SPRE communications in mind. It does include some specific information regarding the Spartan orbit.

In order to communicate with a satellite, its antennas need to be within line of sight of the ground station antennas. When a satellite is in "line-of-sight", you can not necessarily see it. It only means there is an unobstructed path between the two points. Satellites can only be seen visually if they are passing over your location around dusk or dawn.

At an altitude of 165 miles, the Spartan spacecraft has a circular "foot print" that is approximately 1000 miles in radius with the spacecraft at the center. The foot print is the area of the Earth that is in line-of-

sight of the spacecraft. This circular foot print moves with the spacecraft. A ground station that is within the foot print is within line-of-sight of the spacecraft. Where you are within the foot print will determine the angle, or elevation, of the spacecraft above the horizon. During a pass, the spacecraft will rise and set like the Sun and Moon, only much faster.

The quality of a pass is determined by the maximum elevation during a pass. The higher the elevation, the better and longer the pass. The general rule of thumb is that a satellite needs to be at least 5 degrees above the horizon to be heard. However, this will vary depending on the station setup and local topography. A good pass will have an elevation greater than 20 degrees. Passes can last from as little as 10 seconds to as long as 10 minutes. Most satellite tracking software packages can predict passes accurately to within seconds if the orbital elements are up-to-date.

The Spartan spacecraft will be in a 28 degree inclination orbit. This means the orbit is tilted by 28 degrees with respect to the Earth's equator. Therefore the spacecraft will only be directly over head as far North or South as 28 degrees. However, since the spacecraft is 165 miles high and because of the size of the foot print, it is within radio range of stations much farther North or South.

As mentioned in the beginning of this section, the antennas of both the spacecraft and the ground station need to be in line-of-sight. This is not always the case during a satellite pass. This is because the antennas on most satellites have a degree of directionality to them. During a pass the antennas might not be pointing at the ground station antennas, or even the Earth. The orientation of a spacecraft is referred to as the attitude. In the case of SPRE, the antenna system was designed to be as independent of the spacecraft attitude as possible. However, there are some spacecraft attitudes that will result in a degraded signal. During the Spartan mission the attitude will be changing due to the other experiments.

4.0 CAN OUR SCHOOL DO THIS???

The following are some things to consider if your school wants to participate with SPRE. There are different levels of participation to be considered as well.

4.1 SPRE Passes

Before setting up any equipment it is important to determine if SPRE will fly within range of your location. If it does, the quality of the passes needs to be considered. To make this assessment, first look at a map and determine the latitude (degrees North or South of the equator) in which your school is located.

If your latitude is greater than 43 degrees, your chances are hearing or relaying through SPRE are zero.

If your latitude is between 40 and 43 40 degrees, your chances are hearing SPRE are very poor. Your chances of relaying a signal through SPRE are about zero.

If your latitude is between 35 and 40 degrees, your chances are hearing SPRE are very good. Your chances of relaying a signal through SPRE are poor without a well equipped HAM radio satellite station.

If your latitude is less than 35 degrees your chances of hearing SPRE are excellent. Your chances of relaying a signal through SPRE are good with modest equipment if there is not much competition on the uplink.

Latitude	Hearing SPRE	Relaying Through SPRE
> 43	No Chance!	No Chance!
40 - 43	Poor	Very Poor
35 - 40	Very Good	Poor
< 35	Excellent	Good

4.2 Levels of Participation

There are two levels of SPRE participation. These levels have varying complexity, interaction, and equipment requirements.

Full participation would include a setup with APRtrak and an amateur radio station capable of transmitting through SPRE. This implies that the station is at a favorable latitude (see above). The station would be operated by students with the oversight of a licensed amateur radio operator during a pass. A sophisticated station with big antennas and a high powered amplifier are not necessarily required for full participation.

The next level of participation centers around receiving data instead of the ability to transmit to SPRE. This mode of operation requires the least complex equipment and less effort. This may be the mode of choice for schools that do not have the time or resources to put together a complete station or if school is closed during a pass. APRtrak along with a TNC and almost any VHF (2 meter band) radio will work, even a hand-held radio. The antenna can be as simple quarter wave vertical. The more favorable the Latitude the simpler the equipment to receive data. The station can be operated during a pass or APRtrak can be setup to just listen and collect data. All data can be saved to the computer hard disk. All data saved to disk can be replayed on the screen!

4.3 Amateur Radio Operators

In order to get started your will need at least one licensed amateur radio operator. If there are none with in the student body or faculty then please contact Peter Budnik from the Amateur Radio Relay League (ARRL).

He has information on local amateur radio clubs, operators, and volunteer instructors in your area who may be able to assist you.

Peter Budnik
ARRL
225 Main Street
Newington, CT 06111

e-mail: pbudnik@arrl.org

4.4 Equipment and Software

The last major item to consider is the availability of the equipment. It is our suggestion to setup a station in the classroom. See the section below for details of what is equipment required. The equipment needs to be acquired, setup, and tested. This requires a certain level of organization, patience, and technical knowledge. This is where a knowledgeable amateur radio operator will be able to increase your chances or success. Unfortunately, the SPRE Project is not able to provide detailed technical support except with regards to APRtrak.

The needed software is available on the Internet. It is not too complicated, but may require some playing around to get familiar with the programs.

4.5 Successful SPRE Participation

As mentioned above it will take some coordination and planning to get setup for SPRE. It is suggested that, if possible, schools get together and combine efforts. This can also result in more student participation making it a more successful event.

5.0 GROUND STATION SETUP

This section covers the equipment needed to participate with SPRE. It has been the goal of the SPRE Project to make it as accessible as possible to the amateur radio and educational community. We have tried to make the ground station requirements as simple as possible. In general it does not take much power to communicate with SPRE. Since the SPRE foot print is so large, it is potentially within range of dozens or even hundreds of ground stations. All these signals will be competing with each other at the SPRE receiver. If there are a lot of stations transmitting at the same time, then usually the biggest signal wins. However, if a low power transmitter is sending at the right time it can get through just as easily. Always try to use the lowest amount of power needed to communicate with SPRE.

5.1 Hardware

IBM compatible PC:

Recommended configuration Minimum Configuration

386, 486, or Pentium processor XT
VGA color monitor CGA monochrome monitor
640KB RAM 640KB RAM
4MB free hard disk space 3MB free hard disk space
3.5" floppy disk drive 3.5" floppy disk drive
RS-232 Serial Port RS-232 Serial Port

Simple packet radio station setup:

- Licensed Amateur Radio Operator
- Terminal Node Controller (TNC)
~ TAPR-2 compatible
~ 1200 BAUD AFSK
- VHF Radio (amplifier recommended if transmitting to SPRE)
- VHF Antenna (beam recommended if transmitting to SPRE)

Note: If you have an amplifier and a beam antenna, it is more likely that you will be successful in communicating with SPRE. It is NOT, however, recommended that you purchase this equipment to attempt communications. The length and scope of the SPRE experiment is too narrow to justify a major expenditure.

5.2 Software

APRtrak:

APRtrak Version 0.5 is the program that is required to work with SPRE. APRtrak is similar to another program called APRS. However, APRtrak contains SPRE specific implementations for decoding the spacecraft position and telemetry. It is important to get familiar with APRtrak before the SPRE mission starts. This will increase for success rate. APRtrak includes documentation on how to make local maps, how to run simulations, and general information on GPS tracking.

APRtrak is available on the Internet. Below are just two of the many places on the net where APRtrak can be found:

W3EAX, University of Maryland Amateur Radio Association:
URL ftp://w3eax.umd.edu/pub/spre/aprtrak/aprtrak.zip

AMSAT:
URL ftp://ftp.amsat.org/amsat/software/PC/tracking/aprtrak.zip

Unfortunately, APRtrak for Apple and Macintosh computers are NOT supported.

Satellite Tracking:

APRtrak has the ability to track up to ten satellites. The orbital elements for SPRE and the shuttle may be loaded into the system. There are many satellite tracking programs available on the Internet. The AMSAT FTP sight has several program available. In addition, orbital elements for satellites are available on the AMSAT site.

AMSAT:
URL ftp://ftp.amsat.org/amsat/software/PC/tracking/

6.0 PRE-FLIGHT ACTIVITIES

The following are some suggested activities to work on before the launch.

- Play around with APRtrak and replay the simulations. It is important to get familiar with APRtrak before the launch.

- Identify the latitude and longitude location of your school on the APRtrak maps.

- Generate a map of your local area. APRtrak comes with tools and instructions to generate news maps.

- Try to predict the temperature of SPRE during the passes over your location. Will it be hot because it is in the Sun or cold because it is in the Earth's shadow???

- Simulate the SPRE mission using satellite tracking software and the pre-launch orbital elements.

6.1 PRE-LAUNCH ORBITAL ELEMENTS

The preliminary orbital elements below may be used to simulate or predict when SPRE will pass over your location. It can be loaded into most any satellite tracking program. For best results, be sure your simulations use the dates and time listed in the Mission Summary above.

Note: These preliminary elements are for Spartan Spacecraft only, not the shuttle. They are subject to change.

Satellite Name: SPRE-00
Satellite NORAD Number: #40000 <--(DUMMY VALUE)
Element Set Number: 1
Elements Epoch: 96014.48984950
14 JAN 1996 @ 11:45:22.997 UTC
Orbit # at Epoch: 1
Inclination: 28.4779
RA of Ascend Node: 71.7928
Eccentricity: .001131
Arg of Perigee: 189.8166
Mean Anomaly: 358.1771
Mean Motion: 15.85695266
Acceleration/Drag: .0000177
BSTAR Drag: 0

Two Line Element (TLE) Format:

SPRE-00
1 40000U SPRE-00 96014.48984950 .00001770 00000-0 00000-0 0 11
2 40000 28.4779 71.7928 0011310 189.8166 358.1771 15.85695266 18

7.0 SPRE FLIGHT OPERATIONS

During the SPRE mission ground stations will need to have APRtrak up and running and setup for SPRE at least 15 minutes before a predicted pass. When the spacecraft initially rises above the horizon the signal will sound rather scratchy. The higher above the horizon it gets the more clear the signal will become.

Only attempt to transmit after successfully receiving some SPRE packets. Received packets are displayed at the bottom of the screen on APRtrak. If you can't hear SPRE, SPRE will most likely not hear you.

Watch the map to see other stations and the spacecraft. Do not zoom in to close or you may not see other stations. Set the zoom so that you are centered on your state and can also see at least one whole state on all sides.

7.1 OPERATING INSTRUCTIONS

DO's:

- Use APRtrak Version 0.5 to listen and/or communicate with SPRE.

- Use satellite tracking software to predict when SPRE will pass over.

- Set the comment field in APRtrak to the name of your school.

- Make sure your are recording all received data to the hard disk.

- Wait until you receive SPRE transmissions before attempting to transmit.

- Watch for other schools.

DON'Ts:

- Don't zoom in too close on the map.

- Don't attempt to connect using a conventional packet terminal program. It will not allow connects and you will be clogging the frequency with wasted transmissions.

- Don't transmit until you receive SPRE transmissions.

- If your locations has been successfully relayed by SPRE, please do not continue to transmit. Give other stations a chance to get through.

8.0 POST SPRE MISSION ACTIVITIES

The following are someone suggested activities to do shortly after the SPRE mission.

- Replay collected SPRE data using APRtrak.

- See how many other schools you heard and locate them on a map.

- Examine the telemetry and see how hot or cold the different parts of the SPRE electronics are.

- Send copies of your *.HST and *.LOG data files to the SPRE Project. We will take all the data files we receive and generate a composite file. This overview of the mission will then be made available to all schools and amateur radio operators.

9.0 QUESTIONS AND ANSWERS

Hopefully this will answer the most common questions. If not, send electronic mail to the SPRE Project (see Section 11.0 below).

Q: Do I need a GPS receiver.
A: No, APRtrack is used to setup your location parameters which are transmitted to SPRE.

Q: What is the difference between SPRE and SAREX?
A: SPRE will use packet radio in the un-connected or unproto mode. This means that stations can not connect to SPRE. This should ultimately provide more throughput. This experiment involves identifying the location of the spacecraft as well as ground stations. SPRE utilizes APRtrak with a graphical interface making it more interactive and interesting.

Q: How can I find out when SPRE is passing over my location?
A: By using satellite tracking software and up-to-date orbital elements. Tracking software and is available in the Internet. Orbital elements are also available on the Internet including the SPRE WWW home page.

Q: Can the SPRE Project tell me when the spacecraft will be passing over my location?
A: No.

Q: Where can I get updated orbital elements?
A: They are available at the AMSAT FTP site and home page. During the mission they will be available on the SPRE home page (URL http://w3eax.umd.edu).

Q: Can the SPRE Project tell me what kind of antenna or radio to use?
A: No.

10.0 SPRE PROJECT

Participating stations should contact the SPRE Project so that we can try to keep you updated on any changes. Send electronic mail (e-mail) to Ken McCaughey at kenneth@w3eax.umd.edu.

SPRE Home Page: URL http://w3eax.umd.edu
Anon. FTP site: URL ftp://w3eax.umd.edu/pub/spre

The End...

15. Can you pass the MOCK RAE?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <30e99d4e.31104969@news.innotts.co.uk>
Source record: 23282
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.misc,rec.radio.amateur.space

At the risk of getting flamed for self-publicity, I've added a MOCK Radio Amateurs' Exam to my pages to lighten them up a bit.

Anyone who's had to suffer the awfulness of our UK City and Guilds - a nightmare of formality and silly legislation - will perhaps get a laugh out of this send-up.

But will you pass it ????? I dare you to find out!

Link thro' my homepage:

http://www.innotts.co.uk/~asperges/

A sincere thanks to all from this newsgroup who have recently mailed me. Happy New Year!

Jeremy G4NJH
asperges@innotts.co.uk
[Homepage: http://www.innotts.co.uk/~asperges/]

16. SPRE Pre-Launch Orbital Elements

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4ccclq$a1e@hertz.isr.umd.edu>
Source record: 23283
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.digital.misc,sci.space.shuttle

```
[More info about SPRE at http://w3eax.umd.edu/spre.html]

SPARTAN PACKET RADIO EXPERIMENT (SPRE)
------------------------------------------------------------------------

Pre-Launch Orbital Elements

By: Ken McCaughey (N3FZX)
File: sore0obs.txt
Date: 18-Dec-95

SPARTAN 206 ORBITAL ELEMENTS
----------------------------

The preliminary orbital elements below may be used to simulate or predict
when SPRE will pass over your location. It can be loaded into most any
satellite tracking program. For best results, be sure your simulations
use the dates and time listed in the Mission Summary above.

Note: These preliminary elements are for Spartan Spacecraft only, not
the shuttle. They are subject to change.

Satellite Name: SPRE-00
Satellite NORAD Number: #40000 <--(DUMMY VALUE)
Element Set Number: 1
Elements Epoch: 96014.48984950
14 JAN 1996 @ 11:45:22.997 UTC
Orbit # at Epoch: 1
Inclination: 28.4779
RA of Ascend Node: 71.7928
Eccentricity: .001131
Arg of Perigee: 189.8166
Mean Anomaly: 358.1771
Mean Motion: 15.85695266
Acceleration/Drag: .0000177
BSTAR Drag: 0

Two Line Element (TLE) Format:

SPRE-00
1 40000U SPRE-00 96014.48984950 .00001770 00000-0 00000-0 0 11
2 40000 28.4779 71.7928 0011310 189.8166 358.1771 15.85695266 18

STS-72 ORBITAL ELEMENTS
-----------------------
```

The following are pre-launch Keplerian elements for STS-72 based on a nominal launch on January 11, 1996:

Satellite: STS-72
Catalog number: 99972
Epoch time: 96011.41818454
Element set: 1
Inclination: 28.4585 deg
RA of node: 93.5775 deg
Eccentricity: 0.0118687
Arg of perigee: 51.7790 deg
Mean anomaly: 181.0111 deg
Mean motion: 15.62052799 rev/day
Decay rate: 5.0085E-05 rev/day^2
Epoch rev: 1

Two Line Element (TLE) Format:

STS-72
1 99972U 96011.41818454 .00005009 00000-0 38064-4 0 11
2 99972 28.4585 93.5775 0118687 51.7790 181.0111 15.62052799 16

[STS-72 info via Gary Morris, KK6YB]

The End...

17. Shuttle Air-to-Ground Rebroadcast Information

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4cccpp$a21@hertz.isr.umd.edu>
Source record: 23284
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,sci.space.shuttle

```
Shuttle Mission Info:
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Info:
Goddard Amateur Radio Club, WA3NAN, Greenbelt Maryland,
SAREX Bulletins and Shuttle Retransmissions
3860 KHz, 7185 KHz, 14,295 KHz, 21,395 KHz, 28,650 KHz
and 147.45 MHz (FM)

ARRL Amateur Radio Station, W1AW, Newington, CT
SAREX News Bulletins
3990, 7290, 14,290, 18,160, 21,390, and 28,590 KHz
and 147.555 MHz (FM)

NASA Spacelink computer information system, Phone:
(205) 895-0028 or via Internet: spacelink.msfc.nasa.gov,
ARRL BBS (203) 666-0578
JSC ARC BBS (713) 244-5625, 9600 baud or less.
GSFC ARC BBS on internet: wa3nan.gsfc.nasa.gov

WWW Home Pages:
SAREX: http://www.nasa.gov/sarex/sarex_mainpage.html
ARRL: http://www.arrl.org/
AMSAT: http://www.amsat.org
NASA: http://www.ksc.nasa.gov
SPRE: http://w3eax.umd.edu/spre.html

Mission bulletins also available on internet via AMSAT ANS and
through your local PBSS.
```

18. AMSAT-DL Journal on the Web

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: Frank Sperber <100423.3262@CompuServe.COM>
Message-ID: <4cbsmt$eq3$1@mhadf.production.compuserve.com>
Source record: 23285

The AMSAT-DL Journal as official magazine of AMSAT-Germany (DL)
opened
its World-Wide-Web pages. At URL:

http://ourworld.compuserve.com/homepages/fsperber/adl-jour.htm

you'll find (mostly German):

- brandnew satellite and AMSAT-bulletins with OSCAR-News
by HB9SKA (G)
- a preview on the next issue of the AMSAT-DL Journal (E)
- a selection of German articles an hyperlinks to a lot of
English articles
- a list of German and English literature about amateur-radio-
satellites
- the contents of all AMSAT-DL Journals since 1993 (will soon be
enlarged to issues since 1990) (E)
- a glossar of space- and satellite-topics including a list and
frequencies of amateur-radio-satellites (G)
- hyperlinks to other AMSAT-presentations in the Web
- a free WWW-sample of an AMSAT-DL Journal (G)

73, Frank, DL6DBN/AA9KJ
E-Mail: DL6DBN@amsat.org

19. Re: Satellite Tracking Hardware

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4ccbu3$6t7@superb.csc.ti.com>
Source record: 23286

Thanks for the many e-mail responses to my post. All questions were answered and I forwarded the replys to others who e-mailed me to get the same info. The SaTrack IV looks like the device I want. The only work to be done is to build a cable to the rotor control box and one to the radio (two wires to the radio),then I think you can buy a serial cable to go to the computer for transferring Keps data etc.

The latest information is at http://www.teleport.com/~n7ryw/asatpage.html

Ken Durham K5MBV mbv@ti.com

20. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4ccd5j$a2j@hertz.isr.umd.edu>
Source record: 23287

In article <DKHrzy.2AE@ibbs.av.org>, Jeff Stillinger <js@ibbs.av.org> wrote:
>Keith Knipschild - LI ,N.Y (Keith@unix.asb.com) wrote:

>Yha, the reason I asked was we have not had any shutdown at all. All is 100%
>normal here at Edwards.

Goddard is a ghost town from what I have heard. The SPRE project coordinator
says that STS-72 prep at KSC is deemed important enough to keep on going.
We don't know if STS-72 will actually launch if the government is still
shutdown or not...nobody will answer the question.

-Thomas

21. Chinese 1000kg satellite.....where are you

Newsgroup: rec.radio.amateur.space
Date: 1996-01-02 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DKKuLF.GFG@cix.compulink.co.uk>
Source record: 23288

Has this come down with a bang yet?????

Was it nuclear powered????

regards

Steve
g7vfy.

22. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-03 00:00:00 UTC
From: n9rze@firefly.prairienet.org
Message-ID: <n9rze-0301960132280001@ruger-5.slip.uiuc.edu>
Source record: 23289

In article <DKH1F1.7B3@ibbs.av.org>, js@ibbs.av.org (Jeff Stillinger) wrote:

> I signed up on a mailing list out of San Diego, CA. The elements are very
> good and up to date. Needless to say, I am impressed. However, the set
> sent before a launch has no launch date. :-) So when is STS-72 going to
> launch?
>
> Oh, BTW. What happend to NASA Select? The only thing that has been on is
> "NASA WASH" with a color pattern. Did even NASA get laid off? If so what
> about the people that are military that happen to be assigned to NASA duty?
> I ask since there has been no lack of work for me. We have continued as
> normal. Humm..
>
> --
> --
> Jeff Stillinger - KB6IBB js@ibbs.av.org
> PSC Box 3429 js@red-eft.la.ca.us
> Edwards AFB, CA 93524 +1 805 258 7303 8N1
> Flight Test Center, crashing aircraft so you don't have too.
> --

I've been seeing the same thing for more then two weeks. I was asked by
a local professor to carry the launch of the X-Ray telescope, Dr.Lamb. As
he helped build the thing and wanted to see it go off last week. We
carried the signal, but I was told all they had up was bars. As I was
asleep during the launch, our computer switched over to NASA during the
launch window and 90min's after. I have not talked to Dr.Lamb since I
spoke to him the night before the launch. So I don't even know if the
thing went up. In fact the last launch attempt got on national news
because it's been halted so many times and also because one of the people
said a four letter word. It's too bad that it was not shown if it went up.

My thoughts are that the goverment shutdown has something to do with
it. As Dr.Lamb tried to get press material for us to edit into an
interview with him. But no one answred the phone.. So that never worked
out. My only thing with the bars is that, it would cost money to air
anything on a sat. Costs the same with bars and without. So why not turn
off the transmitter and lease out the transponder? Also don't you need
someone to monitor the transmitter all the time? That would be a boring
one to watch.

-Marcus Damberger / N9RZE Amateur Radio

23. Re: Sound Blaster 16 as a DSP unit ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-03 00:00:00 UTC
From: mckee@fc.hp.com
Message-ID: <4cf19g$p7i@fcnews.fc.hp.com>
Source record: 23290

Sean McDonald (seanmcd@iaccess.za) wrote:
: Hi. Does anyone have any information / programmes on the use
: of the Creative Labs Sound Blaster 16 as a DSP unit, similar
: to the MFJ-784 ?

I have used my sound blaster to receive SSTV pictures. Unforutnatly,
it is not likely to do the DSP functions you want. Using DMA, which
is the only reasonable way to operate an SB, it is only half duplex - you
can either record or playback digital data, not both at once which would
be required for real time processing. (the card will route the input
to the speaker, but you cannot do DSP with that).

Some of the Turtle Beach cards do support full duplex operation and
could be used for you purposes.

73,

Bret

24. David Ransom's address?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-03 00:00:00 UTC
From: XE2MXU/N5UHB <fjorozco@academ07.mty.itesm.mx>
Message-ID: <Pine.A32.3.91.960103130952.25674B-100000@academ07.mty.itesm.mx>
Source record: 23291
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

Hi all, I need to get a hold of David Ransom's (creator of STSPLUS) email address. I would appreciate any help since I would like to get in touch with him as soon as possible.

Thanks and 73's de Luis XE2MXU/N5UHB

"Failure is NOT an option!"
-- G. Kranz

25. Re: EVA's on STS-72

Newsgroup: rec.radio.amateur.space
Date: 1996-01-03 00:00:00 UTC
From: rhyolite95@aol.com
Message-ID: <4cfl3j$d3v@newsbf02.news.aol.com>
Source record: 23292
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

I think that I have heard them as well. Do the transmissions contain a biomedical subcarrier?

26. Re: Sound Blaster 16 as a DSP unit ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-04 00:00:00 UTC
From: kevinb@starlink.com
Message-ID: <4ch1ej$70t@pegasus.starlink.com>
Source record: 23293

mckee@fc.hp.com (Bret McKee) wrote:

>Sean McDonald (seanmcd@iaccess.za) wrote:
>: Hi. Does anyone have any information / programmes on the use
>: of the Creative Labs Sound Blaster 16 as a DSP unit, similar
>: to the MFJ-784 ?

>I have used my sound blaster to receive SSTV pictures. Unforutnatly,
>it is not likely to do the DSP functions you want. Using DMA, which
>is the only reasonable way to operate an SB, it is only half duplex - you
>

>Bret

There is a patch to make the SB16 full duplex. I got it to get my
Vocal-Tec I-Phone working full duplex.
Cant recall for sure where I got the patch but probably WebPhone,
Interphone or Vocal-Tec.
Kevin

27. Hubble Downlink freq. ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-04 00:00:00 UTC
From: Jordi <ea3aqr@bcn.servicom.es>
Message-ID: <4cg6s2$sjb@ns.mad.servicom.es>
Source record: 23294

Hello and thanks for reading this message
Anyone knows the Hubble's downlink frequency? , I'd like to recive
telemetry or images directly from the telescope.

Best wishes from Barcelona.

ea3aqr@bcn.servicom.es

28. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-04 00:00:00 UTC
From: js@ibbs.av.org
Message-ID: <DKnuwA.G56@ibbs.av.org>
Source record: 23295

Richard Rohrer (rrohrer@mail.bcpl.lib.md.us) wrote:
: Jeff,

: I believe that STS-72 is going first or second week of Jan. I can double
: check when I get to work on Tuesday.

: As for NASA Select, I believe it probably is shutdown do to gov work
: stopage. I don't know what NASA center it orginates from.

: I work for one of the contractors at Goddard and we are still working, or
: at least till Jan 15, 1996 when our funding runs out.

: Dick Rohrer, KC3EF

Thanks for the reply Dick. I hope they get this thing worked out quick.

I have had radios scanning every known frequency that the shuttle program
uses. So far I have yet to hear anything. I will assume that there is
no mission this week. Launches and the mission I don't worry about too
much. It's the landing. :-) I worked Endevor last year when they came
to Edwards. I don't want to do that again! :-) It's as bad as an air show.

Thanks for all of the great reply's

--

Jeff Stillinger - KB6IBB js@ibbs.av.org
PSC Box 3429 js@red-eft.la.ca.us
Edwards AFB, CA 93524 +1 805 258 7303 8N1
Flight Test Center, crashing aircraft so you don't have too.
---

29. X-Ray Timing Explorer launch, was Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-05 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4cik2o$ntt@paperboy.ids.net>
Source record: 23296

In article <n9rze-0301960132280001@ruger-5.slip.uiuc.edu> Marcus Damberger, n9rze@firefly.prairienet.org writes:
> I've been seeing the same thing for more then two weeks. I was asked by
>a local professor to carry the launch of the X-Ray telescope, Dr.Lamb. As
>he helped build the thing and wanted to see it go off last week. We
>carried the signal, but I was told all they had up was bars

<snip>

>In fact the last launch attempt got on national news
>because it's been halted so many times and also because one of the people
>said a four letter word. It's too bad that it was not shown if it went up.

Actually the primary reason that particular launch attempt made the national news was that it involved an engine shutdown, and the spacecraft was owned by NASA. There have been two other Delta shutdowns in the Delta II program and they're pretty impressive to watch - and a bit scary. In each case the small vernier roll control engines ignited but the main engine failed to start properly somewhere in its startup sequence so the computer instructed the system to shutdown and safe itself before the command was ever sent for the solids to ignite or launch.

I saw a the CBS national news accidentally that night, and my only complaint was the comment that it was the fifth delay for the mission. While true it did not mention that the reason for the four delays was seasonal upper level winds. The four letter word was spoken by one of the launch controllers, and a perfectly normal reaction to something not going right. But it just made it a bit more newsworthy.

> My thoughts are that the goverment shutdown has something to do with it.

You got it.

>As Dr.Lamb tried to get press material for us to edit into an
>interview with him. But no one answred the phone..

Regretably the public affairs officers, for the most part, are not considered critical to government operations. So it isn't surprising that nobody was on the phone. However, existing materials are available via Internet, and some of the schools involved with the XTE project (UCSD and MIT) are certainly available. The government personnel critical to the project are working on XTE - don't worry about that part.

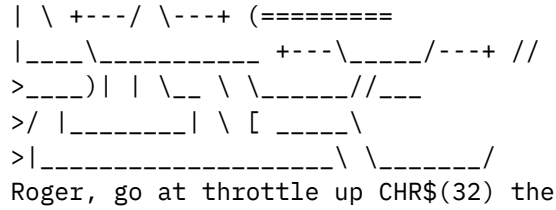
>My only thing with the bars is that, it would cost money to air
>anything on a sat. Costs the same with bars and without. So why not turn
>off the transmitter and lease out the transponder? Also don't you need
>someone to monitor the transmitter all the time? That would be a boring
>one to watch.

Not sure about the legalities involved, so this is off the cuff. There is an additional cost to NASA whenever the transponder is actually used (as opposed to when it's idle or just showing color bars), that's part of the agreement when the NASA TV transponder was leased/purchased/whatevered.

There is a substantial cost to the actual operation of setting up and using the transponder, including the Lockheed video technicians and camerapeople here at the Cape, uplink engineers, etc. - and a NASA supervisor. For the XTE launch it was deemed to be not absolutely necessary, but the current plans are for the shuttle launch to be shown on NASA TV.

In any case the launch did go on Saturday December 30th at the beginning of the window and as far as I know everything is okay with the spacecraft. There was an update at the Goddard Web page (which I don't have off the top of my head. Go through the NASA pages to the Goddard spaceflight center, find the Explorers project, and then look for XTE).

There was one piece of amusement. Several local central Florida TV stations which normally don't show up for an expendable launch did appear in person - because they had to be there in person with their own cameras since they couldn't just record the launch off the satellite. For the most part they were there just in case it failed on the launch pad (Saturday is a pretty slow news day). They certainly had the capability to uplink the video of the launch through a commercial network satellite if any affiliate around the country was interested, but I'd suspect that a successful launch of a NASA rocket during a weekend just before New Years wasn't anything to get really excited about.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

30. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-05 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4cikd7$ntt@paperboy.ids.net>
Source record: 23297

In article <4ccd5j$a2j@hertz.isr.umd.edu> Thomas Grant Edwards, tedwards@Glue.umd.edu writes:
>We don't know if STS-72 will actually launch if the government is still >shutdown or not...nobody will answer the question.

The definitive answer - NASA shuttle managers met on Thursday January 4th and set January 11th as the official launch date for STS-72 - even with the government shutdown in effect.

All personnel who are crticial to the mission (including SPRE) will be permitted to work. (note that I did not say anything about getting paid - personal comment).

However, there will be extremely limited public activities relating to the mission. The Internet web pages will not be updated, no car passes will be permitted for launch from the viewing sites, and no press conferences - either before or during the mission - are planned.

Only press materials which were prepared before the furlough will be distributed.

There will be NASA TV coverage (both satellite and audio circuits) from a 11 pm Wednesday January 10th (the night before launch) through landing.

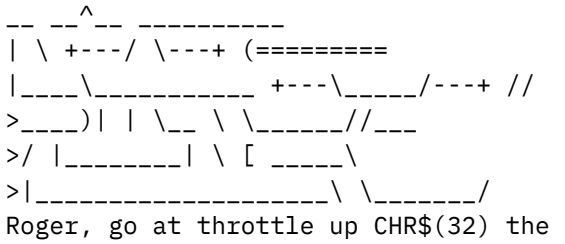
Hopefully keps for the shuttle and Spartan will become available through the normal networks, although I'm certain there will be difficulties.

There is a good trick to tracking a spacecraft, like Spartan, which is deployed and retrieved by the shuttle. Just use the latest available keps for the shuttle before it deploys the Spartan spacecraft. Remember that Spartan has no onboard propulsion system which would move it in to a different orbit - just extremely small cold gas thrusters which are used for attitude control. So the Spartan remains in the orbit the shuttle leaves it in. Then the shuttle maneuvers in to a slightly different orbit,
eventually ending up at a stationkeeping position about 40 nm away from Spartan, and then the shuttle begins a set of maneuvers to rendezvous with Spartan, ultimately ending up in the same orbit where Spartan was originally released!

On previous Spartan and SPAS missions I have tracked the predicted location
where the shuttle would catch up with the free-flyer very accurately using the pre-release keps for the shuttle.

It's also important to note that 40 nm. is a fairly small distance in terms

of orbital dynamics - while the two spacecraft will appear as separate
dots
visually, only the narrowest beams will care about which target it is
pointed towards.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

31. A scheduling component for element set data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-05 00:00:00 UTC
From: amcleod@anjo.hi.net
Message-ID: <414.13.39@anjo.hi.net>
Source record: 23298

Has any thought been given to the possibility of adding a new "element"
to AMSAT-format ElSets? The "Checksum" element was added after-the-fact,
I do believe, so why not a new (optional) item that describes the operating
schedule in some form?
.- -. .--- --- .- -. .--- --- .- -. .--- --- .- -. .--- ---
Internet: amcleod@anjo.hi.net (Angus Mcleod)
Origin: The ANJO BBS

32. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ckusj$q3d@blackbird.afit.af.mil>
Source record: 23299

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
(Letters, blanks, periods, plus signs = 0; minus signs = 1)
```

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

33. NORAD Two-Line Orbital Element Sets (TLE732)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ckuvo$q3n@blackbird.afit.af.mil>
Source record: 23300

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

```
- Current Two-Line Element Sets #732 -
Alouette 1
1 00424U 62049A 96004.20739601 .00000049 00000-0 46416-4 0 1640
2 00424 80.4547 86.5352 0023992 96.2348 264.1528 13.67859122659783
ATS 1
1 02608U 66110A 95349.57563549 -.00000027 00000-0 10000-3 0 9505
2 02608 14.6379 354.7816 0012166 77.8951 282.2507 1.00398102 23011
ATS 3
1 03029U 67111A 95363.08047799 -.00000122 00000-0 10000-3 0 4333
2 03029 14.8895 1.6509 0010472 268.1049 110.8216 1.00272491103050
Starlette
1 07646U 75010A 96003.25691159 -.00000147 00000-0 -14903-5 0 9392
2 07646 49.8290 83.5069 0205826 42.4938 319.1612 13.82189894 56019
LAGEOS
1 08820U 76039A 95363.07625750 .00000016 00000-0 10000-3 0 1602
2 08820 109.8527 327.3824 0044311 165.7799 194.3967 6.38664393202908
ETS-2
1 09852U 77014A 95353.32048303 .00000066 00000-0 10000-3 0 549
2 09852 13.0034 35.0079 0004103 121.1590 238.8691 1.00017150 15837
GOES 2
1 10061U 77048A 96004.39366046 -.00000018 00000-0 00000+0 0 6233
2 10061 12.0979 38.8912 0193553 307.6236 81.8130 1.00252602 12790
IUE
1 10637U 78012A 96003.15846642 -.00000257 00000-0 10000-3 0 2115
2 10637 35.5215 85.7945 1345457 52.4547 348.8547 1.00277075 18270
GPS BI-01
1 10684U 78020A 95360.11302861 -.00000052 00000-0 10000-3 0 4134
2 10684 64.9210 29.0326 0060269 161.8207 198.4573 1.98069435115967
GPS BI-02
1 10893U 78047A 95360.71660011 -.00000028 00000-0 10000-3 0 2079
2 10893 63.2452 266.5516 0227453 14.8304 345.8844 2.01627309129311
```

```
GOES 3
1 10953U 78062A 95362.24889222 -.00000105 00000-0 10000-3 0 5877
2 10953 11.0975 41.9070 0009060 141.1431 253.7085 1.00384104 17339
SeaSat 1
1 10967U 78064A 95362.06348310 -.00000022 00000-0 37297-4 0 4530
2 10967 107.9994 178.6222 0002381 248.2145 111.8741 14.38077937916707
GPS BI-03
1 11054U 78093A 95362.92015361 -.00000046 00000-0 10000-3 0 3731
2 11054 62.9402 265.2027 0045607 180.8393 179.2043 1.93505252125347
Nimbus 7
1 11080U 78098A 96005.13612318 -.00000120 00000-0 -70910-4 0 5551
2 11080 98.9685 235.1326 0009814 51.4128 308.7904 13.83697994868486
GPS BI-04
1 11141U 78112A 96003.95661640 -.00000027 00000-0 10000-3 0 212
2 11141 64.9305 30.9309 0048946 28.0299 332.2966 1.92894750 14698
GPS BI-05
1 11690U 80011A 96004.31843530 -.00000025 00000-0 10000-3 0 9737
2 11690 65.2673 30.2904 0153957 193.9408 165.6806 2.00569651130897
GPS BI-06
1 11783U 80032A 95358.88586530 .00000000 00000-0 10000-3 0 1217
2 11783 62.3716 259.5427 0223071 29.7157 331.6137 2.03456554115260
GOES 5
1 12472U 81049A 95357.13452216 -.00000200 00000-0 10000-3 0 9011
2 12472 7.8675 52.0721 0005261 50.5720 309.3894 1.00213059 11325
Cosmos 1383
1 13301U 82066A 95363.18679141 .00000039 00000-0 28416-4 0 4603
2 13301 82.9310 259.1653 0028184 354.6514 5.4333 13.68070866673992
LandSat 4
1 13367U 82072A 96004.64096822 .00000015 00000-0 13153-4 0 8302
2 13367 98.1000 60.3412 0006197 305.1277 54.9340 14.57164934716579
DMSP B5D2-1
1 13736U 82118A 96004.02953424 .00000003 00000-0 19725-4 0 9203
2 13736 98.6256 195.0534 0008864 146.0229 214.1518 14.25767510677533
IRAS
1 13777U 83004A 96005.03981090 .00000022 00000-0 45077-4 0 1892
2 13777 98.9646 194.0200 0012236 186.4747 173.6251 13.99250725330415
Cosmos 1447
1 13916U 83021A 96004.82925428 .00000085 00000-0 74161-4 0 5580
2 13916 82.9427 312.5977 0036275 250.0708 109.6536 13.74334788641169
TDRS 1
1 13969U 83026B 96003.59190139 .00000010 00000-0 00000+0 0 5202
2 13969 8.7104 45.2819 0003239 245.6539 257.8895 1.00429657 19727
GOES 6
1 14050U 83041A 96003.09471918 -.00000239 00000-0 10000-3 0 4739
2 14050 6.7132 55.2227 0002154 24.1727 335.7506 1.00304923104533
OSCAR 10
1 14129U 83058B 96003.82203279 -.00000137 00000-0 10000-3 0 3970
2 14129 26.4182 230.6314 5976999 339.7618 4.3050 2.05882115 66468
LandSat 5
1 14780U 84021A 96004.68066955 .00000024 00000-0 15681-4 0 4120
```

```
2 14780 98.3585 62.2816 0003610 79.1417 281.0187 14.57035572629973
UoSat 2
1 14781U 84021B 96003.52717005 .00000124 00000-0 28730-4 0 8520
2 14781 97.7877 1.7395 0010583 260.7862 99.2146 14.69414819633326
GPS BI-09
1 15039U 84059A 95360.04717499 -.00000054 00000-0 10000-3 0 3828
2 15039 64.5850 25.5247 0082053 18.3558 341.9929 1.92302268 84081
Cosmos 1574
1 15055U 84062A 96005.06919046 .00000058 00000-0 45656-4 0 7598
2 15055 82.9537 6.9798 0029276 78.7014 281.7427 13.73630939578458
GPS BI-10
1 15271U 84097A 96004.95563558 .00000022 00000-0 10000-3 0 943
2 15271 62.0533 259.6549 0157875 356.3612 3.6119 2.00608204 81973
Cosmos 1602
1 15331U 84105A 96003.73466154 .00000166 00000-0 16672-4 0 4438
2 15331 82.5332 268.0264 0020842 129.7448 230.5598 14.84709888608426
NOAA 9
1 15427U 84123A 96004.80503650 .00000032 00000-0 40754-4 0 5347
2 15427 98.9698 69.4653 0015870 59.6334 300.6401 14.13752544570400
GPS BI-11
1 16129U 85093A 96003.47748501 -.00000028 00000-0 10000-3 0 6978
2 16129 65.2617 28.7215 0156055 85.6860 276.1592 1.89367993 18789
Mir
1 16609U 86017A 96003.57982988 .00002269 00000-0 36791-4 0 3788
2 16609 51.6446 233.8118 0006204 168.5622 191.5522 15.57622987564190
SPOT 1
1 16613U 86019A 96004.90571026 .00000090 00000-0 62356-4 0 8860
2 16613 98.6302 76.5426 0001218 67.6843 292.4430 14.20084423196999
Cosmos 1766
1 16881U 86055A 96002.88398949 .00000218 00000-0 23391-4 0 3585
2 16881 82.5170 326.6019 0019103 159.4486 200.7499 14.83697758509189
EGP
1 16908U 86061A 95362.86397716 -.00000083 00000-0 10000-3 0 534
2 16908 50.0087 163.7232 0011092 296.7871 63.1828 12.44413690 95076
NOAA 10
1 16969U 86073A 96004.89348488 .00000013 00000-0 23795-4 0 4546
2 16969 98.5138 6.7381 0013829 111.2982 248.9687 14.24969597483206
MOS-1
1 17527U 87018A 96004.18537003 -.00000043 00000-0 00000+0 0 3702
2 17527 98.9703 69.6134 0018622 63.2029 297.1039 14.00423259451898
GOES 7
1 17561U 87022A 95365.33785025 .00000078 00000-0 10000-3 0 7032
2 17561 2.7208 70.7464 0001231 311.8063 63.6893 1.00283378 15618
Kvant-1
1 17845U 87030A 96004.99129521 .00009110 00000-0 12730-3 0 4879
2 17845 51.6436 226.7429 0006168 175.1110 185.0117 15.57641546498526
DMSP B5D2-3
1 18123U 87053A 96004.74226931 .00000012 00000-0 28266-4 0 2748
2 18123 98.7728 197.7029 0014680 7.3721 352.7674 14.15428794441235
RS-10/11
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1 18129U 87054A 96003.18510176 .00000028 00000-0 14207-4 0 1543
2 18129 82.9245 271.2286 0009985 257.4534 102.5505 13.72360511427406
Meteor 2-16
1 18312U 87068A 95361.83358391 .00000007 00000-0 -66485-5 0 4489
2 18312 82.5556 128.7919 0012876 352.2119 7.8843 13.84068044422334
Meteor 2-17
1 18820U 88005A 96004.37053383 .00000047 00000-0 28519-4 0 8181
2 18820 82.5423 178.2106 0017920 32.6253 327.6030 13.84749239400713
DMSP B5D2-4
1 18822U 88006A 96005.09338322 .00000024 00000-0 28811-4 0 1557
2 18822 98.3897 204.9022 0006671 119.3400 240.8445 14.23177244411237
Glonass 34
1 19163U 88043A 96003.87755647 -.00000037 00000-0 10000-3 0 446
2 19163 65.1830 91.4162 0007156 159.6756 200.3784 2.13102391 58713
Glonass 36
1 19165U 88043C 95360.48758656 -.00000010 00000-0 10000-3 0 4482
2 19165 65.1676 91.6518 0001359 268.8992 91.1100 2.13102111 59151
METEOSAT 3
1 19215U 88051A 95355.08944164 -.00000107 00000-0 10000-3 0 2269
2 19215 2.9019 68.6477 0003601 141.1150 218.4443 0.96948188 15445
AO-13
1 19216U 88051B 96003.75578790 .00000002 00000-0 -66718-5 0 1300
2 19216 57.4143 143.2919 7364960 27.9823 356.7937 2.09725233 26360
OKEAN 1
1 19274U 88056A 95361.66575296 .00000303 00000-0 34818-4 0 579
2 19274 82.5137 73.0831 0019738 338.3760 21.6626 14.82428108403818
Meteor 3-2
1 19336U 88064A 96002.86157506 .00000051 00000-0 10000-3 0 4493
2 19336 82.5435 284.1157 0015671 294.4118 65.5364 13.16975955357586
Glonass 39
1 19503U 88085C 96004.90203114 -.00000067 00000-0 10000-3 0 3415
2 19503 65.6374 330.2620 0005795 161.6250 198.3783 2.13101750 56846
NOAA 11
1 19531U 88089A 96004.89200584 .00000023 00000-0 37206-4 0 3460
2 19531 99.1918 18.6679 0011993 346.5491 13.5366 14.13077503375246
TDRS 2
1 19548U 88091B 95361.68706792 -.00000193 00000-0 10000-3 0 1688
2 19548 2.2029 72.7880 0007690 168.9156 186.0603 1.00272381 13792
Glonass 40
1 19749U 89001A 96004.47078958 -.00000031 00000-0 10000-3 0 5608
2 19749 65.1476 90.9232 0004396 242.3953 117.5918 2.13101532 54342
Glonass 41
1 19750U 89001B 95359.20225043 -.00000002 00000-0 10000-3 0 4632
2 19750 65.1600 91.3378 0007031 234.5980 125.3589 2.13101795 54141
GPS BII-01
1 19802U 89013A 96004.61593420 -.00000035 00000-0 10000-3 0 1669
2 19802 55.2681 117.1954 0024952 180.0000 179.9584 2.00562686 50416
Akebono
1 19822U 89016A 96004.97587917 .00006801 00000-0 37388-3 0 6352
2 19822 75.1008 218.9214 3757931 229.8752 90.7551 7.89477113153713
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Meteor 2-18
1 19851U 89018A 96003.19514759 .00000031 00000-0 14297-4 0 4489
2 19851 82.5196 53.4421 0015981 80.0356 280.2604 13.84403471345865
MOP-1
1 19876U 89020B 95360.45620906 -.00000160 00000-0 10000-3 0 1708
2 19876 1.6307 71.6790 0018964 276.5027 82.6385 0.97110739 4932
TDRS 3
1 19883U 89021B 95362.60081395 -.00000272 00000-0 10000-3 0 1556
2 19883 0.0097 273.0684 0002839 344.5323 14.2518 1.00267941197393
GPS BII-02
1 20061U 89044A 96003.95676779 -.00000066 00000-0 10000-3 0 1706
2 20061 54.2977 293.2232 0149272 216.8383 142.1969 2.00563159 48144
Nadezhda 1
1 20103U 89050A 96004.83774094 .00000016 00000-0 72675-6 0 6323
2 20103 82.9598 229.8694 0037866 149.4215 210.9159 13.73861643326117
GPS BII-03
1 20185U 89064A 96003.29588341 -.00000042 00000-0 10000-3 0 1815
2 20185 55.0638 117.7533 0015024 303.8333 56.0354 2.00558156 46709
GMS 4
1 20217U 89070A 96004.63686118 -.00000363 00000-0 10000-3 0 2871
2 20217 1.4558 75.3675 0000748 354.4491 23.0166 1.00262780 23772
INTERCOSMOS 24
1 20261U 89080A 96005.13364943 .00000134 00000-0 32449-4 0 4662
2 20261 82.5880 15.5090 1243432 54.6941 316.4140 12.47309076285454
GPS BII-04
1 20302U 89085A 96002.83590712 .00000050 00000-0 10000-3 0 1732
2 20302 53.3079 233.1649 0013485 176.5719 183.5201 2.00561863 45494
Meteor 3-3
1 20305U 89086A 96005.13920676 .00000044 00000-0 10000-3 0 4699
2 20305 82.5512 237.9994 0008249 358.9328 1.1719 13.04425421296810
COBE
1 20322U 89089A 96003.55299041 -.00000123 00000-0 -50361-4 0 1782
2 20322 98.9484 21.5099 0008746 131.4911 228.7017 14.03450102313693
Kvant-2
1 20335U 89093A 96004.99129521 .00009110 00000-0 12730-3 0 4755
2 20335 51.6436 226.7429 0006168 175.1110 185.0117 15.57641546347538
GPS BII-05
1 20361U 89097A 96004.34295428 -.00000048 00000-0 10000-3 0 90
2 20361 55.8942 59.8054 0086158 130.3195 230.5023 2.00563215 35005
COSMOS 2054 (Altair-1)
1 20391U 89101A 96004.31309096 -.00000133 00000-0 00000+0 0 2747
2 20391 3.5258 64.5321 0001331 195.4163 299.6042 1.00275055 22346
SPOT 2
1 20436U 90005A 96004.19212840 .00000169 00000-0 10000-3 0 154
2 20436 98.7164 80.5206 0001827 61.4770 298.6590 14.20035507308429
UO-14
1 20437U 90005B 96003.77087703 -.00000018 00000-0 99025-5 0 1517
2 20437 98.5578 89.8108 0011226 333.8598 26.2016 14.29908290310415
UO-15
1 20438U 90005C 96003.20504439 .00000006 00000-0 19531-4 0 9478
```

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2 20438 98.5539 87.4721 0010734 341.1173 18.9613 14.29222384310214
PACSAT
1 20439U 90005D 95361.73784052 -.00000007 00000-0 14124-4 0 9480
2 20439 98.5711 84.8442 0011755 354.8552 5.2502 14.29962206309425
DO-17
1 20440U 90005E 96004.75313727 .00000010 00000-0 20663-4 0 9507
2 20440 98.5722 93.2866 0011524 330.9606 29.0932 14.30104942310590
WO-18
1 20441U 90005F 96002.78047002 -.00000014 00000-0 11391-4 0 9546
2 20441 98.5701 91.2970 0012513 336.7498 23.3117 14.30074616310310
LO-19
1 20442U 90005G 96004.74768706 .00000008 00000-0 19910-4 0 9509
2 20442 98.5734 93.6638 0012383 330.3086 29.7389 14.30180599310614
GPS BII-06
1 20452U 90008A 96003.24404075 .00000054 00000-0 10000-3 0 1135
2 20452 54.0175 173.5202 0060617 85.0456 275.6234 2.00557588 43483
MOS-1B
1 20478U 90013A 96004.11312228 .00000090 00000-0 10000-3 0 8782
2 20478 99.1263 75.5654 0001090 71.2747 288.8177 13.94864923221547
DEBUT
1 20479U 90013B 96003.13816369 -.00000061 00000-0 -70823-4 0 9498
2 20479 99.0539 59.5872 0540446 140.1650 224.0442 12.83337584276608
FO-20
1 20480U 90013C 96003.16062090 -.00000040 00000-0 -23597-4 0 8466
2 20480 99.0494 59.4281 0541097 140.6266 223.5496 12.83232376276598
MOS-1B R/B
1 20491U 90013D 96003.36093225 .00000220 00000-0 48348-3 0 2039
2 20491 99.0709 119.3582 0469735 322.8549 34.0893 13.02997646280260
LACE
1 20496U 90015A 95358.78624264 .00001179 00000-0 42058-4 0 6072
2 20496 43.1024 124.2894 0011182 351.4975 8.5695 15.35207018326864
Nadezhda 2
1 20508U 90017A 96004.85453735 .00000059 00000-0 46119-4 0 6335
2 20508 82.9513 4.4018 0045837 102.3929 258.2377 13.73503001293332
OKEAN 2
1 20510U 90018A 96003.10529687 .00000177 00000-0 20928-4 0 4672
2 20510 82.5229 20.1195 0019741 135.8605 224.4187 14.78562351315139
GPS BII-07
1 20533U 90025A 96004.14347305 -.00000066 00000-0 10000-3 0 1523
2 20533 54.6671 293.9080 0050492 83.5916 276.9814 2.00573696 42277
PegSat
1 20546U 90028A 96003.85876615 .00005862 00000-0 11362-3 0 8828
2 20546 94.1273 258.2858 0059839 285.0100 74.4538 15.45808442319457
HST
1 20580U 90037B 96004.18620137 .00000330 00000-0 17430-4 0 7523
2 20580 28.4698 199.1414 0005704 253.5398 106.4538 14.90996683113933
MACSAT 2
1 20608U 90043B 95362.41801949 .00000140 00000-0 21678-4 0 1493
2 20608 89.9269 174.8509 0104197 297.6001 61.4668 14.64888227301142
Glonass 44
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1 20619U 90045A 96003.90043377 -.00000071 00000-0 10000-3 0 2566
2 20619 65.2394 329.6116 0025941 212.4275 147.4031 2.13102406 43782
Glonass 45
1 20620U 90045B 95358.22616037 -.00000044 00000-0 10000-3 0 2553
2 20620 65.2387 329.9706 0007284 38.4638 321.5953 2.13102579 43591
Glonass 46
1 20621U 90045C 96003.14778102 -.00000072 00000-0 10000-3 0 8473
2 20621 65.2528 329.6831 0011992 197.0416 162.9095 2.13101773 43805
Kristall
1 20635U 90048A 96004.99129521 .00009110 00000-0 12730-3 0 2679
2 20635 51.6436 226.7429 0006168 175.1110 185.0117 15.57641546318360
ROSAT
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Helios 1A
1 23605U 95033A 96004.20580077 .00000100 00000-0 28094-4 0 1433
2 23605 98.1081 302.4044 0001551 62.0378 298.0982 14.63821063 26415
UPM SAT 1
1 23606U 95033B 96002.88094482 .00000113 00000-0 28822-4 0 1125
2 23606 98.0891 301.5892 0006857 2.8391 357.2848 14.66917257 26330
CERISE
1 23607U 95033C 96003.25855667 .00000170 00000-0 38757-4 0 533
2 23607 98.0881 302.0278 0008766 356.6883 3.4254 14.67197164 26408
TDRS 6
1 23613U 95035B 96003.55151441 .00000131 00000-0 00000+0 0 1111
2 23613 0.3350 83.6505 0002387 170.9945 256.7128 1.00280612 1721
Glonass 74
1 23620U 95037A 96003.79817577 .00000096 00000-0 00000+0 0 845
2 23620 64.8310 209.5184 0018609 161.7893 198.3464 2.13102849 3485
Glonass 75
1 23621U 95037B 95361.46671081 .00000056 00000-0 00000+0 0 884
2 23621 64.8434 209.7692 0017615 173.4301 186.6539 2.13101912 3325
Glonass 76
1 23622U 95037C 96004.03335446 .00000095 00000-0 00000+0 0 877
2 23622 64.8369 209.5134 0036815 162.3025 197.8946 2.13102383 3481
Prognoz-M2
1 23632U 95039A 96005.29486720 .00000073 00000-0 00000+0 0 259
2 23632 67.7750 253.4250 8850933 318.6160 320.5490 0.26341300 419
SICH-1
1 23657U 95046A 95359.53718316 .00000141 00000-0 18280-4 0 420
2 23657 82.5315 1.3098 0026048 257.6795 102.1502 14.73441428 17110
Soyuz TM-22
1 23665U 95047A 96004.99129521 .00009110 00000-0 12730-3 0 1184
2 23665 51.6436 226.7429 0006168 175.1110 185.0117 15.57641546 19285
RADARSAT
1 23710U 95059A 95361.58147788 -.00000044 00000-0 00000+0 0 835
2 23710 98.5788 5.7184 0001189 82.5749 277.5569 14.29977669 7579
TELCOM 2C
1 23730U 95067A 96004.60125579 .00000005 00000-0 00000+0 0 137
```

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2 23730 0.1094 263.3229 0001889 321.9966 95.6414 1.00273487 416
INSAT 2C
1 23731U 95067B 96002.78784144 -.00000250 00000-0 00000+0 0 148
2 23731 0.1285 261.3498 0007099 240.5386 335.8893 1.00270034 286
1995067C
1 23732U 95067C 95345.28709180 -.00000113 00000-0 00000+0 0 25
2 23732 6.8016 240.2951 7350648 180.8584 142.4403 2.18269142 92
1995067D
1 23733U 95067D 95361.67724944 .00032129 00000-0 52036-2 0 101
2 23733 6.9149 232.5567 7280818 194.9832 121.5815 2.29444964 477
Glonass 77
1 23734U 95068A 96004.66734273 .00000090 00000-0 00000+0 0 274
2 23734 64.8281 209.4022 0089995 252.0164 107.0671 2.15948547 466
Glonass 78
1 23735U 95068B 95362.34325462 .00000064 00000-0 00000+0 0 318
2 23735 64.8315 209.6439 0005557 204.5120 155.5205 2.13125622 308
Glonass 79
1 23736U 95068C 96003.44672984 .00000098 00000-0 00000+0 0 279
2 23736 64.8205 209.4593 0006530 186.0752 173.9864 2.13101890 433
1995068D
1 23737U 95068D 95348.94371692 .11793098 78787-5 10221-3 0 68
2 23737 64.8168 207.7143 0007255 256.5960 238.9392 16.51600890 117
1995068E
1 23738U 95068E 95348.55609337 .59377249 81617-5 21656-3 0 42
2 23738 64.7999 209.2089 0008852 357.2814 2.8330 16.57875961 36
1995068F
1 23739U 95068F 95359.51495697 .00000056 00000-0 10000-4 0 86
2 23739 64.8261 209.7506 0008675 261.4864 98.4725 2.13375112 234
1995068G
1 23740U 95068G 96003.62439269 .00000434 00000-0 27640-3 0 155
2 23740 64.7941 202.5882 5796285 296.7615 16.1800 4.23390226 876
GALAXY 3R
1 23741U 95069A 95363.06572554 -.00000164 00000-0 10000-4 0 219
2 23741 0.0737 297.0849 0006205 306.8401 142.0290 1.00296956 231
1995069B
1 23742U 95069B 96004.97768295 .00054926 12517-5 27596-2 0 99
2 23742 26.9221 263.4261 7203298 192.8342 129.4400 2.41488709 515
Progress M-30
1 23744U 95070A 96004.99129521 .00009110 00000-0 12730-3 0 211
2 23744 51.6436 226.7429 0006168 175.1110 185.0117 15.57641546 2724
1995070B
1 23745U 95070B 95355.22797706 .18043433 12725-4 19685-3 0 179
2 23745 51.6411 299.8978 0002388 341.5256 18.5837 16.50340675 436
Cosmos 2326
1 23748U 95071A 96005.26582291 .00000319 00000-0 10000-4 0 484
2 23748 65.0226 81.2805 0005873 259.7054 100.3429 15.52033967 2525
1995071C
1 23750U 95071C 95354.40085137 .43548823 87146-5 41247-3 0 49
2 23750 65.0056 134.7662 0128187 56.1759 305.6754 16.30497756 64
1995072A
```

```
1 23751U 95072A 96004.71265073 .00000000 00000-0 00000+0 0 160
2 23751 098.6957 081.1357 0001120 155.4012 204.7754 14.22218310001061
1995072B
1 23752U 95072B 96004.91514323 -.00000020 00000-0 10000-4 0 88
2 23752 98.5680 81.3057 0006790 112.0245 248.1657 14.24885932 1097
1995072C
1 23753U 95072C 96003.22935915 -.00000043 00000-0 00000+0 0 41
2 23753 98.6011 79.6910 0004858 112.3207 247.8485 14.24998361 858
1995073A
1 23754U 95073A 96004.57710820 .00000000 00000-0 99999-4 0 84
2 23754 003.0690 275.4727 1712668 182.7578 176.1115 01.30272711000101
1995073B
1 23755U 95073B 96005.06041995 .02650045 -84296-5 41163-3 0 334
2 23755 27.9979 219.9415 0033776 233.9359 125.7955 16.30790100 1235
1995073C
1 23756U 95073C 96004.63539726 .00009498 00000-0 16675-2 0 30
2 23756 24.3533 276.0121 7250892 183.1929 165.3807 2.33074345 179
1995074A
1 23757U 95074A 96003.42168807 .00000465 00000-0 10000-4 0 129
2 23757 22.9850 99.9782 0013193 235.0947 124.8309 14.97582021 582
1995074B
1 23758U 95074B 96005.23735464 .00911676 -11448-4 58892-3 0 173
2 23758 24.9513 79.7854 0278766 334.2521 24.4393 15.68587605 889
1995074D
1 23760U 95074D 96001.35514413 .00000797 00000-0 10000-4 0 107
2 23760 22.8741 110.9500 0210834 346.8899 52.1215 15.05915113 642
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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34. Re: SPRE Pre-Launch Orbital Elements

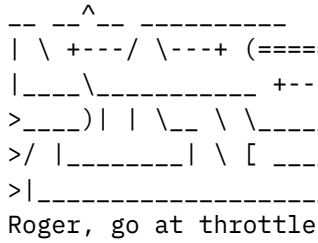
Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4ckqdo$62u@paperboy.ids.net>
Source record: 23301
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.digital.misc,sci.space.shuttle

In article <4ccclq$a1e@hertz.isr.umd.edu> Thomas Grant Edwards,
tedwards@Glue.umd.edu writes:
>
>The preliminary orbital elements below may be used to simulate or
predict
>when SPRE will pass over your location. It can be loaded into most any
>satellite tracking program. For best results, be sure your simulations
>use the dates and time listed in the Mission Summary above.
>
>Note: These preliminary elements are for Spartan Spacecraft only, not
> the shuttle. They are subject to change.
>
>SPRE-00
>1 40000U SPRE-00 96014.48984950 .00001770 00000-0 00000-0 0 11
>2 40000 28.4779 71.7928 0011310 189.8166 358.1771 15.85695266 18

Be extremely cautious before making firm plans with these preliminary
elements. A reliable source has told me that the Japanese Space Flyer
Unit (SFU) has had some problems, so the shuttle will almost certainly
have to use a different rendezvous profile to reach SFU. This will
certainly require more propellant. And the OAST-FLYER's flight plan will
probably change. It may be as simple as a higher orbit, but probably
will involve some shifting of the orbital plane for the freeflight period.

Preliminary elements are excellent for calculating the lengths of passes,
look angles, and to a lesser degree adequate for calculating sun angles
and lighting conditions. But always rely on the true post-launch keps
whenever possible.

(I did run the above keps, and it turns out I've got nine excellent
passes for the predicted time. But all in the middle of the night. Now
if I can only delay the mission long enough for SFU's orbit to precess in
to daylight passes ....)

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

35. Teletype corp printing terminal for sale.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DKrD7K.K0A@cix.compulink.co.uk>
Source record: 23302

Teletype corp printing terminal for sale.

I can't remember if it's a asr or ksr33.

I have one of these things in NW London, in storage which I'd like to sell.. as I'm more into ham radio these days...

It comes supplied with a step-down transformer and it may need some attention. I have never used it, although it cam with my PDP 8e, which I'd also like to sell/swap at some later date.

I also have an Intersil Intercept unit as well, with 4kb of battery backed ram!

Please feel free to make me an offer either for cash or ham radio equipment.

regards

Steve
g7vfy Tele 0956-544202

36. Wraase MR-9202 WxSat Rx - Help?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: jwhac4ca@mindspring.com
Message-ID: <30eeefeb.308678@nntp.mindspring.com>
Source record: 23303

Can anybody help me locate the schematic and RS-232 interface specs for a Volker Wraase MR-9202 WxSat receiver? I'm also looking for an English translation of the Users Guide. I have the German version. Thanks in advance for any help you can provide. 73. -John (AC4CA)

37. ARLK001 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk001.1996@arrl.org>
Source record: 23304
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK001
ARLK001 Keplerian data

ZCZC SK01
QST de W1AW
Keplerian Bulletin 1 ARLK001
From ARRL Headquarters
Newington, CT January 6, 1996
To all radio amateurs

SB KEP ARL ARLK001
ARLK001 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96005.11960750 .00002709 00000-0 42614-4 0 04425
2 16609 51.6444 226.0948 0006214 173.2977 186.8099 15.57633842564435
AO-10
1 14129U 83058B 96003.82203279 -.00000137 00000-0 10000-3 0 3970
2 14129 26.4182 230.6314 5976999 339.7618 4.3050 2.05882115 66468
RS-10/11
1 18129U 87054A 96005.59107144 .00048276 00000-0 52521-1 0 1553
2 18129 82.9247 269.4512 0010016 249.0031 111.0433 13.72401944427732
UO-11
1 14781U 84021B 96005.02527048 .00000148 00000-0 32843-4 0 08620
2 14781 97.7879 3.1691 0010632 256.3972 103.6048 14.69415557633546
RS-12/13
1 21089U 91007A 96004.90971969 .00000048 00000-0 34821-4 0 08685
2 21089 82.9206 311.1661 0029232 334.6070 25.3643 13.74064295246476
AO-13
1 19216U 88051B 96003.75578790 .00000002 00000-0 -66718-5 0 01300
2 19216 57.4143 143.2919 7364960 27.9823 356.7937 2.09725233026360
UO-14
1 20437U 90005B 96005.17036548 -.00000001 00000-0 16383-4 0 01599
2 20437 98.5577 91.1860 0011230 329.7721 30.2810 14.29908572310614
RS-15
1 23439U 94085A 96005.01481332 -.00000039 00000-0 10000-3 0 01044
2 23439 64.8163 288.5825 0165458 227.8048 130.8720 11.27524005042272
```

```
AO-16
1 20439U 90005D 96005.27438403 -.00000007 00000-0 14066-4 0 9509
2 20439 98.5706 93.2462 0011485 330.3398 29.7127 14.29963024310641
DO-17
1 20440U 90005E 96005.10296138 .00000014 00000-0 22411-4 0 09511
2 20440 98.5722 93.6312 0011542 329.9743 30.0780 14.30105022310649
WO-18
1 20441U 90005F 96005.15932379 -.00000011 00000-0 12468-4 0 09644
2 20441 98.5698 93.6383 0012452 330.0338 30.0129 14.30074812310654
LO-19
1 20442U 90005G 96005.09749268 -.00000035 00000-0 32043-5 0 09515
2 20442 98.5734 94.0084 0012205 329.2251 30.8173 14.30180184310667
FO-20
1 20480U 90013C 96005.10985892 -.00000036 00000-0 -15377-4 0 08558
2 20480 99.0506 61.0122 0541012 136.2165 228.3178 12.83232342276842
AO-21
1 21087U 91006A 96005.15578074 .00000093 00000-0 82657-4 0 6655
2 21087 82.9392 83.1157 0034870 306.1747 53.6185 13.74563185247473
UO-22
1 21575U 91050B 96005.14404364 -.00000002 00000-0 13830-4 0 06608
2 21575 98.3742 76.2440 0008740 37.7103 322.4696 14.37006773234502
KO-23
1 22077U 92052B 96004.88733225 -.00000037 00000-0 10000-3 0 05578
2 22077 66.0793 173.4624 0005056 344.2089 15.8772 12.86294707159678
KO-25
1 22828U 93061F 96005.11041530 .00000043 00000-0 34953-4 0 04222
2 22828 98.5932 83.6812 0010684 341.9849 18.0979 14.28125848086691
IO-26
1 22826U 93061D 96005.09070735 .00000005 00000-0 19474-4 0 04540
2 22826 98.5980 83.6134 0009792 357.0204 3.0928 14.27791625118583
AO-27
1 22825U 93061C 96005.15205169 .00000016 00000-0 24355-4 0 04554
2 22825 98.6011 83.5448 0009240 356.1872 3.9234 14.27683814118583
PO-28
1 22829U 93061G 96005.12482750 -.00000017 00000-0 10787-4 0 04554
2 22829 98.5968 83.7443 0010238 343.5851 16.4997 14.28106303118613

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
January 9, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

38. uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: johnestein@mcn.net
Message-ID: <4cmg78$1tm@news.mcn.net>
Source record: 23305

Hi, I'm brand new to the hobby of amatuer radio and would like to try to work the MIR space station. I've looked in my ARRL handbook and can't find the uplink and downlink frequencies for MIR. Maybe I'm just not looking in the right places. I'd like to try both packet and voice communication.

Thanks!
John Stein
KC7MRY

39. WTB/R: Service manual IC-211

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: wday@dfw.net
Message-ID: <wday-0601962353390001@fw12.dfw.net>
Source record: 23306

Want to buy or rent (so I can copy) a service manual for the Icom IC-211
2m Multimode transceiver. Will purchase either an original or copy.

73 Wayne KF5ZC
voicemail: (817) 450-1043

Wayne Day KF5ZC Fort Worth,Texas,USA kf5zc@amsat.org |
CompuServe: 76703,376 76703.376@CompuServe.Com | ,__o
wday@dfw.net |--_<,
Member: Bicycle Mobile Hams of America (*)/'(*)
For info on BMHA or the BIKEHAM mailing list: Finger KF5ZC@dfw.net
---

40. Instant Track Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-01-06 00:00:00 UTC
From: braymond@ns.poweramp.net
Message-ID: <braymond.9.005A1346@ns.poweramp.net>
Source record: 23307

I recently moved up to a Pentium computer and now Instant Track has problems displaying the updated data on the screen. I have heard of this problem, but do not recall what if any, the cure may be.

Is there anyone out there that recalls this problem.

Bob, KG7WC

****
* BRAYMOND@NS.POWERAMP.NET - Spokane, WA - Amateur Radio KG7WC *
****

41. Radio Meteor Obs Bull. Dec 1995: Geminids, Ursids

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.48.30EF9FD9@vvs.innet.be>
Source record: 23308

Radio Meteor Observation Bulletin No. 29 Jan 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P.Bus
Location: Groningen, The Netherlands (6 33' E, 53 13' N)
Frequency: 66.89 MHz
Transmitter Location:
Krakow, Poland, 120 kW, Distance 1001 km
Antenna: Yagi, 3 elements, Azimuth 106 o (=ESE), elevation 12 o
Receiver: Bearcat UBC 177XLT Scanning Radio
Sensitivity: 0.3 microvolt
Observing method: Listening

Leonids 1995

Long duration reflections >1 sec during one hour intervals starting at 22h UT:

Nov 10/11	Nov 17/18
22h 11	12
23 9	9
0 4	14
1 7	20
2 4	18
3 7	28
4 6	26
5 4	18
6 3	22
7 3	19
8 7	10
9 6	17

Long duration reflections >6 sec during one hour intervals starting at 22h UT:

Nov 10/11	Nov 17/18
22h 1	2
23 1	2
0 2	10
1 3	9
2 0	9
3 2	11
4 1	11
5 1	11
6 0	15

7 1 12
8 3 5
9 2 11

Notes:

After correction for sporadic activity and Observability Function (after Hines), maximum activity occurred on November 18 around 2.5h UT, Solar Longitude 235.32 (J2000.0).
In 1994 on Nov 18 the activity was much higher and the observed maximum occurred on November 18 around 8.5 h UT, Solar Longitude 235.83 (J2000.0).

Alpha Monocerotids

Raw counts of reflections during 5 minutes starting at 00h05m UT.

1995 Nov 22 Nov 25 Nov 26

0h05m 12 12 11
0 10 13 13 11
0 15 14 13 9
0 20 13 15 17
0 25 19 17 16
0 30 17 13 12
0 35 12 15 19
0 40 9 11 11
0 45 16 11 15
0 50 9 9 14

1 05 19 11 11
1 10 17 12 13
1 15 16 9 12
1 20 16 16 11
1 25 19 13 12
1 30 22 13 12
1 35 15 11 11
1 40 15 10 9
1 45 13 13 8
1 50 10 10 10
1 55 13 11 12
2 00 13 12 12
2 05 11 13 15
2 10 15 12 14
2 15 10 11 9
2 20 11 10 10
2 25 8 10 13
2 30 12 8 11
2 35 14 13 10
2 40 11 11 8
2 45 13 12 9
2 50 15 17 13

Total time of long-duration reflections (>1 sec) per 5-minute interval
on 1995 November 22 starting at 1h05m UT (between brackets the number of
reflections):

1h05m 11(6)
1 10 32(6)
1 15 81(11)
1 20 99(7)
1 25 117(10)
1 30 137(16)
1 35 107(10)
1 40 32(6)
1 45 11(2)
1 50 18(2)
1 55 0
2 00 0

Ursids 1995

Raw counts of reflections during one hour intervals starting at 22h UT:

22 dec 23 dec
------ ------
20h 114 114
22 197 121
23 178 104
24 192 120

Peter Bus / via Ton Schoenmaker

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA, Bratislava
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are

available for further analysis. Reduction software for DOS and
Windows available].

December 1995
Geminids, Ursids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Dec	UT											
1995	20h	21	22	23	00	01	02	03	04	05	06	07
1- 2	35	52	74	61	69	64	69	75	95	63	75	57
2- 3	36	50	68	56	71	103	73	72	70	67	70	74
3- 4	41	67	54	71	63	58	74	71	69	67	115	75
4- 5	28	51	41	52	52	74	74	80	70	80	108	81
5- 6	16	25	27	36	39	53	56	80	67	52	56	60
6- 7	17	21	23	41	46	45	56	61	67	70	62	67
7- 8	24	32	43	45	56	58	86	49	64	41	62	73
8- 9	18	37	48	63	66	70	68	77	63	82	87	91
9-10	40	59	57	53	57	56	77	65	67	62	112	88
10-11	80	88	60	65	64	86	70	65	55	65	85	97
11-12	39	97	84	87	80	77	81	85	84	73	92	99
12-13	57	67	69	75	84	92	75	109	66	55	98	128
13-14	83	73	114	89	68	61	60	70	75	54	147*	227*
14-15	108	105	118	91	100	87	68	89	67	70	112	76
15-16	53	49	54	34	52	52	62	68	61	57	60	60
16-17	15	34	35	42	32	25	44	39	45	34	40	49
17-18	27	29	37	49	53	55	62	81	72	78	70	74
18-19	17	27	54	47	63	74	60	87	81	65	77	72
19-20	29	40	34	59	54	56	89	74	88	89	70	88
20-21	17	18	25	30	42	47	31	48	60	40	56	60
21-22	-	-	-	-	-	-	-	-	-	-	-	-
22-23	40	54	75	80	85	79	64	90	90&	89&	106&	89
23-24	37	20	39	33	44	58	69	58	89	64	84	88
24-25	17	24	30	41	46	38	38	49	60	58	82	69
25-26	19	21	46	49	51	55	60	75	89	77	96	91
26-27	22	35	24	18	42	46	45	64	65	50	50	57
27-28	13	24	25	44	38	29	44	32	46	58	56	68
28-29	15	15	20	23	31	28	42	55	66	52	75	59
29-30	21	14	23	23	34	38	36	43	43	38	63	57
30-31	6	13	34	30	40	40	56	58	75	89	71	88
31-01	-	-	-	-	-	-	-	-	-	-	-	-
1995	20h	21	22	23	00	01	02	03	04	05	06	07
Dec	UT											

Notes:

. * maximum Geminid activity on the morning of Dec 14.
Best forward scatter conditions for this setup between 2h and 8h UT.
Compare with last years's results in RMOB9412.

. & some Ursid activity on Dec 22-23. The radiant is circumpolar for this location. Apparently, no outburst took place.

Maurice De Meyere / Chris Steyaert

Observer: Werfried Kuneth
Location: Villach, Austria (46 37' N, 13 53' E)
Frequency: 59.250 MHz, SSB mode
Transmitter location: 150 kW TV video carrier from Bucaresti, distance 950 km, east. Sometimes other TV video carriers are selected.
Antenna: dipole with reflector, direction east.
Frequency 1: 59.250 MHz, SSB mode, 150 kW TV video carrier in Bucaresti, distance 950 km, east.
Frequency 2: 48.246 Mhz, SSB mode, 100 kW TV video carrier Location Germany, distance 550 km, northwest.
Dipole used alternating with frequency 1.
Receivers: Several, incl. homemade converter. AGC enabled. No preamplifiers.
Observing method: the audio signal is fed into a real time FFT display (FFTDSP program from AF9Y) on the PC where 640 channels of 2Hz width are recorded and stored continuously. Every meteor reflection produces a distinct whistle, which is recorded easily by the real time FFT program.
From the saved .GIF files, reflections of at least 15 seconds are taken to get the one hour intervals count starting at UT:

The following figures give information about the total length of the meteor reflections during one hour, expressed in percentage of time.

Total length of meteor reflections during one hour on receiver # 1 :

Dec UT
1995 6h 7h 8h 9h 10h 11h 12h 13h 14h 15h 16h 17h 18h 19h 20h 21h 22h 23h
---
1, 0, 4, 3, 6, 4, 4, 0, 0, 0, 2, 0, 0, 0, 0, 0, 0, 0, 0
2, 6, 4, 5, 4, 5, 3, 3, 5, 4, 0, 0, 0, 5, 0, 6, 6, 6, 10
3, 9, 12, 11, 0, 6, 5, 4, 4, 3, 4, 0, 4, 4, 0, 0, 8, 5, 0
4, 0, 0, 0, 0, 0, 0, 0, 0, 5, 3, 0, 0, 0, 3, 3, 4, 3, 5
5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 2, 5, 6, 5, 5, 5
6, 12, 11, 8, 10, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3, 6, 9
7, 11, 9, 8, 7, 6, 5, 4, 3, 4, 5, 3, 0, 0, 0, 0, 5, 5, 7
8, 13, 8, 10, 9, 0, 0, 0, 0, 0, 6, 5, 5, 0, 0, 0, 8, 8, 9
9, 12, 12, 9, 9, 0, 0, 4, 4, 6, 7, 6, 6, 6, 7, 6, 0, 0, 5
10, 11, 9, 7, 8, 8, 7, 5, 0, 6, 0, 0, 0, 0, 0, 0, 0, 0, 0
11, 30, 22, 18, 23, 17, 15, 10, 7, 9, 8, 11, 0, 0, 0, 0, 0, 8, 10
12, 0, 23, 17, 21, 18, 17, 12, 7, 7, 8, 8, 11, 0, 0, 0, 0, 11, 11
13, 22, 15, 16, 10, 9, 6, 3, 5, 4, 4, 5, 0, 18, 18, 19, 18, 23, 21
14, 0, 39, 21, 14, 8, 7, 4, 4, 6, 5, 8, 10, 0, 0, 26, 18, 20, 0
15, 34, 22, 17, 13, 9, 7, 3, 4, 2, 4, 0, 0, 0, 5, 7, 0, 7, 13
16, 0, 21, 14, 12, 11, 7, 0, 8, 9, 8, 0, 0, 0, 0, 7, 7, 5, 8
17, 8, 12, 8, 10, 12, 12, 9, 0, 0, 0, 0, 0, 0, 0, 0, 4, 8, 9
18, 15, 16, 11, 12, 9, 9, 5, 6, 5, 4, 3, 0, 9, 7, 9, 0, 0, 8
19, 14, 13, 20, 18, 20, 7, 5, 6, 9, 8, 4, 0, 0, 0, 5, 5, 7, 6

20, 11, 15, 19, 31, 42, 20, 6, 3, 4, 4, 0, 5, 6, 4, 5, 7, 7, 9
21, 0, 19, 15, 15, 12, 11, 9, 8, 7, 8, 41, 8, 0, 6, 7, 6, 7, 7
22, 18, 15, 22, 17, 12, 15, 12, 6, 8, 10, 0, 8, 10, 8, 9, 8, 7, 10
23, 17, 9, 11, 13, 13, 8, 6, 6, 5, 5, 5, 4, 9, 5, 6, 6, 7, 10
24, 0, 20, 19, 22, 18, 12, 16, 12, 8, 8, 9, 6, 9, 5, 7, 0, 6, 6
25, 17, 13, 0, 0, 12, 10, 7, 10, 7, 11, 19, 0, 3, 5, 4, 7, 7, 15
26, 0, 6, 6, 0, 3, 0, 11, 5, 0, 0, 5, 5, 5, 4, 6, 8, 7, 6
27, 8, 16, 9, 14, 8, 7, 5, 4, 7, 0, 0, 0, 0, 0, 6, 7, 7, 7
28, 11, 25, 17, 13, 14, 11, 12, 7, 7, 9, 9, 0, 7, 5, 8, 0, 12, 10
29, 0, 10, 15, 15, 8, 0, 0, 0, 9, 9, 0, 6, 5, 8, 8, 6, 7, 8
30, 0, 10, 8, 9, 5, 0, 9, 0, 0, 0, 0, 5, 7, 6, 7, 7, 9, 12
31, 0, 13, 11, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

1995 6h 7 8h 9h 10h 11h 12h 13h 14h 15h 16h 17h 18h 19h 20h 21h 22h 23h
Dec UT

Total length of meteor reflections during one hour on receiver # 2 :

Dec UT
1995 0h 1h 2h 3h 4h 5h 6h 7h 8h 9h 10h 11h 12h 13h 14h 15h

1, 6, 0, 0, 7, 7, 6, 9, 7, 9, 7, 9, 9, 5, 4, 5, 3
2, 6, 8, 6, 8, 7, 6, 8, 7, 8, 6, 7, 0, 0, 0, 0, 0
3, 6, 6, 6, 7, 5, 0, 0, 0, 10, 0, 0, 0, 0, 0, 0, 0
4, 6, 6, 7, 7, 7, 6, 6, 10, 7, 6, 7, 6, 4, 5, 3, 0
5, 6, 6, 7, 7, 6, 6, 8, 8, 8, 6, 0, 0, 5, 4, 4, 3
6, 5, 0, 0, 8, 7, 0, 0, 0, 0, 9, 7, 7, 7, 5, 5, 5
7, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
8, 6, 8, 10, 10, 11, 10, 9, 0, 0, 0, 0, 0, 0, 0, 0, 0
9, 4, 7, 8, 8, 6, 7, 7, 0, 0, 0, 0, 0, 0, 0, 0, 0
10, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
11, 0, 0, 0, 0, 0, 0, 0, 0, 7, 7, 6, 0, 0, 0, 0, 0
12, 8, 10, 13, 10, 12, 12, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
13, 7, 13, 15, 13, 10, 10, 0, 0, 0, 0, 0, 0, 4, 0, 0, 0
14, 12, 16, 17, 13, 14, 12, 14, 17, 10, 9, 7, 6, 4, 4, 4, 3
15, 10, 12, 15, 13, 13, 11, 14, 10, 8, 8, 8, 10, 7, 6, 5, 5
16, 5, 7, 9, 9, 12, 10, 8, 0, 0, 0, 0, 0, 0, 0, 0, 0
17, 5, 5, 6, 7, 7, 11, 7, 10, 4, 6, 6, 5, 0, 0, 0, 0
18, 3, 4, 4, 5, 5, 6, 6, 6, 11, 7, 8, 5, 4, 4, 3, 3
19, 6, 6, 6, 7, 9, 8, 7, 8, 8, 9, 8, 7, 5, 5, 4, 3
20, 5, 6, 6, 7, 8, 8, 0, 10, 9, 7, 19, 5, 8, 5, 4, 0
21, 5, 4, 6, 7, 9, 8, 8, 8, 6, 8, 9, 7, 6, 6, 3, 0
22, 5, 6, 7, 5, 7, 8, 9, 12, 11, 7, 10, 9, 10, 6, 6, 5
23, 5, 5, 6, 6, 7, 8, 8, 6, 6, 8, 6, 5, 5, 3, 6, 4
24, 6, 6, 8, 8, 10, 6, 7, 10, 10, 11, 9, 8, 7, 5, 4, 3
25, 6, 6, 8, 7, 8, 8, 8, 11, 10, 0, 9, 5, 5, 3, 3, 3
26, 4, 6, 6, 6, 6, 8, 8, 5, 6, 0, 7, 5, 4, 6, 0, 4
27, 7, 9, 10, 0, 13, 9, 11, 10, 0, 6, 9, 9, 7, 0, 0, 6
28, 7, 8, 7, 7, 11, 9, 7, 6, 9, 10, 8, 0, 9, 6, 0, 3
29, 7, 8, 8, 8, 8, 0, 0, 0, 0, 0, 7, 6, 7, 0, 4, 3
30, 6, 6, 6, 6, 6, 7, 5, 8, 6, 5, 5, 0, 4, 0, 0, 0

31, 4, 6, 6, 7, 7, 8, 6, 5, 6, 0, 0, 0, 0, 0, 0, 0

1995 0h 1h 2h 3h 4h 5h 6h 7h 8h 9h 10h 11h 12h 13h 14h 15h
Dec UT

Notes:

. 0 (zero) means no data available.

. the complete figures for Oct, Nov and Dec 95 including summary GIF files
are now available via anonymus ftp at:
ftp://charlie.luc.ac.be/pub/icaros/werfried
The ftp site mentioned in the RMOB9511 is no longer in use.

. local time conversion: one hour ahead of UT (06h00 UT is 07h00 local).

Werfried Kuneth

Observer: Ingo Reimann
Location: Luebeck, Germany (10 51'01" E, 53 57'21" N, 13 m above sea level)
Antenna: 6 element Yagi
Frequency: 88.40 MHz (three or more stations)
Antennae: 6 element Yagi, geographical azimuth 340 o, elevation 53 o
Receiver: Technics ST-Z55 with SU-V505
Observing method: listening (tape-recordings)

Raw counts of reflections during one hour interval starting at UT:

Nov | UT
1995 | 01h 02 03 04 08 09 10 11 12
---
16 | 15 23 15 26 10 18 18 15 18
17 | 25 43 48 43 31 24 32 31 22
18 | 24 30 54 39 32 29 27 24 26
19 | 20 26 22 26 17 20 19 15 18
20 | 18 15 28 23 18 - - - 16

26 | 30 19 28 21 22 19 10 13 -

1995 | 01h 02 03 04 08 09 10 11 12
Nov | UT

Bright meteors on November 18, 1995 around 03h UT:

Time Number reflections
>= 2 seconds
--- ---
2h 20-30m 0
30-40m 1 (15 seconds long)
40-50m 1
50-60m 3 (one of 88 seconds)
3h 00-10m 4 (one 12s, one 68s)
10-20m 0

20-30m 0
30-40m 1
--------- -------------------------

Ingo Reimann / via Jeroen Van Wassenhove

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: narrow band FM, detected signal level >-122dBm.
Antenna: 2 element Yagi with 4dBd gain to SW.
Antenna Azimuth: 45 o
Computer: T-1000SE
Data sampling system: threshold crossing detection is fed in binary
form (1 bit) from the receiver to the computer.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.

Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft42.zip

Counts in one hour intervals starting at:

Geminids 1995

UT |12 Dec 13 Dec 14 Dec 15 Dec

0h | 496 700 1161 896
1 | 430 493 925 742
2 | 344 531 999 481
3 | 457 689 1138 676
4 | 658 917 1552 812
5 | 703 824 1450 684
6 | 563 759 1191 617
7 | 463 605 1005 476
8 | 427 549 727 519
9 | 408 411 529 421
10 | 318 374 454 364
11 | 267 266 295 365
12 | 284 273 284 269
13 | 266 175 306 179
14 | 197 246 325 149
15 | 233 327 392 187
16 | 305 332 453 183
17 | 321 465 460 270
18 | 345 693 1032 224
19 | 465 1019 784 305
20 | 575 1111 762 322
21 | 708 1178 1268 300
22 | 678 1256 1355 365

23 | 747 1207 974 387

UT |12 Dec 13 Dec 14 Dec 15 Dec

Ursids 1995

UT |20 Dec 21 Dec 22 Dec 23 Dec
---
0 | 325 349 287 287
1 | 339 350 257 318
2 | 308 320 339 349
3 | 370 388 359 331
4 | 389 358 277 424
5 | 341 350 300 322
6 | 335 462 258 316
7 | 324 341 266 314
8 | 248 370 362 256
9 | 278 314 303 290
10 | 312 270 315 285
11 | 237 287 354 178
12 | 221 225 264 269
13 | 188 188 220 191
14 | 163 147 260 159
15 | 177 171 222 127
16 | 156 158 184 134
17 | 154 101 208 148
18 | 186 146 271 178
19 | 174 137 232 185
20 | 169 181 282 172
21 | 248 216 279 177
22 | 318 254 367 290
23 | 294 247 378 359

UT |20 Dec 21 Dec 22 Dec 23 Dec

. Geminid maximum approximately on Dec 14, 4h - 5h UT

Ilkka Yrlola / via M. De Meyere

2. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

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--
Christian Steyaert (RMOB9512) 7 Jan 1995
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42. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: cv282@FreeNet.Carleton.CA
Message-ID: <DKsJz5.57K@freenet.carleton.ca>
Source record: 23309

John E. Stein (johnestein@mcn.net) writes:
> Hi, I'm brand new to the hobby of amatuer radio and would like to try to work
> the MIR space station. I've looked in my ARRL handbook and can't find the
> uplink and downlink frequencies for MIR. Maybe I'm just not looking in the
> right places. I'd like to try both packet and voice communication.
>
> Thanks!
> John Stein
> KC7MRY

145.55 simplex. Mostly Packet, if your're lucky voice. You'll need to use
a tracking program.

--

43. Hubble Downlink freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: keeth@su1.in.net
Message-ID: <4cp9sm$pq0@su3.in.net>
Source record: 23310

According to SATELLITE TIMES Nov/Dec 95, the Hubble usually communicates to NASA's Tracking and Data Relay Satellite System (TDRSS). Two steerable high gain antennas are used. Freqs are 2255.5 Mhz and 2287.5 MHz. Low gain antennas receive ground commands and transmit engineering data on freqs from 2100 to 2300 MHz.

73,
Jim AF9A

44. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: tom@n1phx.mv.com
Message-ID: <DKsKs7.J3H@granite.mv.net>
Source record: 23311

johnestein@mcn.net (John E. Stein) wrote:

>Hi, I'm brand new to the hobby of amatuer radio and would like to try to work
>the MIR space station. I've looked in my ARRL handbook and can't find the
>uplink and downlink frequencies for MIR. Maybe I'm just not looking in the
>right places. I'd like to try both packet and voice communication.

>Thanks!
>John Stein
>KC7MRY

They are currently using 145.55 FM symplex but there are changes
coming. 73 de N1PHX

45. Keplerian elements

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: ta2ei@antrak.ta2ka.ampr.ORG
Message-ID: <1582@antrak.ta2ka.ampr.org>
Source record: 23312

GM
If it's possible wuold you pse send me keplerian elements data regularly?
i am looking for particularly NOAA 9,10,11,12 and Meteor 2-21, 3-4, 3-5
and amateur satellites.
Tnx.
Recep Aydin Gulec
ta2ei
ta2ei@antrak.ta2ka.ampr.org

46. Comment 01/07/96 12:23pm

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: Joseph.Isbell@333.woodybbs.com
Message-ID: <ea5_9601072249@woodybbs.com>
Source record: 23313

```
-> Joe -
->
-> I don't know what happened, but most files in area #25 have been
-> deleted. I'll re-populate with fresh data.
->
-> 73, Ken

Thats weird.. I didn't do anything!!!!

Thanks
Joe
--
|Fidonet: Joseph Isbell 1:2619/333
|Internet: Joseph.Isbell@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.
```

47. Comment 01/07/96 12:23pm

Newsgroup: rec.radio.amateur.space
Date: 1996-01-07 00:00:00 UTC
From: Ken.Ernandes@333.woodybbs.com
Message-ID: <ea4_9601072249@woodybbs.com>
Source record: 23314

Joe -

I don't know what happened, but most files in area #25 have been
deleted. I'll re-populate with fresh data.

73, Ken
--
|Fidonet: Ken Ernandes 1:2619/333
|Internet: Ken.Ernandes@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

48. Yaesu 5400 noise

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: tom_boza@ccm.ch.intel.com
Message-ID: <4crf5v$1534@chnews.ch.intel.com>
Source record: 23217

My Yaesu 5400 rotor control box is generating noise hash on the HF bands. If I turn the contol box off, the noise disapears. Is anyone else having this problem? If so, is there a fix?

WB7ASR...
Tom_Boza@ccm.ch.intel.com

49. Re: WTB/R: Service manual IC-211

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: kc5egg@eule.lanl.gov
Message-ID: <4crehr$8sc@newshost.lanl.gov>
Source record: 23218

Wayne,

I used to own one of the IC-211s and as I recall Icom told me there never was a service manual per se. Icom is on compuserve. If you can't get on compuserve send me an e-mail and I will get you their internet address.

73 Jerry

50. Re: STS-72 When?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: js@ibbs.av.org
Message-ID: <DKv8EI.8DE@ibbs.av.org>
Source record: 23219

Philip Chien (kc4yer@amsat.org) wrote:
: In article <DKH1F1.7B3@ibbs.av.org> Jeff Stillinger, js@ibbs.av.org
: writes:
: >So when is STS-72 going to
: >launch?

: January 11th 4:18 am Eastern Time - ought to be a nice night launch.
: Since this mission is a grounds-up rendezvous the window moves forward by
: about 30 minutes each day to match the plane of SFU's orbit. (SFU =
: Space Flyer Unit, the Japanese freeflyer which will be returned in the
: shuttle's cargo bay).

Thanks Philip.

: >Oh, BTW. What happend to NASA Select?

: NASA TV is shutdown due to the government furlough. Only critical
: government functions have been permitted during the furlough - which
: fortunately includes preparing STS-72 for launch and the downstream
: missions. If you look on Spacenet 2 Transponder 3 (channel 5) you can
: occasionally see some engineering video, or a scrambled signal.

Yha, that would figure. I guess everyone is going back to work from what
I hear on the news.

--

Jeff Stillinger - KB6IBB js@ibbs.av.org
PSC Box 3429 js@red-eft.la.ca.us
Edwards AFB, CA 93524 +1 805 258 7303 8N1
---

51. What Is R.R.A.S?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: Tripwire@ix.netcom.com
Message-ID: <4cs96a$rje@ixnews3.ix.netcom.com>
Source record: 23220

Hello, there

Please forgive my ignorance, but, what is rec.radio.amateur.space about? I'm a member of the Planetary Society, but, have never heard of your group. Where can I find the FAQs? Could you please e-mail me at tripwire@ix.netcom.com? I sure would appreciate anyone taking just a moment to enlighten me. It sounds way cool.

Tom

52. Re: Instant Track Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: kc5egg@eule.lanl.gov
Message-ID: <4creci$8sc@newshost.lanl.gov>
Source record: 23221

I don't recall either but logic points me toward a non-standard display driver. A lot of the cheaper Pentiums seem to have "Harry's discount video boards" in them. I have had this trouble with other code where the video card was not truly backward compatible.

73 Jerry

53. Web Page with MODs, Calls lookup, Ham links, Swap page, and more!!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: David Mclean <dmclean@dfw.net>
Message-ID: <4cpord$gok@fnord.dfw.net>
Source record: 23315
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

I would like to welcome all of you to my web page. The address of my web page is "http://www.dfw.net/~dmclean". I have many links that you will like. Here is a list of things that I have on my Web page:
1. Swap Page
2. Mods page
3. QRZ call lookup
4. Repeters freqs.
5. Links to F.C.C, A.R.R.L, and many more.
Check it out. You will like it.
--
David Mclean
From The World of Hamradio
KC5NNV is Clear!

---

54. HamCom '96 Speaker's Forums

Newsgroup: rec.radio.amateur.space
Date: 1996-01-08 00:00:00 UTC
From: craigs@ti.com
Message-ID: <4cre3g$eiv@superb.csc.ti.com>
Source record: 23316

The HamCom '96 amateur radio convention is expanding its focus this year, with a theme of "Computers, Satellites, and Microwaves in Today's Amateur Radio" and is looking for speakers who can address these topics. Of particular interest are programs which bridge these topics (High speed packet on the microwave bands, packet operation via satellite, etc.). Speaker sessions are typically 20 to 30 minutes in length. HamCom '96 runs Friday, Saturday, and Sunday, June 7 - 9, with speaker's forums all day Saturday and morning on Sunday.

If you are interested in speaking at HamCom '96, or have suggestions for speakers, please contact me at email address craigs@ti.com, or via phone at (214) 952-4616.

```
Craig S. Young, KA5BOU

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------------------------------------------------------------------------
Craig S. Young "I speak only for me, not TI"
Texas Instruments Incorporated
2501 W. University, MS 8041 email: craigs@ti.com
McKinney, TX 75070 phone: (214) 952-4616
------------------------------------------------------------------------
```

55. 16 Channel Logic Analyzer for trade/sale

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: "Walt W.", dfheli@Gramercy.ios.com
Message-ID: <4cuc50$2e9@news.ios.com>
Source record: 23222

Hello,

I have for sale or trade a Gould / Biomation K-102-D
16 channel logic analyzer.
This instrument has self contained 7.0" crt display.
The instrument was used for GPIB interface design &
analysis. It is a great tool. It resolves glitches to 5 ns.
The instrument needs pods.
It works.

I am asking $550 or trade?

I am looking for a HeathKit Hero Robot, I would be interested
in a trade, or maybe a CamCorder?

Interested parties may reach me at (818) 700-8915 or
dfheli@gramercy.ios.com

56. Orbital elements in nasa format

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Message-ID: <30F23DEE.167EB0E7@miage.unice.fr>
Source record: 23223

you can find a complete list of latest orbitals elements on

http://miage.unice.fr/~cecchina

73's

57. Re: Keplerian elements

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Message-ID: <30F23D40.41C67EA6@miage.unice.fr>
Source record: 23224

For you at http://miage.unice.fr/~cecchina

58. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4ctos6$rov@over.mhv.net>
Source record: 23225

In article <4cmg78$1tm@news.mcn.net>,
johnestein@mcn.net (John E. Stein) wrote:
>Hi, I'm brand new to the hobby of amatuer radio and would like to try to
work
>the MIR space station. I've looked in my ARRL handbook and can't find the
>uplink and downlink frequencies for MIR. Maybe I'm just not looking in
the
>right places. I'd like to try both packet and voice communication.
>
>Thanks!
>John Stein
>KC7MRY

Mir uses simplex on 145.550 both voice and packet. Euromir uses 145.800 for downlink and 145.200 for uplink. Euromir callsign is DP0MIR. Mir's call on 145.550 is R0MIR for the keyboard and R0MIR-1 for the Pbbs. Only ONE connect at a time on the PBBS and 7 at a time to the keyboard. After 2100 utc they are asleep and not at the station.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

59. Re: What Is R.R.A.S?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: leslie fergson <lezf@iol.ie>
Message-ID: <4csmco$nu0@barnacle.iol.ie>
Source record: 23226

Hi there.
Rec .radio.amateur.space is where radio amateurs ask questions
to other amateurs around the the world about amateur radio satellites.
We use these satsllites to commutate to each other around the world.
You need a licence to operate throught the satellites, this corse takes
about 1 year here in Ireland. Hope this answers your question.

73,s lez EI9EJB

60. Re: Instant Track Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: "Jordi C." <ea3aqr@bcn.servicom.es>
Message-ID: <4cu0ha$66k@ns.bcn.servicom.es>
Source record: 23227

Hi
I had the same problem with my Pentium , I solved it buying a new video card (#9fx-330vision).If you doni¿½t want to spend your money try to type in your autoexec.bat file this 2 lines:
MODE CON CODEPAGE PREPARE=((850) c:\dos\ega.cpi)
CON CODEPAGE SELECT=850
I hope it could work.

Good luck and 73 from Barcelona.

ea3aqr@bcn.servicom.es

61. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Message-ID: <30F23F80.2781E494@miage.unice.fr>
Source record: 23228

I know the Mir downlink frequency : 145.550 Mhz

Latest orbitals elements on http://miage.unice.fr/~cecchina

F5JHC (Montauroux,French Riviera)

62. Re: Yaesu 5400 noise

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4ctvf9$c9a@superb.csc.ti.com>
Source record: 23229

In article <4crf5v$1534@chnews.ch.intel.com>, tom_boza@ccm.ch.intel.com says...
>
>My Yaesu 5400 rotor control box is generating noise hash on the HF
>bands.
~~~~~~

Mine too Tom, I just turn it off like you do. It doesn't always generate the noise. It is more noticable if the beams are facing the operating postition. I have thought about adding some decoupling caps to the control and power lines to see if it would help. Others must be having the problem too. Maybe Yaesu has a fix for this.

Ken mbv@ti.com
~~~~~~

63. Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: allen@lmsc.lockheed.com
Message-ID: <4curv8$oss@lscruz.scf.lmsc.lockheed.com>
Source record: 23230

I have been thinking about buying an AZ-EL rotor. I see a few advertised.
Which are the good ones and which are the bad ones? Besides price. how
are they evaluated? I will be using it for 2M and 436 MHZ OSCAR antennas.

Thanks, Allen WB6RWU Capitola Ca.

64. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-09 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <4cuts4$kgn@newshost.lanl.gov>
Source record: 23231

The MIR space station is much easier to contact via radio than ANY of the USA Shuttle missions but it isn't overly easy either. I don't even bother to use satellite tracking programs for MIR any more, I just put 145.55 simplex into my 2 meter mobile and remote base memories and add it to the scanning lists. Several times a day I'll hear the packet buzzing away and with simple packet equipment I've contacted the MIR system several times but rarely have gotten more than the successful connect or a busy (DM) signal from the MIR TNC. A "busy" signal is actually, to me, a successful 2-way packet contact especially if you compare it to the usual USA SAREX policy of hoping to someday see your callsign in a published "stations heard" list. If you get a busy signal from MIR (very likely) it proves MIR has successfully heard you and you have successfully heard MIR. Full callsign exchanges and all: a legit 2-way contact. But confirming it may be a problem.
Voice operation seems to be getting rarer and rarer from MIR but the cosmonauts still pop up on voice unexpectedly from time to time. I have called them repeatedly with high and low power without success but there are at least several local stations in Northern New Mexico who have successfully QSO'ed with MIR using 10 watts or less into omnidirectional outside antennas.
--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
My views rarely (if ever) reflect those of my employers

65. Inexpensive h/h FM Scanner radio for sale.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DKyuHs.6K1@cix.compulink.co.uk>
Source record: 23232

```
Inexpensive h/h FM Scanner radio for sale.
==========================================
AOR AR 880, FM ONLY coverage, 30~49.995MHz , 138~174MHz , 436~512MHz,
830~950MHz. runs on four aaa batteries (Included). Although I have
managed to get a little further frequency coverage than this....(I.e all
of 70mcs amateur band.)

85ukp inc uk Postage.
Tel 0956-544202

Steve, NW-London-UK.
G7VFY.
```

66. RS10 Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: chand@netcom.com
Message-ID: <30f36678.4033252@nntp-server>
Source record: 23233

The RS10 beacon sure seems to be more like 29.358 than 29.357. At the beginning of a pass I hear it at 29.3585, and at the end I hear it at 29.3575.

Also, I noted my U/L and D/L frequencies at one time (145.870 and 29.364) and, accounting for the doppler shifts at that moment (-2800 U/L and -564 D/L) I calculate the actual transponder shift to be 116.5027 Mhz rather than 116.5000 Mhz.

Has anyone else made similar or contradictory observations?

-Charlie AA6YK

Charlie Hand "Men go crazy in congregations
chand@netcom.com They only get better one by one"
San Jose, Ca. -Sting

67. Yaesu G-800SDX computer control.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: "Jordi C." <ea3aqr@bcn.servicom.es>
Message-ID: <4d012k$k2s@ns.bcn.servicom.es>
Source record: 23234

Hi
I would like to control my Yaesu G-800SDX via my PC without buying an
expensive control card.Do you know how?
Thanks in advance for all information.

Jordi Carnï¿½
ea3aqr@bcn.servicom.es

68. Accessories for FT726

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DKyrFy.I8F@cix.compulink.co.uk>
Source record: 23235

Has anyone got...

Satellite module
HF Module
10m module

or a FT726 with these items added....

regards

Steve, London, England.
g7vfy
Tel 0956-544202

69. * SpaceNews 01-Jan-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4d0k66$mbi@pilot.njin.net>
Source record: 23236
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 01-Jan-96 *
Date: 10 Jan 1996 09:58:14 -0500
Organization: Rutgers University
Message-ID: <4d0k66$mbi@pilot.njin.net>

SB NEWS @ AMSAT $SPC0101
* SpaceNews 01-Jan-96 *

BID: $SPC0101

=========
SpaceNews
=========

MONDAY JANUARY 1, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* SpaceNews NEWS *
==================
SpaceNews is a non-commercial electronic journal including articles of
interest to Amateur Radio Operators involved in satellite and other advanced
areas of telecommunications. It is published every week (as time permits)
and is available for unlimited circulation provided no charges are made and
no profits are realized from its availability.

SpaceNews has been in existance for about 8 years and is available from a
variety of different electronic sources. It is widely distributed on the
Amateur Packet Radio (AMPR) network through thousands of terrestrial packet
bulletin board systems around the world. SpaceNews circulation on packet
radio follows normal AMSAT message routing. SpaceNews is also uploaded
regularly to the AMSAT-OSCAR-16 digital store-and-forward "Pacsat" satellite
in compressed (ZIP) form.

In addition to wireless circulation, SpaceNews is also posted to several
Usenet newsgroups on the Internet including: rec.radio.info, sci.space.news,
and rec.radio.amateur.space. Those with Internet access can obtain the
latest issue of SpaceNews by using the Unix "finger" command as follows:

finger magliaco@pilot.njin.net

Those with e-mail capabilities can receive SpaceNews by sending a blank
message to "infobot@infomania.com" with a subject of:

#FINGER magliaco@pilot.njin.net

Archives of SpaceNews issues from years past are available via anonymous
FTP at pilot.njin.net (128.6.7.38). Files are located under the
/pub/SpaceNews subdirectory. Archives from 1993, 1994, and 1995 have been
compressed into .ZIP files, while issues from 1996 are available individually
in ASCII text form.

* HAPPY NEW YEAR *
==================

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```
* FEEDBACK/INPUT WELCOMED *
===========================
Comments and input for SpaceNews should be directed to the editor (John,
KD2BD) via any of the paths listed below:
```

```
FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19
```

```
MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.
```

```
<<=- SpaceNews: The first amateur newsletter read in space! -=>>
```

```
/EX
```

70. * SpaceNews 08-Jan-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4d0kdq$mlb@pilot.njin.net>
Source record: 23237
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 08-Jan-96 *
Date: 10 Jan 1996 10:02:18 -0500
Organization: Rutgers University
Message-ID: <4d0kdq$mlb@pilot.njin.net>

SB NEWS @ AMSAT $SPC0108
* SpaceNews 08-Jan-96 *

BID: $SPC0108

=========
SpaceNews
=========

MONDAY JANUARY 8, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* MIR NEWS *
============
The cosmonauts on the Russian space station Mir have unpacked their new
Amateur Radio equipment and are expected to place it on the air shortly.
The new equipment includes a 70-cm FM transceiver along with some 9600 baud
packet radio equipment.

* RS-15 NEWS *
==============
G3IOR reports that RS-15's nighttime performance has changed. The transponder
now remains ON for 1 second and OFF for 10 seconds during eclipse periods.
RS-15 was seeing 36 minutes of eclipse each orbit during late December giving
a battery charge efficiency of just 72%. The eclipse commences when the
southbound satellite reaches 58N, continuing until it comes into sunlight
again at 25S. The transponder and beacon become intermittent after RS-15
has been in eclipse for 5 minutes, when the battery drops to 12v DC.

By 14th January, RS-15 will see 28 minutes of eclipse, going down to 20
minutes (85% charge efficiency) on 20th January, and 16 minutes (91%) on
22nd January. On 23rd January the satellite sees 100% sunlight again, and
should give 24 hour/day operation again.

Dave G4CUO and John G4ZHG have now worked via RS-15 all US states other than
New Mexico, Delaware, Mississippi, Alabama and of course Hawaii. While the
latter poses a problem, Dave would like to complete WAS of all mainland
states and is regularly looking for USA contacts in the US evening periods

between 0000 and 0300 UTC.

* PRC-37 NEWS *
===============
PRC-37, also known as 'JIANBING-93' is reputed to be the return package of a photo and radio 'spy-sat' that is due to re-enter in early 1996. Apparently the retro-rocket firing accidentally placed it into a highly elliptical orbit with a rather low perigee. It is designed for re-entry, and as the parachute is unlikely to deploy, will probably impact. Current studies show the 990 km apogee to be at 52N, and the 153 km perigee at 52S. No beacon frequency is known. Orbital enthusiasts may wish to study the re-entry as a precursor to the following of the demise of OSCAR-13, as few have had experience with elliptical orbiter return. No 'Chicken Little' contest has evolved to date!

Here are a late 2-line Kep-Set:-

JIANBING-93 P/L(1)
1 22870U 93063H 95335.24898568 .00304666 82639-5 20323-3 0 3248
2 22870 56.4566 96.6266 0604138 229.7187 124.9507 14.94537215 2456

[Info via Pat Gowen, G3IOR]

* DOVE NEWS *
=============
DOVE-OSCAR-17 returned to the 2-meter band sooner than expected after its recent on-board computer (OBC) crash only to experience another OBC crash on 29-Dec-95 at 0500 UTC while reloading new operating software.

Normally, the 2-meter beacon transmitter switches OFF and the S-band beacon switches ON when the OBC crashes. A hardware failure on the satellite makes software upload very difficult and risky. This most recent crash came unexpectedly, and will require investigation. Recently copied DO-17 telemetry should be forwarded to Jim White, WD0E at his e-mail address: wd0e@amsat.org.

* SpaceNews NEWS *
==================
A compressed (ZIP) archive of all 1995 issues of SpaceNews are available via anonymous FTP at pilot.njin.net in the pub/SpaceNews subdirectory. The pub/SpaceNews/webersat-images subdirectory holds some WEBERSAT-OSCAR-18 images downloaded and processed by ZL1AAN. If time permits, some of these images may be complied into a World Wide Web page over the next month or so.

* FEEDBACK/INPUT WELCOMED *
===========================
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
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PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net

SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

71. Re: Accessories for FT726

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DKytFy.25J@cix.compulink.co.uk>
Source record: 23238

FOR SALE TRIO TS120s 100w 225ukp
-------- ----------------------

TRIO TS120V HF RADIO 10 WATTS OUT (GOOD QRO RIG but can be used at qrp)
80-10M DIGITIAL DISPLAY S METER SSB/CW RIT/VOX/IF SHIFT SSB/CW BOXED
circuit diagram. MIC POWER LEADS ETC. EXCELLENT first base or mobile RADIO

225 UKP ono or part ex for ft736/726...
=========
PHONE 0956-544202

Steve Walters
G7VFY. N. London.

72. Noise in the 2m oscar window

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: Jim Fellows <jimf@corp.sgi.com>
Message-ID: <30F45AF2.41C6@corp.sgi.com>
Source record: 23239

Hi all-

Just got my brand spanking new FT-736R and wanted to start some work on the birds. I'm just starting out so I'm using a Comet GP-6 2M - 70cm vertical until I can get some beams up. I can hear some of the satellites fine (especially FO-20) on 70cm. But, when I try to hear anything in the 145.8 - 146 range for 2m I am receiving a LOT of noise. Tuning up or down 1MHz will result in a fairly quiet noise floor. The noise is broadbanded otherwise, with no detected "edges" or carriers or hint of information content. The problem exists all day and night with no descernable changes. Removing the antenna and checking eliminates any frequency dependancy on noise across 2m, so I'm guessing it isn't the radio itself. But I do live in a fairly densely populated area with TV cable in a radio noisy zone (Sunnyvale CA). Is this common for TV cable leakage to cause this, even though it does not sound like the video sideband? Anyone have any ideas on this? Could this be some spread spectrum double secret spy stuff?

Thanks,

Jim

--
It's a dog-eat-dog world and I'm wearing Milk Bone underwear.
The hills are alive, and they're coming to get YOU!!! KF6AGJ
Green Acres *IS* the place to be!
jimf@corp.sgi.com

73. Re: What Is R.R.A.S?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: ppiercey@nlnet.nf.ca
Message-ID: <4d1bvf$3k8_001@vo1he.ampr.org>
Source record: 23240

In article <4cs96a$rje@ixnews3.ix.netcom.com>,
Tripwire@ix.netcom.com (Tomahawk) wrote:
>Hello, there
>
>Please forgive my ignorance, but, what is rec.radio.amateur.space about?
>I'm a member of the Planetary Society, but, have never heard of your
>group. Where can I find the FAQs? Could you please e-mail me at
>tripwire@ix.netcom.com? I sure would appreciate anyone taking just a
>moment to enlighten me. It sounds way cool.
>
>Tom

It primarily deals with discussions of Amateur Radio as it pertains
to satellite communication and has nothing to do with astronomy
or related topics. I'm not sure what the Planetary Society is but
I am assuming it has to do with astronomy. I'm sure you'll get other,
more definitive answers.

Later...

Paul J. Piercey

VO1HE
[44.135.16.3]

Packet Address VO1HE@VO1AAA.#ENF.NF.CAN.NOAM
Internet Address ppiercey@nlnet.nf.ca
----

74. New Patches for SatTrack V3.1 Available

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: Manfred Bester <manfred@ssl.berkeley.edu>
Message-ID: <4d1j6e$t80@agate.berkeley.edu>
Source record: 23241
Cross-posted to: sci.space.shuttle,sci.space.tech,rec.radio.amateur.space

New patches for the UNIX/Linux satellite tracking software package
SatTrack V3.1 are available now from the SatTrack Web Page at:

http://www.primenet.com/~bester/sattrack.html

Manfred Bester

--
Manfred Bester
Space Sciences Laboratory
University of California
Berkeley, CA 94720

75. Orbitals elements (NASA Format)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-10 00:00:00 UTC
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Message-ID: <30F3A215.41C67EA6@miage.unice.fr>
Source record: 23242

```
latest orbitals elements on
http://miage.unice.fr/~cecchina

73's
```

76. WANTED FRODTRACK interface!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: Geert Pirens <Geert.Pirens@ping.be>
Message-ID: <30F4E77D.1FE7@ping.be>
Source record: 23243

HEllo,

Where can I Buy me a FRODTRACK interface or an interface thats compatiple
to INSTAND TRACK ??

Plaese somebody help me!

Thanks

Bye

Geert Pirens
ONL2057

77. NORAD Two-Line Orbital Element Sets (TLE736)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4d41bh$cp@blackbird.afit.af.mil>
Source record: 23244

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

```
- Current Two-Line Element Sets #736 -
Alouette 1
1 00424U 62049A 96008.23038088 .00000049 00000-0 46416-4 0 1659
2 00424 80.4545 82.5655 0024204 86.0649 274.3261 13.67859108660335
ATS 1
1 02608U 66110A 96010.47110381 -.00000138 00000-0 10000-3 0 9516
2 02608 14.6703 354.6034 0012230 79.6217 280.4493 1.00400766 23272
ATS 3
1 03029U 67111A 96009.48755010 -.00000105 00000-0 10000-3 0 4361
2 03029 14.8890 1.5187 0010345 268.6064 268.2544 1.00272764103164
Starlette
1 07646U 75010A 96007.52274806 -.00000136 00000-0 78020-5 0 9401
2 07646 49.8286 66.6724 0206139 56.5640 305.4780 13.82190282 56600
LAGEOS
1 08820U 76039A 96010.44695899 .00000015 00000-0 10000-3 0 1636
2 08820 109.8520 331.6205 0044131 163.5590 196.6342 6.38664601203698
ETS-2
1 09852U 77014A 96009.31532497 -.00000059 00000-0 10000-3 0 575
2 09852 13.0302 34.7715 0003861 134.0546 226.0196 1.00023538 16042
GOES 2
1 10061U 77048A 96010.43343672 .00000013 00000-0 00000+0 0 6262
2 10061 12.1042 38.8102 0196152 307.5280 101.8281 1.00254700 12857
IUE
1 10637U 78012A 96010.15980139 -.00000205 00000-0 10000-3 0 2138
2 10637 35.5326 85.6844 1346356 52.6443 356.2471 1.00275801 18348
GPS BI-01
1 10684U 78020A 96008.23977764 -.00000027 00000-0 10000-3 0 4184
2 10684 64.9306 28.6534 0058716 162.7914 197.4612 1.98069456116224
GPS BI-02
1 10893U 78047A 95360.71660011 -.00000028 00000-0 10000-3 0 2079
2 10893 63.2452 266.5516 0227453 14.8304 345.8844 2.01627309129311
```

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GOES 3
1 10953U 78062A 96009.11432097 -.00000119 00000-0 10000-3 0 5927
2 10953 11.1114 41.7527 0006108 153.3187 209.6766 1.00384116 17455
SeaSat 1
1 10967U 78064A 96010.07133435 .00000006 00000-0 46527-4 0 4562
2 10967 108.0007 205.5431 0002712 247.2895 112.7957 14.38080966918577
GPS BI-03
1 11054U 78093A 96009.80616026 .00000017 00000-0 10000-3 0 3751
2 11054 62.9328 264.8525 0045429 180.1045 179.9860 1.93505222125577
Nimbus 7
1 11080U 78098A 96009.54697636 -.00000043 00000-0 -13344-5 0 5560
2 11080 98.9698 239.3417 0009813 39.7216 320.4655 13.83698395869091
GPS BI-04
1 11141U 78112A 96003.95661640 -.00000027 00000-0 10000-3 0 212
2 11141 64.9305 30.9309 0048946 28.0299 332.2966 1.92894750 14698
GPS BI-05
1 11690U 80011A 96009.30421354 -.00000023 00000-0 10000-3 0 9779
2 11690 65.2685 30.1418 0154678 194.2694 165.3468 2.00569769130993
GPS BI-06
1 11783U 80032A 95358.88586530 .00000000 00000-0 10000-3 0 1217
2 11783 62.3716 259.5427 0223071 29.7157 331.6137 2.03456554115260
GOES 5
1 12472U 81049A 96006.10457356 -.00000176 00000-0 10000-3 0 9056
2 12472 7.8965 51.9176 0005088 49.0953 310.9320 1.00210279 11465
Cosmos 1383
1 13301U 82066A 96011.13191328 .00000049 00000-0 40356-4 0 4636
2 13301 82.9310 249.6751 0027249 319.0705 40.8407 13.68071341675764
LandSat 4
1 13367U 82072A 96010.68367274 .00000048 00000-0 20460-4 0 8322
2 13367 98.0987 66.2157 0005860 283.1121 76.9424 14.57166193717456
DMSP B5D2-1
1 13736U 82118A 96010.06480544 -.00000031 00000-0 53267-5 0 9259
2 13736 98.6237 200.9903 0009197 129.1663 231.0334 14.25767635678399
IRAS
1 13777U 83004A 96011.04633136 -.00000152 00000-0 -74537-4 0 1951
2 13777 98.9653 199.8994 0012442 171.1696 188.9679 13.99248731331259
Cosmos 1447
1 13916U 83021A 96008.83345416 .00000031 00000-0 16871-4 0 5594
2 13916 82.9431 309.6367 0036325 238.3641 121.3965 13.74334529641716
TDRS 1
1 13969U 83026B 96010.14115934 -.00000004 00000-0 00000+0 0 5249
2 13969 8.7214 45.2234 0003443 245.5027 106.0514 1.00431768 19783
GOES 6
1 14050U 83041A 96008.07954076 -.00000235 00000-0 10000-3 0 4740
2 14050 6.7220 55.1740 0002263 25.2480 334.7461 1.00303552104580
OSCAR 10
1 14129U 83058B 96003.82203279 -.00000137 00000-0 10000-3 0 3970
2 14129 26.4182 230.6314 5976999 339.7618 4.3050 2.05882115 66468
LandSat 5
1 14780U 84021A 96008.18299022 -.00000002 00000-0 98484-5 0 4133
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2 14780 98.3583 65.7941 0003580 72.2820 287.8768 14.57035654630484
UoSat 2
1 14781U 84021B 96008.02147107 .00000131 00000-0 29881-4 0 8537
2 14781 97.7881 6.0269 0010656 245.6303 114.3788 14.69416492633984
GPS BI-09
1 15039U 84059A 96005.96751860 -.00000032 00000-0 10000-3 0 3844
2 15039 64.5882 25.2214 0082056 18.2844 342.0645 1.92302252 84290
Cosmos 1574
1 15055U 84062A 96009.43963156 .00000041 00000-0 27438-4 0 7606
2 15055 82.9535 3.7548 0029244 67.2796 293.1445 13.73631129579055
GPS BI-10
1 15271U 84097A 96009.94044585 .00000023 00000-0 10000-3 0 964
2 15271 62.0524 259.4945 0157430 356.4598 3.5186 2.00608112 82075
Cosmos 1602
1 15331U 84105A 96008.18272775 .00000179 00000-0 18163-4 0 4448
2 15331 82.5338 263.8613 0021414 115.8590 244.4829 14.84711440609084
NOAA 9
1 15427U 84123A 96010.74996535 .00000026 00000-0 37773-4 0 5413
2 15427 98.9680 75.4277 0015623 43.3268 316.9128 14.13753444571241
GPS BI-11
1 16129U 85093A 96008.23015668 -.00000027 00000-0 10000-3 0 6988
2 16129 65.2645 28.5968 0155928 85.5659 276.2702 1.89367987 18873
Mir
1 16609U 86017A 96011.21448032 .00001907 00000-0 31939-4 0 3827
2 16609 51.6436 195.5557 0005535 197.3708 162.7101 15.57665536565383
SPOT 1
1 16613U 86019A 96008.21724484 .00000090 00000-0 62356-4 0 8877
2 16613 98.6297 79.7723 0001343 69.0125 291.1193 14.20084993197462
Cosmos 1766
1 16881U 86055A 96011.24666152 .00000177 00000-0 18406-4 0 3607
2 16881 82.5175 318.7645 0020216 132.5524 227.7395 14.83699977510421
EGP
1 16908U 86061A 96010.47319936 -.00000083 00000-0 10000-3 0 563
2 16908 50.0065 124.9546 0011039 328.6794 31.3381 12.44413674 96646
NOAA 10
1 16969U 86073A 96010.86192305 .00000001 00000-0 18334-4 0 4613
2 16969 98.5150 12.5302 0014048 95.0601 265.2181 14.24970058484058
MOS-1
1 17527U 87018A 96010.18682403 -.00000044 00000-0 00000+0 0 3738
2 17527 98.9731 75.5074 0018562 53.9494 306.3388 14.00425317452734
GOES 7
1 17561U 87022A 96010.44844271 .00000086 00000-0 10000-3 0 7119
2 17561 2.7416 70.7347 0001006 295.9593 129.8292 1.00287133 15711
Kvant-1
1 17845U 87030A 96010.89369249 -.00004742 00000-0 -56164-4 0 4977
2 17845 51.6426 197.1674 0005685 197.8225 162.2097 15.57655773499442
DMSP B5D2-3
1 18123U 87053A 96010.89224850 .00000017 00000-0 31338-4 0 2816
2 18123 98.7730 203.7538 0014401 350.5290 9.5609 14.15429579442100
RS-10/11
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1 18129U 87054A 96007.19504923 -.00000166 00000-0 -19828-3 0 1572
2 18129 82.9247 268.2657 0010073 243.8869 116.1253 13.72360392427954
Meteor 2-16
1 18312U 87068A 96010.20747747 .00000054 00000-0 35582-4 0 4517
2 18312 82.5559 118.1872 0011797 314.9543 45.0671 13.84069208424186
Meteor 2-17
1 18820U 88005A 96010.94581281 .00000040 00000-0 22158-4 0 8247
2 18820 82.5423 172.9807 0017534 15.8180 344.3522 13.84749556401620
DMSP B5D2-4
1 18822U 88006A 96010.08506817 .00000014 00000-0 24286-4 0 1593
2 18822 98.3897 209.6600 0006877 106.4953 253.6982 14.23177808411941
Glonass 34
1 19163U 88043A 96008.10092182 -.00000000 00000-0 10000-3 0 456
2 19163 65.1853 91.2753 0006955 158.0076 202.0738 2.13102426 58803
Glonass 36
1 19165U 88043C 96010.50395913 .00000001 00000-0 10000-3 0 4525
2 19165 65.1767 91.1482 0000443 149.3594 210.6964 2.13102147 59471
METEOSAT 3
1 19215U 88051A 96006.59343782 -.00000086 00000-0 10000-3 0 2309
2 19215 2.9402 68.6312 0003825 146.0904 213.6563 0.96947836 15605
AO-13
1 19216U 88051B 96010.43115822 -.00000382 00000-0 -70792-5 0 1338
2 19216 57.4000 141.9993 7365996 28.6721 356.7613 2.09730826 26505
OKEAN 1
1 19274U 88056A 96010.16540123 .00000279 00000-0 31873-4 0 601
2 19274 82.5134 60.4480 0018310 292.3191 67.6076 14.82433634405818
Meteor 3-2
1 19336U 88064A 96011.21845055 .00000051 00000-0 10000-3 0 4518
2 19336 82.5453 278.2036 0015723 272.5232 87.4090 13.16975990358688
Glonass 39
1 19503U 88085C 96009.12542902 -.00000039 00000-0 10000-3 0 3425
2 19503 65.6360 330.1187 0005889 162.2593 197.7599 2.13101734 56939
NOAA 11
1 19531U 88089A 96010.91055614 .00000028 00000-0 40398-4 0 3531
2 19531 99.1921 24.8458 0011782 329.5964 30.4520 14.13078433376093
TDRS 2
1 19548U 88091B 96008.63967109 -.00000183 00000-0 10000-3 0 1705
2 19548 2.2205 73.1702 0006795 175.1531 174.4781 1.00277387 13911
Glonass 40
1 19749U 89001A 96010.10195943 .00000001 00000-0 10000-3 0 5616
2 19749 65.1492 90.7337 0004277 243.0315 116.9813 2.13101542 54463
Glonass 41
1 19750U 89001B 96010.15716488 .00000001 00000-0 10000-3 0 4660
2 19750 65.1666 90.7998 0006950 238.0979 121.8939 2.13101795 54487
GPS BII-01
1 19802U 89013A 96009.60196433 .00000010 00000-0 10000-3 0 1703
2 19802 55.2669 116.9833 0027163 165.6047 194.5027 2.00565160 50518
Akebono
1 19822U 89016A 96009.66411869 .00007451 00000-0 41068-3 0 6380
2 19822 75.0976 216.2156 3757428 226.3445 95.7735 7.89540290154081
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Meteor 2-18
1 19851U 89018A 96007.53158291 .00000034 00000-0 17433-4 0 4495
2 19851 82.5178 49.9831 0016015 69.4475 290.8409 13.84403685346466
MOP-1
1 19876U 89020B 96007.81328798 -.00000081 00000-0 10000-3 0 1725
2 19876 1.6557 71.5433 0018959 276.8907 82.4167 0.97109577 5054
TDRS 3
1 19883U 89021B 96010.70715856 -.00000256 00000-0 10000-3 0 1624
2 19883 0.0256 118.5193 0003353 162.6328 41.9960 1.00272218197519
GPS BII-02
1 20061U 89044A 96009.93968378 -.00000037 00000-0 10000-3 0 1729
2 20061 54.2944 292.9769 0149376 217.0021 142.0090 2.00563219 48260
Nadezhda 1
1 20103U 89050A 96010.80970067 .00000035 00000-0 20411-4 0 6381
2 20103 82.9598 225.4658 0038153 133.0624 227.3737 13.73861964326932
GPS BII-03
1 20185U 89064A 96009.27899101 .00000009 00000-0 10000-3 0 1821
2 20185 55.0675 117.5130 0015044 304.9772 54.8784 2.00557947 46825
GMS 4
1 20217U 89070A 96010.27430556 -.00000358 00000-0 10000-3 0 2910
2 20217 1.4641 75.3946 0000862 342.7394 269.5220 1.00259780 23825
INTERCOSMOS 24
1 20261U 89080A 96009.46480152 .00000122 00000-0 29319-4 0 4673
2 20261 82.5883 12.7414 1243243 44.8628 324.6420 12.47310221285994
GPS BII-04
1 20302U 89085A 96010.81318240 .00000051 00000-0 10000-3 0 1789
2 20302 53.3015 232.8361 0013315 174.3556 185.7308 2.00561914 45655
Meteor 3-3
1 20305U 89086A 96010.66181084 .00000044 00000-0 10000-3 0 4741
2 20305 82.5451 234.1758 0007765 351.1372 8.9507 13.04417598297531
COBE
1 20322U 89089A 96010.04056851 .00000251 00000-0 18819-3 0 1808
2 20322 98.9490 27.8923 0008666 114.8158 245.3922 14.03455205314605
Kvant-2
1 20335U 89093A 96010.89369249 -.00004742 00000-0 -56164-4 0 4819
2 20335 51.6426 197.1674 0005685 197.8225 162.2097 15.57655773348454
GPS BII-05
1 20361U 89097A 96010.32592260 -.00000033 00000-0 10000-3 0 161
2 20361 55.8921 59.5659 0088423 131.5795 229.2483 2.00563586 35125
COSMOS 2054 (Altair-1)
1 20391U 89101A 96011.16824299 -.00000125 00000-0 00000+0 0 2780
2 20391 3.5367 64.4968 0001358 204.6301 245.1388 1.00275100 22417
SPOT 2
1 20436U 90005A 96010.81542771 .00000169 00000-0 10000-3 0 182
2 20436 98.7144 87.0422 0001222 72.3799 287.7509 14.20033879309363
UO-14
1 20437U 90005B 96008.17926689 -.00000013 00000-0 11929-4 0 1523
2 20437 98.5575 94.1427 0010928 320.5346 39.5039 14.29908570311040
UO-15
1 20438U 90005C 96007.26551039 -.00000052 00000-0 -33191-5 0 9489
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2 20438 98.5490 91.4535 0010077 328.5462 31.5114 14.29222027310792
PACSAT
1 20439U 90005D 96009.75257553 .00000019 00000-0 24219-4 0 9515
2 20439 98.5702 97.6532 0011223 316.7613 43.2681 14.29963664311288
DO-17
1 20440U 90005E 96009.16092089 .00000002 00000-0 17650-4 0 9516
2 20440 98.5721 97.6269 0011492 318.3978 41.6326 14.30105275311228
WO-18
1 20441U 90005F 96011.24639056 -.00000005 00000-0 14919-4 0 9564
2 20441 98.5697 99.6306 0011673 311.5392 48.4791 14.30075214311524
LO-19
1 20442U 90005G 96009.15523625 .00000018 00000-0 23877-4 0 9517
2 20442 98.5727 98.0036 0012176 317.6870 42.3376 14.30181366311246
GPS BII-06
1 20452U 90008A 96009.72564622 .00000067 00000-0 10000-3 0 1188
2 20452 54.0209 173.2517 0060701 85.5617 275.1059 2.00558878 43613
MOS-1B
1 20478U 90013A 96009.56464934 .00000090 00000-0 10000-3 0 8801
2 20478 99.1246 80.9493 0000767 7.7107 352.4065 13.94865916222305
DEBUT
1 20479U 90013B 96007.19223797 -.00000022 00000-0 14715-4 0 9501
2 20479 99.0535 62.8803 0540582 130.9922 233.9248 12.83337727277125
FO-20
1 20480U 90013C 96007.68284418 -.00000046 00000-0 -37499-4 0 8470
2 20480 99.0496 63.0999 0541067 130.3968 234.5661 12.83232219277176
MOS-1B R/B
1 20491U 90013D 96010.80881722 -.00000461 00000-0 -79883-3 0 2063
2 20491 99.0719 125.6336 0469739 305.3808 50.4233 13.02989032281234
LACE
1 20496U 90015A 96007.18869254 .00000953 00000-0 35551-4 0 6101
2 20496 43.1033 47.8332 0008871 78.0583 282.1258 15.35245470328927
Nadezhda 2
1 20508U 90017A 96010.90088560 .00000020 00000-0 45495-5 0 6399
2 20508 82.9511 359.9396 0045990 86.2599 274.3818 13.73502988294164
OKEAN 2
1 20510U 90018A 96007.50416643 .00000210 00000-0 25459-4 0 4680
2 20510 82.5222 16.0304 0020332 122.4676 237.8506 14.78564104315788
GPS BII-07
1 20533U 90025A 96010.12610355 -.00000037 00000-0 10000-3 0 1579
2 20533 54.6841 293.6341 0049352 77.2272 283.3950 2.00576041 42394
PegSat
1 20546U 90028A 96007.87233582 .00005324 00000-0 10320-3 0 8831
2 20546 94.1269 260.5739 0059364 269.1305 90.3149 15.45852307320073
HST
1 20580U 90037B 96010.81313367 .00000331 00000-0 17591-4 0 7545
2 20580 28.4690 156.5466 0006593 326.0865 33.9302 14.90999201114923
MACSAT 2
1 20608U 90043B 96009.98700196 .00000111 00000-0 16719-4 0 1528
2 20608 89.9268 174.7402 0103395 252.6400 106.3475 14.64890827302982
Glonass 44
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1 20619U 90045A 96008.12379121 -.00000047 00000-0 10000-3 0 2578
2 20619 65.2383 329.4673 0025935 212.2915 147.5466 2.13102408 43873
Glonass 45
1 20620U 90045B 96006.83471474 -.00000056 00000-0 10000-3 0 2581
2 20620 65.2310 329.5028 0007616 46.1332 313.9249 2.13102493 43886
Glonass 46
1 20621U 90045C 96007.84041853 -.00000049 00000-0 10000-3 0 8496
2 20621 65.2507 329.5233 0013298 195.9580 164.0020 2.13101708 43907
Kristall
1 20635U 90048A 96010.89369249 -.00004742 00000-0 -56164-4 0 2733
2 20635 51.6426 197.1674 0005685 197.8225 162.2097 15.57655773319286
ROSAT
1 20638U 90049A 96008.18755142 .00000229 00000-0 33844-4 0 5239
2 20638 52.9929 304.0647 0011838 8.2978 351.8206 15.07335101308031
Meteor 2-19
1 20670U 90057A 96008.35358266 .00000063 00000-0 43195-4 0 9497
2 20670 82.5464 115.6205 0016530 352.2797 7.8107 13.84152894279495
CRRES
1 20712U 90065A 96010.00603424 .00000042 00000-0 12058-3 0 2030
2 20712 18.0764 315.5903 7183192 258.4302 20.2258 2.35653499 39367
GPS BII-08
1 20724U 90068A 96008.45714884 .00000001 00000-0 10000-3 0 9841
2 20724 54.9058 115.1187 0124898 178.2250 181.8228 2.00565299 38222
Feng Yun1-2
1 20788U 90081A 96010.52180696 .00000365 00000-0 27012-3 0 6981
2 20788 98.8103 21.4533 0013798 217.4524 142.5678 14.01379483273877
Meteor 2-20
1 20826U 90086A 96008.15747483 .00000052 00000-0 33449-4 0 9605
2 20826 82.5239 52.4737 0011706 251.3927 108.5958 13.83622891266576
GPS BII-09
1 20830U 90088A 96009.00748954 -.00000034 00000-0 10000-3 0 9935
2 20830 55.8363 57.5874 0064295 99.3935 261.4059 2.00560356 38875
GPS BIIA-10
1 20959U 90103A 96008.41069042 .00000003 00000-0 10000-3 0 9567
2 20959 55.0970 117.1549 0103901 231.9773 127.0789 2.00567085 37453
DMSP B5D2-5
1 20978U 90105A 96010.76804530 .00000089 00000-0 47749-4 0 4740
2 20978 98.6176 83.0505 0078270 278.0884 81.1419 14.32614389267030
Glonass 47
1 21006U 90110A 96006.45714816 -.00000010 00000-0 10000-3 0 8228
2 21006 65.1297 90.1992 0058415 187.0440 172.9205 2.13102665 39541
Glonass 48
1 21007U 90110B 96009.46271372 .00000002 00000-0 10000-3 0 9476
2 21007 65.1463 90.1803 0035703 179.5732 180.4863 2.13101169 39590
Glonass 49
1 21008U 90110C 96010.29412723 .00000001 00000-0 00000+0 0 1743
2 21008 65.1217 90.0936 0010443 266.5793 93.3589 2.13098852 39605
AO-21
1 21087U 91006A 96008.21301566 .00000093 00000-0 82657-4 0 6666
2 21087 82.9397 80.8549 0034530 297.4920 62.2726 13.74563231247890
```

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RS-12/13
1 21089U 91007A 96010.88076097 .00000041 00000-0 27282-4 0 8582
2 21089 82.9212 306.7390 0028575 317.8362 42.0590 13.74064499247292
MOP-2
1 21140U 91015B 96010.28572569 .00000002 00000-0 00000+0 0 1324
2 21140 0.2216 62.6987 0001879 213.9851 295.3967 1.00268399 20015
Nadezhda 3
1 21152U 91019A 96010.79429780 .00000019 00000-0 37552-5 0 3286
2 21152 82.9259 263.1002 0043226 63.4618 297.0956 13.73527945242009
Glonass 50
1 21216U 91025A 96010.23010177 -.00000035 00000-0 10000-3 0 4714
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2 21218 64.9341 329.0184 0021700 46.8274 312.8266 2.13104070 37120
GRO
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2 21263 98.5687 34.3753 0013529 18.2682 341.8982 14.22589913241940
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2 21574 98.5452 87.4930 0000819 74.3933 285.7340 14.32254600234827
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2 21575 98.3739 79.2243 0008668 29.6967 330.4705 14.37006962234947
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2 21701 56.9839 26.9935 0005239 108.4715 251.6874 14.96474164236563
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Glonass 60
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Glonass 61
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UFO F1
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UFO F2
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IO-26
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1995068G
1 23740U 95068G 96010.47385804 .00000064 00000-0 -23025-5 0 213
2 23740 64.8239 200.0408 5798311 296.3837 16.2229 4.23391552 1160
GALAXY 3R
1 23741U 95069A 95363.06572554 -.00000164 00000-0 10000-4 0 219
2 23741 0.0737 297.0849 0006205 306.8401 142.0290 1.00296956 231
1995069B
1 23742U 95069B 96007.86359976 .00071861 47191-6 35495-2 0 127
2 23742 26.8962 262.4340 7199969 194.4471 120.6377 2.41918769 580
Progress M-30
1 23744U 95070A 96010.89369249 -.00004742 00000-0 -56164-4 0 274
2 23744 51.6426 197.1674 0005685 197.8225 162.2097 15.57655773 3640
1995070B
1 23745U 95070B 95355.22797706 .18043433 12725-4 19685-3 0 179
2 23745 51.6411 299.8978 0002388 341.5256 18.5837 16.50340675 436
Cosmos 2326
1 23748U 95071A 96010.42073384 .00000319 00000-0 10000-4 0 633
2 23748 65.0198 63.8502 0006214 269.6257 90.4125 15.52066558 3321
1995071C
1 23750U 95071C 95354.40085137 .43548823 87146-5 41247-3 0 49
2 23750 65.0056 134.7662 0128187 56.1759 305.6754 16.30497756 64
1995072A
1 23751U 95072A 96010.90425809 -.00000044 00000-0 00000+0 0 230
2 23751 98.7124 87.2525 0000860 110.2535 249.8722 14.21632673 1944
1995072B
1 23752U 95072B 96010.90115075 -.00000020 00000-0 10000-4 0 120
2 23752 98.5673 87.1469 0006794 96.3446 352.1618 14.24886341 1943
1995072C
1 23753U 95072C 96010.90009600 -.00000043 00000-0 00000+0 0 81
2 23753 98.5990 87.2076 0004848 95.8471 352.7871 14.24997834 1948
1995073A
1 23754U 95073A 96004.57710820 .00000000 00000-0 99999-4 0 84
2 23754 003.0690 275.4727 1712668 182.7578 176.1115 01.30272711000101
1995073B
```

```
1 23755U 95073B 96006.40177083 .10450431 -86684-5 24062-3 0 429
2 23755 27.9817 209.1767 0007856 259.0232 101.1203 16.46201404 1455
1995073C
1 23756U 95073C 96010.62240300 .00004768 00000-0 77820-3 0 83
2 23756 24.3314 273.6985 7251318 187.2134 149.3140 2.33125965 317
1995074A
1 23757U 95074A 96007.55252270 .00000701 00000-0 29660-4 0 131
2 23757 22.9853 71.8825 0013126 284.5045 75.3976 14.97585001 1207
1995074B
1 23758U 95074B 96011.19403498 .01084689 -11329-4 57156-3 0 282
2 23758 24.9505 34.8510 0232225 51.4197 310.6920 15.80867589 1825
1995074D
1 23760U 95074D 96001.35514413 .00000797 00000-0 10000-4 0 107
2 23760 22.8741 110.9500 0210834 346.8899 52.1215 15.05915113 642
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

78. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: tgliang@eskimo.com
Message-ID: <DL0F2C.CM2@eskimo.com>
Source record: 23245

In article <4curv8$oss@lscruz.scf.lmsc.lockheed.com>, allen@lmsc.lockheed.com says...
>
>I have been thinking about buying an AZ-EL rotor. I see a few advertised.
>Which are the good ones and which are the bad ones? Besides price. how
>are they evaluated? I will be using it for 2M and 436 MHZ OSCAR antennas.
>
>Thanks, Allen WB6RWU Capitola Ca.
Hi Allen. I have the YAESU G-5400B rotator operating with the Kansas City driver/tuner. That is one of the cheapest commercially made, and it always worked. I have M2 2M, 70cm, and a Bob Myers s-mode 2.4 ghz antenna. I do not have any problem with chatter (dead band set at 5 degrees), or any other problem. Tom

79. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DL0M5y.BC7@pe1chl.ampr.org>
Source record: 23246

In <4curv8$oss@lscruz.scf.lmsc.lockheed.com> allen@lmsc.lockheed.com (Allen Fugelseth) writes:

>I have been thinking about buying an AZ-EL rotor. I see a few advertised.
>Which are the good ones and which are the bad ones? Besides price. how
>are they evaluated? I will be using it for 2M and 436 MHZ OSCAR antennas.

It depends on your local weather, and the pointing accuracy that you
desire. For 2m and 70cm the Yaesu G-5400 and G-5600 are OK, but they
are known to fail after extended periods of coverage to moisture.
The moisture gets in the rotators and destroys the feedback potentiometers.

The potentiometers are also not accurate enough for SHF antenna pointing,
but mods exist to add optical encoders.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

80. New SatTrack V3.1 patches available now

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: manfred@isi5.ssl.berkeley.edu
Message-ID: <4d47t2$67c@agate.berkeley.edu>
Source record: 23247
Cross-posted to: sci.space.shuttle,sci.space.tech,rec.radio.amateur.space

Two new patches for the UNIX/Linux satellite tracking and orbit prediction program SatTrack (V3.1) are available now from the SatTrack web page at:

http://www.primenet.com/~bester/sattrack.html

-Manfred Bester

81. Construction of egg-beeter ant.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: ritz@wsunix.wsu.EDU
Message-ID: <Pine.OSF.3.91.960111123933.25876A-100000@unicorn.it.wsu.edu>
Source record: 23248

Hello, I have successfully gotting into the RS10/11 a couple of times with a vertical but i want to build an egg-beeter. The theory behind it I understand. Thanks to the Electronics Encyclopedia....excellent antanna section. This is what I need to know; are two complete loops used, which are made from one piece of wire each. Or is it like 4, semi - circles that are used. This makes the difference between a loop and a halo antanna. Also assuming each loop is complete, (no break at the top) then are the midpoints of both loops in contact?

Thank you!
Big Dave
_/ _/
_/ Ritz@wsunix.wsu.edu On the web: http://www.wsu.edu:8080/~ritz _/
_/ KC7NFZ, in Pullman: 145.47-, 146.82-, or Simplex 146.415, 146.52 _/
_/ All of the above require a 123.0 Hz tone to break my squelch _/
_/ Intertie: KB7AUK Trunk with a 179.9 Hz tone to break my squelch _/
_/ Satellite: RS10 29.36~29.4MHz Packet:KC7NFZ@w7yh.pullman.wa.usa _/
_/ _/

82. Looking for Shuttle Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: sthorpe@wasatch.com
Message-ID: <4d3mp6$iib@twin.wasatch.com>
Source record: 23249

I am looking for some way to keep in contact witht he shuttle missions.
I can't afford a sat. Dish, and have a scanner I was hoping to use. I live
in Utah, and someone gave me a freq. of 448.625, however this has
nothing but morse code on it.

Thanks for you time.

Stuart Thorpe - sthorpe@wasatch.com

83. Re: Noise in the 2m oscar window

Newsgroup: rec.radio.amateur.space
Date: 1996-01-11 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4d38l1$676@superb.csc.ti.com>
Source record: 23250

In article <30F45AF2.41C6@corp.sgi.com>, jimf@corp.sgi.com says...
>
I'm just starting out so I'm using a Comet GP-6 2M - 70cm
>vertical until I can get some beams up.
>satellites fine (especially FO-20) on 70cm. But, when I try to hear
>anything in the 145.8 - 146 range for 2m I am receiving a LOT of noise.
>Tuning up or down 1MHz will result in a fairly quiet noise floor.
>~~~~~~

Jim, the problem may be just that the antennal is a vertical, which seems
to pick up more line noise than other types of antenna. The fact that the
noise peaks inside the band of interest is normal if the antenna is tuned
correctly. The impedance will match best at the frequency where the VSWR
is at minimum, which should be in the middle of the band.
I could barely detect any signal from AO-10 or AO-13 on an optimum pass
when listening with a dual band vertical, a two meter ground plane, or a
discone antenna. What you are describing is normal for an urban noise
environment. I don't think I could hear any satellites on 2M if the power
lines here weren't buried. I use a linear polarized 11 el long (22 ft) 2M
antennal for satellite reception. If you can, use a circular polarized ant
with polarization switching for best results.

Hope this helps.

Ken K5MBV mbv@ti.com

84. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-12 00:00:00 UTC
From: kevin@TerraCom.Net
Message-ID: <4d4dge$s27@homer.alpha.net>
Source record: 23251

In article <DL0M5y.BC7@pe1chl.ampr.org>,
rob@pe1chl.ampr.org (Rob Janssen) wrote:
>
>>I have been thinking about buying an AZ-EL rotor. I see a few advertised.
>>Which are the good ones and which are the bad ones? Besides price. how
>>are they evaluated? I will be using it for 2M and 436 MHZ OSCAR antennas.
>
>It depends on your local weather, and the pointing accuracy that you
>desire. For 2m and 70cm the Yaesu G-5400 and G-5600 are OK, but they
>are known to fail after extended periods of coverage to moisture.
>The moisture gets in the rotators and destroys the feedback potentiometers.
>
>The potentiometers are also not accurate enough for SHF antenna pointing,
>but mods exist to add optical encoders.

Rob,
Where would one find info on these mods. I have 2 G-5400s. The one has been
on a 50' tower with an OSCAR 13 antenna setup. So far no problems and it's
been there for several years.

The other will be for 1.7 GHz feed on a 1 meter dish for weather satellite
(HRPT) reception. It would be great if I could improve the pointing accuracy.

Thanks!

Kevin N9JKP

****
* Kevin G. Shea N9JKP *
* 4460 Dahmen Pass *
* Cross Plains, WI 53528 USA *
* 608.789.4326,voice; 608.798.1747,fax *
****

85. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-12 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@biggulp.callamer.com>
Message-ID: <Pine.OSF.3.91.960112112957.13203J-100000@biggulp.callamer.com>
Source record: 23252

Is there an optical encoder for the 5400/5600 series of rotors? I would appreciate more information on this if so. 63 Cliff Buttschardt W6HDO

86. space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-12 00:00:00 UTC
From: rargyle@cc.weber.edu
Message-ID: <12JAN199615544993@cc.weber.edu>
Source record: 23253
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

Does anyone know of a site that list components that have been used in space?
Intended application is a polar low earth orbit, two year lifetime, 10K rad
(Si) total dose. Specific chips currently in question are: NEC uPD70236GD-16
(V53), TI TL16C550A and TL16C552, Nat.Semi. DS89C21TM, Motorola 68HC705B,
and Altera EPM7032.
--
/_/\ /_/\ bob argyle kb7kcl rargyle@cc.weber.edu http://137.190.32.131
={ 0.0 }= =(0.0)= "The plowman is broad as the back of the land he is sowing/
> ^ < > " < As he dances the circular track of the plow, ever knowing/
|m/ \m| |m/ \m| That the work of his day measures more than the planting
Tabbie & Willie and growing/Let it grow/Let it grow/Greatly yield"--Wier

87. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-12 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DL2zMu.FwJ@pe1chl.ampr.org>
Source record: 23254

In <4d4dge$s27@homer.alpha.net> kevin@TerraCom.Net (Kevin Shea) writes:

>>The potentiometers are also not accurate enough for SHF antenna pointing,
>>but mods exist to add optical encoders.

>Rob,
>Where would one find info on these mods. I have 2 G-5400s. The one has been
>on a 50' tower with an OSCAR 13 antenna setup. So far no problems and it's
>been there for several years.

>The other will be for 1.7 GHz feed on a 1 meter dish for weather satellite
>(HRPT) reception. It would be great if I could improve the pointing accuracy.

Look for info on the tracking system designed by Freddy, ON6UG.
(the actual name escapes me right now, maybe someone else can fill this in)

Probably it can be found on some amateur radio FTP sites...
There is usually some talk about it on the digital sats as well, or
you can just ask over there.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

88. SPARTAN PACKET RADIO EXPERIMENT (SPRE) Setup Info

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4d7u09$9m5@thrash.src.umd.edu>
Source record: 23255
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space,sci.space.shuttle

[See http://w3eax.umd.edu/spre.html for more info]

SPARTAN PACKET RADIO EXPERIMENT (SPRE)

Setup Information for Participating Amateur Radio (HAM) Ground Stations

By: Ken McCaughey (N3FZX)
File: ham01.txt
Date: 20-DEC-95

1.0 INTRODUCTION

The Spartan Packet Radio Experiment (SPRE) is open to amateur radio operators and schools who want to participate. This document will guide you in your preparations for the SPRE mission. Included are some guidelines that will help you to determine if you can hear SPRE and what level of equipment you will need. Please read this document thoroughly. If you have any additional questions please contact the SPRE Project (see Section 10.0).

2.0 MISSION PROFILE

SPRE is one of four experiments on-board NASA Goddard's Spartan OAST-Flyer spacecraft, also known as SP-206. The Spartan spacecraft is one of the primary payloads on the STS-72 shuttle mission slated to launch January 11, 1996.

SPRE is designed to relay ground station positions and transmit telemetry containing the GPS location of the spacecraft and housekeeping data. The GPS data is generated by another Spartan experiment and sent to SPRE via a serial connection. Special software called APRtrak (tm) will be used at SPRE ground stations to provide a mechanism to plot the positions of stations and objects world-wide using SPRE transmissions. Ground stations can transmit their locations to SPRE, and if heard, SPRE will relay GPS information back to Earth. All ground stations within range of SPRE will see the relayed station locations plotted on a map. APRtrak system can plot and track both fixed and mobile ground stations. The APRtrak software will decode and display SPRE housekeeping telemetry including temperatures, voltages, and system status, along with the geographical positions.

SPRE can be used as an educational tool in many classes including math, science, and geography. The APRtrak software with its colorful graphics

and maps is available on Internet for installation on IBM compatible computers. Even if a school is not in session during a fly-over, a simple packet radio station can be set up to listen to the SPRE telemetry and record the data for later use.

The spacecraft will be deployed by the robot arm 3 days and 2 hours (3/02:00:00) Mission Elapsed Time (MET). After deployment the shuttle will distance itself away from Spartan (up to 100 miles). The battery powered spacecraft will perform its mission following a preprogrammed routine.

SPRE operations will start 2 hours and 41 minutes after the deployment and continue for approximately 46 hours. During the mission the attitude of the spacecraft will be changing. The spacecraft will make about 33 orbits before retrieval.

Near the End-of-Mission (EOM) the shuttle will approach the spacecraft for pickup. At approximately 5/00:30:00 MET the spacecraft will be grappled by the robot arm and returned to its berth in the cargo bay, thus ending the Spartan 206 mission.

Mission Summary

Mission: STS-72, Space Shuttle Endeavour (OV-105)
Launch: January 11, 1996 at 09:18 UTC (60 minute launch window)
Orbit: 28.45 Degrees Inclination
Landing: January 20, 1996 at 04:54 UTC at KSC

Spartan Deploy: ~3/02:23:00 MET
SPRE mission: Starting 2 hours 40 minutes after Spartan deployment operational for approximately 46 hours
Operating Mode: FM, AFSK 1200 baud packet radio
Frequencies: 145.550 MHz Simplex
Callsign: W3EAX, unproto mode only, do not connect!
Retrieval: ~5/00:30:00 MET

3.0 BASIC SATELLITE COMMUNICATIONS TUTORIAL

This short tutorial is written with SPRE communications in mind. It does include some specific information regarding the Spartan orbit.

In order to communicate with a satellite, its antennas need to be within line of sight of the ground station antennas. When a satellite is in "line-of-sight", you can not necessarily see it. It only means there is an unobstructed path between the two points. Satellites can only be seen visually if they are passing over your location around dusk or dawn.

At an altitude of 165 miles, the Spartan spacecraft has a circular "foot print" that is approximately 1000 miles in radius with the spacecraft at the center. The foot print is the area of the Earth that is in line-of-sight of the spacecraft. This circular foot print moves with the

spacecraft. A ground station that is within the foot print is within line-of-sight of the spacecraft. Where you are within the foot print will determine the angle, or elevation, of the spacecraft above the horizon. During a pass, the spacecraft will rise and set like the Sun and Moon, only much faster.

The quality of a pass is determined by the maximum elevation during a pass. The higher the elevation, the better and longer the pass. The general rule of thumb is that a satellite needs to be at least 5 degrees above the horizon to be heard. However, this will vary depending on the station setup and local topography. A good pass will have an elevation greater than 20 degrees. Passes can last from as little as 10 seconds to as long as 10 minutes. Most satellite tracking software packages can predict passes accurately to within seconds if the orbital elements are up-to-date.

The Spartan spacecraft will be in a 28 degree inclination orbit. This means the orbit is tilted by 28 degrees with respect to the Earth's equator. Therefore the spacecraft will only be directly over head as far North or South as 28 degrees. However, since the spacecraft is 165 miles high and because of the size of the foot print, it is within radio range of stations much farther North or South .

As mentioned in the beginning of this section, the antennas of both the spacecraft and the ground station need to be in line-of-sight. This is not always the case during a satellite pass. This is because the antennas on most satellites have a degree of directionality to them. During a pass the antennas might not be pointing at the ground station antennas, or even the Earth. The orientation of a spacecraft is referred to as the attitude. In the case of SPRE, the antenna system was designed to be as independent of the spacecraft attitude as possible. However, there are some spacecraft attitudes that will result in a degraded signal. During the Spartan mission the attitude will be changing due to the other experiments.

4.0 CAN I DO THIS AT MY LOCATION???

The following are some things to consider if you want to participate with SPRE. There are different levels of participation to be considered as well.

4.1 SPRE Passes

Before setting up any equipment it is important to determine if SPRE will fly within range of your location. If it does, the quality of the passes needs to be considered. To make this assessment, first look at a map and determine the latitude (degrees North or South of the equator) in which your station is located.

If your latitude is greater than 43 degrees, your chances are hearing or relaying through SPRE are zero.

If your latitude is between 40 and 43 40 degrees, your chances are hearing SPRE are very poor. Your chances of relaying a signal through SPRE are about zero.

If your latitude is between 35 and 40 degrees, your chances are hearing SPRE are very good. Your chances of relaying a signal through SPRE are poor without a well equipped HAM radio satellite station.

If your latitude is less than 35 degrees your chances of hearing SPRE are excellent. Your chances of relaying a signal through SPRE are good with modest equipment if there is not much competition on the uplink.

Latitude Hearing SPRE Relaying Through SPRE

> 43 No Chance! No Chance!
40 - 43 Poor Very Poor
35 - 40 Very Good Poor
< 35 Excellent Good

4.2 Levels of Participation

There are two levels of SPRE participation. These levels have varying complexity, interaction, and equipment requirements.

Full participation would include a setup with APRtrak and an amateur radio station capable of transmitting through SPRE. This implies that the station is at a favorable Latitude (see above). A sophisticated station with big antennas and a high powered amplifier are not necessarily required for full participation.

The next level of participation centers around receiving data instead of the ability to transmit to SPRE. This mode of operation requires the least complex equipment and less effort. This may be the mode of choice for stations located in unfavorable latitudes. APRtrak along with a TNC and almost any VHF (2 meter band) radio will work, even a hand-held radio. The antenna can be as simple quarter wave vertical. The more favorable the Latitude the simpler the equipment to receive data. The station can be operated during a pass or APRtrak can be setup to just listen and collect data. All data can be saved to the computer hard disk. All data saved to disk can be replayed on the screen!

5.0 GROUND STATION SETUP

This section covers the equipment needed to participate with SPRE. It has been the goal of the SPRE Project to make it as accessible as possible to the amateur radio and educational community. We have tried to make the ground station requirements as simple as possible. In general it does not take much power to communicate with SPRE. Since the SPRE foot print is so large, it is potentially within range of dozens or even hundreds of ground stations. All these signals will be competing with each other at the SPRE receiver. If there are a lot of stations transmitting at the same time, then usually the biggest signal wins. However, if a low power transmitter

is sending at the right time it can get through just as easily. Always used the least amount of power needed to communicate with SPRE.

5.1 Hardware

IBM compatible PC:

Recommended configuration	Minimum Configuration
386, 486, or Pentium processor	XT
VGA color monitor	CGA monochrome monitor
640KB RAM	640KB RAM
4MB free hard disk space	3MB free hard disk space
3.5" floppy disk drive	3.5" floppy disk drive
RS-232 Serial Port	RS-232 Serial Port

Simple packet radio station setup:

- Licensed Amateur Radio Operator
- Terminal Node Controller (TNC)
~ TAPR-2 compatible
~ 1200 BAUD AFSK
- VHF Radio (amplifier recommended if transmitting to SPRE)
- VHF Antenna (beam recommended if transmitting to SPRE)

Note: If you have an amplifier and a beam antenna, it is more likely that you will be successful in communicating with SPRE. It is NOT, however, recommended that you purchase this equipment to attempt communications. The length and scope of the SPRE experiment is too narrow to justify a major expenditure.

5.2 Software

APRtrak:

APRtrak Version 0.5 is the program that is required to work with SPRE. APRtrak is similar to another program called APRS. However, APRtrak contains SPRE specific implementations for decoding the spacecraft position and telemetry. It is important to get familiar with APRtrak before the SPRE mission starts. This will increase for success rate. APRtrak includes documentation on how to make local maps, how to run simulations, and general information on GPS tracking.

APRtrak is available on the Internet. Below are just two of the many places on the net where APRtrak can be found:

W3EAX, University of Maryland Amateur Radio Association:
URL ftp://w3eax.umd.edu/pub/spre/aprtrak/aprtrak.zip

AMSAT:
URL ftp://ftp.amsat.org/amsat/software/PC/tracking/aprtrak.zip

Unfortunately, APRtrak for Apple and Macintosh computers are NOT supported.

Satellite Tracking:

APRtrak has the ability to track up to ten satellites. The orbital elements for SPRE and the shuttle may be loaded into the system. There are many satellite tracking programs available on the Internet. The AMSAT FTP sight has several program available. In addition, orbital elements for satellites are available on the AMSAT site.

AMSAT:
URL ftp://ftp.amsat.org/amsat/software/PC/tracking/

6.0 PRE-FLIGHT ACTIVITIES

The following are some suggested activities to work on before the launch.

- Play around with APRtrak and replay the simulations. It is important to get familiar with APRtrak before the launch.

- Identify the latitude and longitude location of your station on the APRtrak maps.

- Simulate the SPRE mission using satellite tracking software and the pre-launch orbital elements.

6.1 PRE-LAUNCH ORBITAL ELEMENTS

The preliminary orbital elements below may be used to simulate or predict when SPRE will pass over your location. It can be loaded into most any satellite tracking program. For best results, be sure your simulations use the dates and time listed in the Mission Summary above.

Note: These preliminary elements are for Spartan Spacecraft only, not the shuttle. They are subject to change.

Satellite Name: SPRE-00
Satellite NORAD Number: #40000 <--(DUMMY VALUE)
Element Set Number: 1
Elements Epoch: 96014.48984950
14 JAN 1996 @ 11:45:22.997 UTC
Orbit # at Epoch: 1
Inclination: 28.4779
RA of Ascend Node: 71.7928
Eccentricity: .001131
Arg of Perigee: 189.8166
Mean Anomaly: 358.1771
Mean Motion: 15.85695266
Acceleration/Drag: .0000177
BSTAR Drag: 0

Two Line Element (TLE) Format:

SPRE-00
1 40000U SPRE-00 96014.48984950 .00001770 00000-0 00000-0 0 11
2 40000 28.4779 71.7928 0011310 189.8166 358.1771 15.85695266 18

7.0 SPRE FLIGHT OPERATIONS

During the SPRE mission ground stations will need to have APRtrak up and running and setup for SPRE at least 15 minutes before a predicted pass. When the spacecraft initially rises above the horizon the signal will sound rather scratchy. The higher above the horizon it gets the more clear the signal will become.

Only attempt to transmit after successfully receiving some SPRE packets. Received packets are displayed at the bottom of the screen on APRtrak. If you can't hear SPRE, SPRE will most likely not hear you.

Watch the map to see other stations and the spacecraft. Do not zoom in to close or you may not see other stations. Set the zoom so that you are centered on your state and can also see at least one whole state on all sides.

7.1 OPERATING INSTRUCTIONS

DO's:

- Use APRtrak Version 0.5 to listen and/or communicate with SPRE.

- Use satellite tracking software to predict when SPRE will pass over.

- Set the comment field in APRtrak to the name of your school.

- Make sure your are recording all received data to the hard disk.

- Wait until you receive SPRE transmissions before attempting to transmit.

- Watch for other schools.

DON'Ts:

- Don't zoom in too close on the map.

- Don't attempt to connect using a conventional packet terminal program. It will not allow connects and you will be clogging the frequency with wasted transmissions.

- Don't transmit until you receive SPRE transmissions.

- If your locations has been successfully relayed by SPRE, please do not continue to transmit. Give other stations a chance to get through.

8.0 POST SPRE MISSION ACTIVITIES

The following are someone suggested activities to do shortly after the SPRE mission.

- Replay collected SPRE data using APRtrak.

- Send copies of your *.HST and *.LOG data files to the SPRE Project. We will take all the data files we receive and generate a composite file. This overview of the mission will then be made available to all schools and amateur radio operators.

9.0 QUESTIONS AND ANSWERS

Hopefully this will answer the most common questions. If not, send electronic mail to the SPRE Project (see Section 11.0 below).

Q: Do I need a GPS receiver.
A: No, APRtrack is used to setup your location parameters which are transmitted to SPRE.

Q: What is the difference between SPRE and SAREX?
A: SPRE will use packet radio in the un-connected or unproto mode. This means that stations can not connect to SPRE. This should ultimately provide more throughput. This experiment involves identifying the location of the spacecraft as well as ground stations. SPRE utilizes APRtrak with a graphical interface making it more interactive and interesting. Also SPRE is an automated system and not controlled by the astronauts.

Q: How can I find out when SPRE is passing over my location?
A: By using satellite tracking software and up-to-date orbital elements. Tracking software and is available in the Internet. Orbital elements are also available on the Internet including the SPRE WWW home page.

Q: Can the SPRE Project tell me when the spacecraft will be passing over my location?
A: No.

Q: Where can I get updated orbital elements?
A: They are available at the AMSAT FTP site and home page. During the mission they will be available on the SPRE home page (URL http://w3eax.umd.edu).

Q: Can the SPRE Project tell me what kind of antenna or radio to use?
A: No.

10.0 SPRE PROJECT

Participating stations should contact the SPRE Project so that we can try to keep you updated on any changes. Send electronic mail (e-mail) to Ken McCaughey at kenneth@w3eax.umd.edu.

SPRE Home Page: URL http://w3eax.umd.edu
Anon. FTP site: URL ftp://w3eax.umd.edu/pub/spre

The End...

89. APRtrak summary for the SPRE mission

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4d7tmp$9kc@thrash.src.umd.edu>
Source record: 23256
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.digital,sci.space.shuttle

```
APRtrak summary for the SPRE mission:
=====================================

By: Bob Bruninga (WB4APR)
File: aprthlp1.txt
Date: 11-Jan-96

MISSION SUMMARY: The Shuttle orbit is 28 degrees and should be visible
by stations south of about 43 degrees latitude. It will deploy the
SPRE for about 46 hours and then retrieve it. (Beginning Sunday morning)
While it is free-flying, SPRE will be transmitting its GPS posit and a few
channels of telemetry using standard 1200 baud AX.25 but NOT in the
standard APRS format. The SPRE TNC (W3EAX) will also be available to
digipeat GRID SQUARE posits from groundstations on 145.55 MHz.

GRID SQUARE FORMAT: Stations without APRtrak or APRS may simply place
their 6 digit GRID SQUARE in the TO address of their TNC and transmit a
UI frame via W3EAX. This is done by using the TNC command UNPROTO
GGGGGG VIA W3EAX. If you don't know your 6 digits, use GGGGAA. Set your
BEACON to every 10 seconds or so using the BEACON EVERY command. (This
will not work on many TNC's that always send their BEACON to the address
of BEACON instead of whats in the UNPROTO command). If you use the
BEACON, PLEASE make your BText as SHORT as possible. A suggested format
might be: "25W into 13db beam." When you see your packet digipeated,
STOP transmitting!

If your TNC only sends beacons to BEACON, then you will have to place your
TNC into converse and TYPE your beacon each time. In this mode,
the UNPROTO TO address with your grid square WILL be used. Please do not
send a beacon any more often than once every 10 seconds and LISTEN between
them to see if you got digipeated. Once you see yourself, STOP and let
others have a chance...

USING APRtrak: APRtrak is a significantly modified version of APRS that
will parse the special SPRE posits and telemetry. Be sure you have
version 0.5. APRtrak, like APRS, has a special SPACE mode that will
automatically transmit your GRID-SQUARE posit and will display all such
packets received on the map.

DIFFERENCES BETWEEN APRtrak and APRS:
* APRtrak was donated to the AMSAT software library. Register with AMSAT.
* APRtrak plots the movements of up to 9 satellites using KEPS.
* APRtrak ignores most terrestrial APRS posits by ignoring all packets
that use MORE than one digipeater in their path.
* APRtrak will decode the SPRE position and TELEMETRY. APRS will not.
```

* Both have SPACE mode. (alt-SETUP-MODES-SPACE) which:
- automatically inserts your GRID-SQUARE in your transmitted POSIT.
- THe period between each POSIT doubles after each transmission to minimize QRM for un-attended stations
- If the SPACE DIGIPEATER is heard, then the POSIT period is reset back to a minimum value.
- If your OWN digipeated packet is SEEN on the downllink, then your POSIT period is FORCED to 9 minutes and a CONGRATULATIONS message is displayed!
- APRtrak places the TNC in MCOM ON. This way it will not only display all packets, but this mode also enables the automatic LOGGING of ALL packets.

OPERATIONS: Be sure to PRACTICE before the SPRE mission. APRtrak and APRS are a totally different approach to packet and take some getting used to... Most APRtrak commands are single letter commands. Many display an additional menu of single letter commands. F1 brings up the HELP menu. Although you may find some APRS activity on your local area APRS frequency (try 145.79) remember that APRtrak will ignore APRS packets using more than one DIGIpeater. Use the OPS-UNPROTO command to enter the call of the local digipeater; then practice... Find someone else that is in range of the same digi and see if you can see his posit.

Another way to practice is to tune in 145.55 and monitor MIR. DO NOT SET SPACE mode however, UI packets are NOT desired via MIR. Without SPACE mode you will only transmit a packet about once every 10 minutes. If you want to be sure that you dont transmit to MIR, toggle your xmter off using the CONTROLS-XMT command.

TROUBLES: APRtrak tries to properly configure your TNC, but the manufacturers all have different command sets. Be sure to set up your TNC for 9600,N,8,1. If you see garbled packets, check your manual and be sure to use the proper PARity command to set for NO parity. To talk to your TNC while APRtrak is running, use the OPS-COMM command. (Experienced APRS users should be careful to NOT hit O-C-T out of habit, because that will place your TNC into TRANSPARENT mode!)

SPRE SET UP: Although APRtrak will decode the raw telemetry values for SPRE, it needs to have the SPRE telemetry equations loaded before it can display the proper engineering units. Use the FILES-LOAD command to load the file SPRE.BK. This tells APRtrak to use the SPRE telemetry equations. USE THE ALT-T command to see the telemetry page...

A BIG problem with some TNC's is that they monitor their OWN outgoing packets even if they are NOT digipeated. This will automatically give you the CONGRATULATINS message and cancel further transmitting EVERY time you transmit a single packet in SPACE mode. Be sure that MXMIT or whatever is the command on your TNC is OFF. If your radio echos the XMT audio back in to the TNC, this problem will also occur. If you cannot get rid of your own packets, then disable SPACE mode but be sure that GRID-TO is enabled. I think this is on the CONTROLS menu somewhere. You can still force your POSIT or BEACON to go out every now and then using

the XMT-POSIT command.

BEACON TEXT. In APRS or APRtrak, your default BEACON will be your software version number. That is a WASTE of valuable bandwidth. Be sure to change it to something SHORT and meaningful using the alt-BEACON command. Mine will probably say "25W into 13 dB." or something like that. NO NEED TO SAY your call, or your location, Thats already in the packet.

90. APRtrak - SPRE part-II

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4d7tp8$9kv@thrash.src.umd.edu>
Source record: 23257
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.digital,sci.space.shuttle

[See http://w3eax.umd.edu/spre.html for more SPRE info]

APRtrak - SPRE part-II
======================

By: Bob Bruninga (WB4APR)
File: aprthlp2.txt
Date: 11-Jan-96

Once you have APRtrak unzipped, loaded, and working with your TNC, and have READ all the files in the README directory, you will be able to rapidly move between the APRtrak screens to see the packets being parsed using several single Key commands:

SPACE BAR displays the map. Use PgUP/DN, HOME and arrows to ZOOM

L - LATEST. Will only display the LAST packet seen per station.

P - POSITS. Holds the posits of any stations reporting same.

A - ALL BEACONS. This is the chronological page of all NEW packets. It does NOT update in real time, so you have to keep pressing "A" each time you want to see the latest.

V - This is a conventional scrolling text display of raw packets

D - DIGIPEATERs. This display shows the packet headers being used.

alt-T - This page displays the telemetry.

Z - HORIZON. This is an interesting display showing what the SKY looks like from your backyard or wherever the MAP cursor is. To see the default horizon (Annapolis), center the map on your station and press Z. You can customize this HORIZON following the steps in SYSTEM\HORIZON.DAT.

alt-F FAST. This will make the satellites move FAST. It is interesting to watch on the HORIZON display.

NOTE!!!! I just discovered that APRtrak defaults to Mcom OFF. This will prevent you from capturing the REFLEX and other non APRS packets! Without Mcom ON, you also will not see the full packets on the ALL PAGE. To toggle MCOM ON, use the APRtrak CONTROLS-MCOM command.

APRtrak will then try to set MCOM on in your TNC. AEA TNC's use a different command which you will have to set yourself using the OPS-COMM mode to talk to your TNC directly.

Not only does MCOM in APRtrak turn on MCOM in your TNC, but within APRtrak it also ENABLES the saving of ALL packets including the HEADERS on the ALL page and subsequently that is what is saved in the LOG files. So even if you can't get MCOM ON in your TNC, be sure it is ON in APRtrak. When it is ON you will see it in the CONTROLS display (Hit the TAB key to show it).

Hope to see you on the map!

91. APRtrak and SPRE part III

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4d7ts4$9li@thrash.src.umd.edu>
Source record: 23258
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,sci.space.shuttle

[for more SPRE info, go to http://w3eax.umd.edu/spre.html]

APRtrak and SPRE part III
==========

By: Bob Bruninga (WB4APR)
File: aprthlp3.txt
Date: 11-Jan-96

At the bottom of this file are the latest KEPS for STS-72 and MIR. In
APRtrak, use the FILES-KEPS command to update your KEPS from this file.

NOTES:
1) Use a DOS editor to change one of the existing satellite object
numbers in APR.ORB to the object number for STS-72. That is 23762
2) Now use the FILES-KEPS (NASA format) to update from this file.
3) Do NOT use the AMSAT format for updating, because it appears to
wipe out all the satellites and only bring in the new one...
4) If you accidentally wipe out all your satellites, you can copy the
APR.BAK file to APR.ORB and you will be back in business...

Be sure your DATE, TIME and TIME ZONE are correct.

Once SPRE is deployed, do NOT update your KEPS if you want to keep
tracking SPRE. If you want to update the shuttle KEPS, then use an
editor to change the name from STS-72 to SPRE and give it a fake OBJ
number. Then change another satellite to 23762 and do an update. But
remember that the shuttle does have to come back to the SPRE position to
pick it up.

KEPS
STS-72
1 23762U 96001A 96011.54980208 .00018263 14056-8 12334-4 0 25
2 23762 28.4456 92.8486 0209086 53.8763 124.4554 15.83397765 37
Mir
1 16609U 86017A 96011.21448032 .00001907 00000-0 31939-4 0 3827
2 16609 51.6436 195.5557 0005535 197.3708 162.7101 15.57665536565383

Satellite: STS-72
Catalog number: 23762
Epoch time: 96011.54980208
Element set: 2
Inclination: 28.4456 deg
RA of node: 92.8486 deg
Eccentricity: 0.0209086
Arg of perigee: 53.8763 deg

```
Mean anomaly: 124.4554 deg
Mean motion: 15.83397765 rev/day
Decay rate: 1.82628e-04 rev/day^2
Epoch rev: 3
Check sum: 324
```

92. Re: Party like it's 1999!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: smspty@peg.apc.org
Message-ID: <15900001@peg>
Source record: 23259

As an old U.S. ham WA2GMO who has let my license expire I am faced with a new test including CW if I wish to qualify again. I don't mind. I am not a technician but it seems to me amateur radio is all about developing skills in the discipline and that includes CW.

93. Rs-15 Antennas Turn style type.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: millerj@dnaco.net
Message-ID: <4d9dh4$me6@sisko.dnaco.net>
Source record: 23260

Any one got any plans on a RS-15 turnstyle antenna, or any ideas ?
Since you are sopposed to use vert. polarized antenna.

Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

94. DL0ART/am - 4th launch scheduled (01-14-96)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: Oliver Welp <welp@uni-muenster.de>
Message-ID: <4d8j1h$1gbg@majestix.uni-muenster.de>
Source record: 23261

We finally can do it...

DL0ART/am - The Nienberge Amateur Radio Group (Germany)
plans another balloon launch on Sunday, 01-14-96.

This is our fourth flight and will be the first one
carrying
a "user access". We`ll have a 70 cm/2 m crossband repeater
aboard. All hams are invited to use this facility. Please,
show appropriate ham spirit while using the repeater!

Planned ARTOB launch 01-14-96:

Launch: # 4
Launch date: 01-14-96 (Sunday)
Launch time: 1200 UTC
Launch site: Nienberge near Muenster, Germany, JO32SA

Call sign: DL0ART/am
QRG/mod.: (1) Telemetry beacon: 145.200 MHz (F2D &
F2A)
(2) Crossband repeater (F3E):
Uplink: 432.570 MHz
Downlink: 144.470 MHz
(3) RX for remote control on 70 cm and 10 m

Power: (1) 2 W
(2) 2.5 W

Antennas: (1) groundplane
(2) big wheel - one for 70 cm, one for 2 m
(3) 70 cm: groundplane / 10 m: lamda/4

Diameter ballon: ca. 8 ft

Talk back of DF teams and ground control via repeater
Muenster,
DB0PD (R 84). Reports are welcome, please call DL3YBQ or
DL9QJ.
Or send QSL to DL9QJ via bureau, via PR or via Internet.
Each
report will be confirmed by a special QSL card of the
balloon.

Any suggestion or response is always welcome!
Best 73,
Oliver

[Oliver Welp, DL9QJ, N3NSF
Internet: n3nsf@amsat.org or welp@uni-muenster.de
PR: DL9QJ@DB0EA.#NRW.DEU.EU
phone/fax: +49-2533-7312]

95. ARLK002 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk002.1996@arrl.org>
Source record: 23262
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK002
ARLK002 Keplerian data

ZCZC SK02
QST de W1AW
Keplerian Bulletin 2 ARLK002
From ARRL Headquarters
Newington, CT January 13, 1996
To all radio amateurs

SB KEP ARL ARLK002
ARLK002 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-72
1 23762U 96001A 96011.62622535 .00001398 00000-0 30151-4 0 24
2 23762 28.4579 97.9720 0035382 51.8638 183.1994 15.42756391 45
Mir
1 16609U 86017A 96011.21448032 .00001907 00000-0 31939-4 0 3827
2 16609 51.6436 195.5557 0005535 197.3708 162.7101 15.57665536565383
AO-10
1 14129U 83058B 96003.82203279 -.00000137 00000-0 10000-3 0 3970
2 14129 26.4182 230.6314 5976999 339.7618 4.3050 2.05882115 66468
RS-10/11
1 18129U 87054A 96011.20499684 -.00000002 00000-0 -18866-4 0 1588
2 18129 82.9248 265.3021 0010178 230.6769 129.3484 13.72360713428508
UO-11
1 14781U 84021B 96008.02147107 .00000131 00000-0 29881-4 0 8537
2 14781 97.7881 6.0269 0010656 245.6303 114.3788 14.69416492633984
RS-12/13
1 21089U 91007A 96010.88076097 .00000041 00000-0 27282-4 0 8582
2 21089 82.9212 306.7390 0028575 317.8362 42.0590 13.74064499247292
AO-13
1 19216U 88051B 96011.38475840 -.00000444 00000-0 -18067-4 0 1348
2 19216 57.4029 141.8227 7366043 28.7607 356.7587 2.09731251 26528
UO-14
1 20437U 90005B 96008.17926689 -.00000013 00000-0 11929-4 0 1523
2 20437 98.5575 94.1427 0010928 320.5346 39.5039 14.29908570311040
```

```
RS-15
1 23439U 94085A 96009.09473853 -.00000039 00000-0 10000-3 0 1045
2 23439 64.8163 281.9849 0165001 227.1029 131.5940 11.27524046 42739
AO-16
1 20439U 90005D 96009.75257553 .00000019 00000-0 24219-4 0 9515
2 20439 98.5702 97.6532 0011223 316.7613 43.2681 14.29963664311288
DO-17
1 20440U 90005E 96009.16092089 .00000002 00000-0 17650-4 0 9516
2 20440 98.5721 97.6269 0011492 318.3978 41.6326 14.30105275311228
WO-18
1 20441U 90005F 96007.18834620 -.00000014 00000-0 11644-4 0 9557
2 20441 98.5702 95.6370 0012314 324.1454 35.8901 14.30074846310948
LO-19
1 20442U 90005G 96009.15523625 .00000018 00000-0 23877-4 0 9517
2 20442 98.5727 98.0036 0012176 317.6870 42.3376 14.30181366311246
FO-20
1 20480U 90013C 96007.68284418 -.00000046 00000-0 -37499-4 0 8470
2 20480 99.0496 63.0999 0541067 130.3968 234.5661 12.83232219277176
AO-21
1 21087U 91006A 96008.21301566 .00000093 00000-0 82657-4 0 6666
2 21087 82.9397 80.8549 0034530 297.4920 62.2726 13.74563231247890
UO-22
1 21575U 91050B 96008.20773185 -.00000006 00000-0 12505-4 0 6576
2 21575 98.3739 79.2243 0008668 29.6967 330.4705 14.37006962234947
KO-23
1 22077U 92052B 96010.87411647 -.00000037 00000-0 10000-3 0 5485
2 22077 66.0793 160.9264 0005462 342.3930 17.6897 12.86295101160448
KO-25
1 22828U 93061F 96009.17399361 .00000002 00000-0 18213-4 0 4226
2 22828 98.5931 87.6801 0010470 330.6896 29.3700 14.28125771 87279
IO-26
1 22826U 93061D 96007.19304898 .00000001 00000-0 18043-4 0 4438
2 22826 98.5979 85.6823 0009749 351.1149 8.9860 14.27791757118881
AO-27
1 22825U 93061C 96007.74513626 -.00000007 00000-0 14869-4 0 4449
2 22825 98.6008 86.0962 0008944 349.2342 10.8646 14.27683756118953
PO-28
1 22829U 93061G 96010.16933463 .00000038 00000-0 32788-4 0 4362
2 22829 98.5967 88.7102 0009889 328.7679 31.2916 14.28107228119335

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
January 16, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

96. Re: Noise in the 2m oscar window

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jan13.144345.6827@ke4zv.atl.ga.us>
Source record: 23263

In article <30F45AF2.41C6@corp.sgi.com> Jim Fellows <jimf@corp.sgi.com> writes:
>Just got my brand spanking new FT-736R and wanted to start some work on
>the birds. I'm just starting out so I'm using a Comet GP-6 2M - 70cm
>vertical until I can get some beams up. I can hear some of the
>satellites fine (especially FO-20) on 70cm. But, when I try to hear
>anything in the 145.8 - 146 range for 2m I am receiving a LOT of noise.
>Tuning up or down 1MHz will result in a fairly quiet noise floor. The
>noise is broadbanded otherwise, with no detected "edges" or carriers or
>hint of information content. The problem exists all day and night with
>no descernable changes. Removing the antenna and checking eliminates
>any frequency dependancy on noise across 2m, so I'm guessing it isn't
>the radio itself. But I do live in a fairly densely populated area with
>TV cable in a radio noisy zone (Sunnyvale CA). Is this common for TV
>cable leakage to cause this, even though it does not sound like the
>video sideband? Anyone have any ideas on this? Could this be some
>spread spectrum double secret spy stuff?

No such luck, it's plain old ordinary cable TV leakage. Cable channel
18 is right smack in the middle of our band. Complaints about interference
to amateur operations usually fall on deaf ears at the cable company.
But if you tell them they're interfering with your listening to aircraft
traffic on your scanner, cable trucks will be scrambling around your
neighborhood looking for the leak. The FCC isn't willing to give us
any protection, but they still get serious with cable systems interfering
with aircraft frequencies. They recently shut one cable system down
for excessive leakage that was interfering with aircraft. That's big
bucks lost, so cable systems get serious when they get a report of
leakage heard in the aircraft band, and of course, a leak is a leak,
and spills Ch 18 into our bands just the same as it spills another
channel onto the aircraft frequencies. When they tighten up the system,
both noises go away.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | emory!kd4nc!ke4zv!gary
534 Shannon Way | Guaranteed! | gary@ke4zv.atl.ga.us
Lawrenceville, GA 30244 | |

97. Hamtronics Weather Satellite Receiver

Newsgroup: rec.radio.amateur.space
Date: 1996-01-13 00:00:00 UTC
From: Chuck Freeman <cfreeman@sound.net>
Message-ID: <4d7gad$sr8@guitar.sound.net>
Source record: 23264

Has anyone out there tried the Hamtronics Weather Satellite Receiver. If so how well does it work and does it provide better pictures from the NOAA series of satellites compared to a normal narrow band scanner. Your help would be appreciated.

73's Chuck WD0ASJ

98. Re: Rs-15 Antennas Turn style type.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-14 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960114083753.7904E-100000@spacelink>
Source record: 23167

Follow the plans in the ARRL Handbook. They work just fine.
A more detailed plan appears in the ARRL Antenna Handbook.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

99. * SpaceNews 15-Jan-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-01-14 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4dcg1t$ens@pilot.njin.net>
Source record: 23168
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 15-Jan-96 *
Date: 14 Jan 1996 22:01:17 -0500
Organization: Rutgers University
Message-ID: <4dcg1t$ens@pilot.njin.net>

SB NEWS @ AMSAT $SPC0115
* SpaceNews 15-Jan-96 *

BID: $SPC0115

=========
SpaceNews
=========

MONDAY JANUARY 15, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* KANTO FIREBALL *
==================
Japanese newspapers and TV news reported that a fireball appeared over
Saitama and Ibaraki prefectures about 16:20 (UTC+9h) on January 7.
The fireball travelled in an approximately easterly direction. An
explosive sound was reported. The event was captured on photo/video
recording by the residents. A probable fragment (5cm, 60g) of the
meteorite also was found.

[Info via Yoshiro Yamada]

* MIR NEWS *
============
Thomas Reiter aboard the Mir orbital complex reports that the power supply
used for some of the Amateur radio equipment on Mir has failed. An old
power supply was installed, but it is only capable of handling the old
ICOM transceiver and one TNC. The Digital Voice Module has also failed,
so there will be no more automatic voice recordings in the near future.
All four fuses in the two connected transceivers blew, and only two spare
fuses are left to run the ICOM.

[Info via Dave Larse, N6JLH]

* SKN NOMINATIONS DUE *
======================
AMSAT has already received a number of "Best Fist" nominations from the

24th annual Straight Key Night on OSCAR, held 1 January 1996. If you participated and haven't yet nominated someone you worked for "Best Fist" honors, please take a moment to do so now.

Nominations should be addressed as follows:

Internet : w2rs@amsat.org
Packet : W2RS @ GB7HSN.#32.GBR.EU or W2RS @ WA2SNA.NJ.USA.NA
(whichever is closer to you)

or via "snail-mail" to W2RS' Callbook address.

Thanks to all who participated.

[Info via Ray, W2RS]

* SPACE SHUTTLE FREQUENCIES *
==========
The space shuttle Endeavour was launched successfully on 11-Jan-96 at 09:41 UTC. The following is a list of downlink frequencies being used during the mission:

243.000 MHz (AM) Emergency Voice Channel
259.700 MHz (AM) Secondary Voice Channel
279.000 MHz (AM) EVA Voice Channel
296.800 MHz (AM) Primary Voice Channel
2041.900 MHz Data
2106.400 MHz Data
2217.500 MHz Data
2287.500 MHz Data
15003.400 GHz Data

Retransmission of space shuttle air-to-ground communications can be monitored on the following frequencies:

147.450 MHz Goddard Amateur Radio Club
3860 kHz (USB) Goddard Amateur Radio Club
7185 kHz (USB) Goddard Amateur Radio Club
14295 kHz (USB) Goddard Amateur Radio Club
21395 kHz (USB) Goddard Amateur Radio Club
28650 kHz (USB) Goddard Amateur Radio Club

During this mission, the six person crew will retrieve the Japanese Space Flyer Unit (SFU) spacecraft. SFU's downlink frequency is 2263.6018 MHz.

Also during this mission a spacecraft called the Spartan 206/OAST Flyer will be deployed by the shuttle crew for about 48 hours of the mission. This satellite has a FM AFSK 1200 baud packet radio transmitter on board that will downlink on 145.550 MHz.

[Info via Keith Stein]

* STS-72 ELEMENT SET *
==========

STS-72
1 23762U 96001A 96012.68815534 .00000193 00000-0 55743-5 0 98
2 23762 28.4496 84.4984 0005424 175.6278 0.5580 15.34557256 217

[Info via Gary Morris]

* FEEDBACK/INPUT WELCOMED *
==========
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

100. Trouble Hearing RS-15

Newsgroup: rec.radio.amateur.space
Date: 1996-01-14 00:00:00 UTC
From: jrybak@mesa5.Mesa.Colorado.EDU
Message-ID: <4daag4$h6d@mesa5.mesa.colorado.edu>
Source record: 23169

I can hear the RS-10 and RS-12 downlinks very well on 10 meters. I do

not hear RS-15 very well. Sometimes the beacon is strong but then it disappears. The very few QSO's I hear on RS-15 usually are quite weak. Does RS-15 have some problems or am I not doing something right?

Thanks.

Jim Rybak W0KSD

101. STS-72 Does this mission have SAREX???

Newsgroup: rec.radio.amateur.space
Date: 1996-01-14 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4d9kok$h1c@vivaldi.telepac.pt>
Source record: 23265

I think the answer is NO (but i want to check).
I look everywhere i know and can't see no reference to SAREX on this mission. But, because is (at least) one radioamateur on board - Brian Duffy, N5WQW -, i want to be sure.

Thanks in advance.

73's F.Costa CT1EAT

P.S. By the way, do you know where i can find a list of 1996 SAREX missions? (i couldnï¿½t find it on SAREX web page!!!???)

102. 1996 SAREX flights are:

Newsgroup: rec.radio.amateur.space
Date: 1996-01-14 00:00:00 UTC
From: marchant@netcom.com
Message-ID: <marchantDL5FK5.Jq8@netcom.com>
Source record: 23266

```
Mission Launch Length Ham Crew Inc. Config. Modes

STS-76 3/21/96 9 days Richard Searfoss, KC5CKM, PLT 51.6 M FM Voice
MIR Docking Flt-3 Shannon Lucid, TBD, MS
Atlantis Linda Godwin, N5RAX, MS
Ron Sega, KC5ETH, MS

STS-78 6/27/96 16 days Kevin Kregel, PLT, TBD 39 C FM Voice
Columbia Susan Helms, MS, KC7NHZ Packet
Rick Linnehan, MS, TBD
Charles Brady, MS, N4BQW
Robert Thirsk, PS, VA3CSA
Jean-Jacques Favier, PS, TBD
Luca Urbani, Alt PS, KC5RGF
Pedro Duque, Alt PS, KC5RGG

STS-79 8/1/96 9 days Jay Apt, N5QWL, MS 51.6 M FM Voice
MIR Docking Flt-4 Jerry Linenger, KC5HBR, MS
Atlantis

STS-80 11/7/96 16 days TBD 28.5 C FM Voice
Columbia Packet

STS-81 12/5/96 9 days TBD 51.6 M FM Voice
MIR Docking Flt-5
Atlantis

Notes: CDR=Commander, PLT=Pilot,
MS#=Mission Specialist, PS#=Payload Specialist, Alt PS= Alternate PS

I have not checked these launch dates recently. I have not kept the crew
lists up either. Looks like it will be a good year for SAREX!
Will
kc6rol@amsat.org
--

marchant@netcom.com
```

103. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-01-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_821740285@rtfm.mit.edu>
Source record: 23170
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

104. Website for Mir links etc..

Newsgroup: rec.radio.amateur.space
Date: 1996-01-15 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4ddr6u$ggl@news.cyberportal.net>
Source record: 23171

My Webpage is running but still under construction I have links to various
information about Mir and its activities.. check it out.. it is:
http://www.cyberportal.net/dhend/dave1.html
or:
http://www.cyberportal.net
and follow the links to the personal pages..

73 Old man..

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743

It is dangerous to be right when the government is wrong.

--Voltaire

Be wary of strong drink.
It can make you shoot at tax collectors and miss.
-Lazarus Long

105. Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-15 00:00:00 UTC
From: afmtt@orion.alaska.edu
Message-ID: <1996Jan15.105425.1@orion.alaska.edu>
Source record: 23172

[No readable article body recovered]

106. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-15 00:00:00 UTC
From: Matt Peterson <mpeterson@novell.com>
Message-ID: <30FAAD5C.2FDF@novell.com>
Source record: 23173
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

Bob Argyle wrote:
>
> Does anyone know of a site that list components that have been used in space?
> Intended application is a polar low earth orbit, two year lifetime, 10K rad
> (Si) total dose. Specific chips currently in question are: NEC uPD70236GD-16
> (V53), TI TL16C550A and TL16C552, Nat.Semi. DS89C21TM, Motorola 68HC705B,
> and Altera EPM7032.
> --
> /_/\ /_/\ bob argyle kb7kcl rargyle@cc.weber.edu http://137.190.32.131
> ={ 0.0 }= =(0.0)= "The plowman is broad as the back of the land he is sowing/
> > ^ < > " < As he dances the circular track of the plow, ever knowing/
> |m/ \m| |m/ \m| That the work of his day measures more than the planting
> Tabbie & Willie and growing/Let it grow/Let it grow/Greatly yield"--Wier

As I understand it, IC's are giving a "industrial" or "military" rating
at production time depending on their performance in a hostile
environment. Digikey, Mouser, etc. all carry industrial-grade ic's -
you'll probably have to contact the manufacturer to find sources for
military-grade.

Matt

107. ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: David Mclean <dmclean@dfw.net>
Message-ID: <4df36s$3lt@fnord.dfw.net>
Source record: 23174
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Hello to all:

Come a take a look at my new web page. I have been working on it for the last 4 weeks. I have lots of thing that you will like. Some of the things that I have are: MODs, Swap Shop, Dfw repeter list, comment page, links to other good ham pages, call looks ups (updated by the sec), radio pricing, Links to QRZ,FCC,HRO, and many more. If you are a ham and would like you web page added to my list just send me e-mail. Please tell me what you like and dislike about the page. I want all types of comments. Hope you like what I have.

--
David Mclean
From The World of Hamradio
KC5NNV is Clear!

---

108. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: John Passaneau <jep@leps.phys.psu.edu>
Message-ID: <30FC38F4.2EEC@leps.phys.psu.edu>
Source record: 23175
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

David Mclean wrote:
>
> Hello to all:
>
> Come a take a look at my new web page. I have been working on it for
> the last 4 weeks. I have lots of thing that you will like. Some of the
> things that I have are: MODs, Swap Shop, Dfw repeter list, comment page,
> links to other good ham pages, call looks ups (updated by the sec), radio
> pricing, Links to QRZ,FCC,HRO, and many more. If you are a ham and would
> like you web page added to my list just send me e-mail. Please tell me
> what you like and dislike about the page. I want all types of comments.
> Hope you like what I have.
>
> --
> David Mclean
> From The World of Hamradio
> KC5NNV is Clear!
> _____>

It might have been nice to put the address in the message.
John Passaneau, WB8EIY, State College Pa.

109. Re: STS-72 Does this mission have SAREX???

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4dfqvj$o8l@paperboy.ids.net>
Source record: 23176

In article <4d9kok$h1c@vivaldi.telepac.pt> Francisco Costa,
fcosta@mail.telepac.pt writes:
>I think the answer is NO (but i want to check).
>I look everywhere i know and can't see no reference to SAREX on this
>mission. But, because is (at least) one radioamateur on board - Brian
>Duffy, N5WQW -, i want to be sure.

Regretably no. Brian's one of my favorite astronauts and the SAREX team
really wanted to try to get SAREX assigned to this mission. Others on
the flight who have expressed an interest in amateur radio include
Winston Scott and Koichi Wakata.

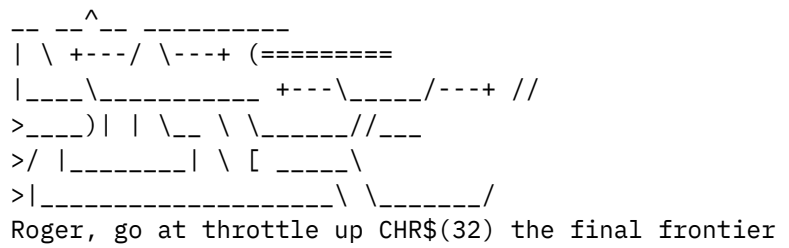
But the SAREX team can only support so many flights each year, you know -
things like real jobs get in the way.

Here's the list of upcoming 1996 SAREX flights:

STS-76 March SAREX-M
STS-78 June SAREX-C
STS-79 August SAREX-M
STS-80 November SAREX-C
STS-81 December SAREX-M

Check out the JSC amateur radio club web site. It's got a list of the
astronauts who have been assigned to these flights, their call signs, and
more details:

http://www.phoenix.net/USERS/mbordel/index.html

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

110. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: Vance Campbell <vcampbell@novell.com>
Message-ID: <30fbc721.0@news.provo.novell.com>
Source record: 23177
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

David Mclean <dmclean@dfw.net> wrote:
>Hello to all:
>
> Come a take a look at my new web page. I have been working on it for
>the last 4 weeks.

<snip>

What's the URL?

111. Re: Looking for Shuttle Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: bmm1@freenet3.scri.fsu.edu
Message-ID: <4dhmci$42q@freenet3.scri.fsu.edu>
Source record: 23178

Stuart:
The radio equipment required to receive and demodualate the shuttle directly is beond the scope/price/etc. of individuals. I don't remember all the details but it is microwave/multiplexed/digitized/transponded through several satellites. I don't know where you are located but the shuttle audio is retransmitted on several HF frequencies from Maryland and Texas. Try 3.860, 7.185, 7.225, 14.280, 14.295, 21.395, 26.650. good luck. These are single sideband modulation.

Bruce.
--
Bruce M. Marshall bmm1@freenet.fsu.edu voice 615 481 0990 fax 615 481 8039

112. Re: Looking for Shuttle Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: gazerz@aol.com
Message-ID: <4dhp7g$k73@newsbf02.news.aol.com>
Source record: 23179

sthorpe@wasatch.com (Stuart Thorpe) wrote:

>I am looking for some way to keep in contact witht he shuttle missions.
>I can't afford a sat. Dish, and have a scanner I was hoping to use. I
live
>in Utah, and someone gave me a freq. of 448.625, however this has
>nothing but morse code on it.

>Thanks for you time.

>Stuart Thorpe - sthorpe@wasatch.com

You may want to try the following,

Brigham City 145.290
Ogden 449.775

Robbie ;D

113. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-16 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960116230442.16439C-100000@qni.com>
Source record: 23180
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Ahh that was pretty easy to find the URL

try www.dfw.net/~dmclean

It worked for me

Too bad we can't replace morse code for questions like this !

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 16 Jan 1996, Vance Campbell wrote:

> David Mclean <dmclean@dfw.net> wrote:
> >Hello to all:
> >
> > Come a take a look at my new web page. I have been working on it for
> >the last 4 weeks.
>
> <snip>
>
> What's the URL?
>
>
>

114. African Stations via RS-12/13, etc.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-17 00:00:00 UTC
From: kebsch@pdb.sni.de
Message-ID: <4div93$roi@nervous.pdb.sni.de>
Source record: 23181

Hi,

I am looking for African Stations who like to have a sked with me
via the satellite RS-12/13 (maybe RS-10/11 and/or RS-15 if you like?).

If you don't have any experience with RS-12/13 then I would be happy
to give you all instructions you need. All what you need to work via
the satellite RS-12/13 is your normal HF equipment. No special radio
or antennas or training necessary!

BTW: If you are not from Africa and would like to have a sked with me,
don't worry and feel free to drop me an e-mail!

Vy 73 de Waldemar, DK3VN
--
E-Mail: kebsch.pad@sni.de Packet Radio DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [7f]

115. Micro-Processor ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-17 00:00:00 UTC
From: ve2har@mtlgw.ampr.ORG
Message-ID: <11870@mtlgw.ampr.org>
Source record: 23182

Hello,
I wonder how is the EPROM assembled and manufactured since hundreds
of thousands transistors,resistors and diods exist on 1/4 inch chip.
Thanks in advance...

VE2HAR,Robert

116. Announce: New RF Design sw for Windows

Newsgroup: rec.radio.amateur.space
Date: 1996-01-17 00:00:00 UTC
From: Jon Jenkins <academic@onthenet.com.au>
Message-ID: <4djnbq$rqt@diablo.OntheNet.com.au>
Source record: 23183

RF: The Analog Analysis Program

by Academic Technologies

RF is a new inexpensive circuit simulation sw package for
Windows, Windows 95 and Windows NT. It is primarily
intended for Radio Frequency design but is applicable
to all frequencies.

Come and have a look, visit out Web site at:

http://www.onthenet.com.au/~academic/Welcome.htm

or download the readme.txt and rfdemo.zip demo
version from:

ftp.onthenet.com.au in /pub/acdemic/

or mail us at:

academic@onthenet.com.au

Briefly RF has the following functions:

Tools
Convert between S,Y,Z and ABCD two port parameters
Design Butterworth and Chebichev Filters
Design and analyse coil and wire inductors
Sophisticated Microstrip design and analysis
Design parallel, series resonators and LC filters
Complex/Polar calculator

Compnents
Capacitors (includes parasitics)
Resistors (includes parasitics)
Inductors (Q included)
Curve fitted S parameter devices and whole circuits (fit types:
rational, polynomial, spline, ls, linear)
OpAmps
Transmission Lines (ideal and lossy, open and shorted)
Transformers (ideal and non ideal, leakage inductances and resistances)
FETS (all parasitics)
Tapped Inductors (Q and parasitics)
Beta controlled current sources (all parasitics)
VCCS
Mutual inductors (all parasitics)
Source and Loads
DC source

Analysis Facilities
Swept frequency (Full and Nodal)
Single frequency component tolerance
Swept frequency component tolerance
DC bias point analysis
Pulse analysis (Fourier simulated)

Text Output
Transducer gain
Linvil c stability
Stern k stability
Input impedance
Output impedance
Input admittance
Output admittance
Voltage gain
S11, S12, S21, S22 S parameters
Input reflection coefficient
Output reflection coefficient
Maximum transducer gain possible
Source admittance/impedance to obtain Gtmax
Load admittance/impedance to obtain Gtmax

Graphical Output
Voltage Gain
Transducer gain
Input impedance
Output impedance
S11, S12, S21, S22 S parameters
Input reflection coefficient
Output reflection coefficient
Pulse time trace
Multiple "tagged" plots
Autoscaling or manual scale
Auto cursor tracking (warps to and displays the nearest
points) or absolute
Points or line traces

Name: Academic Technologies Bongaree Rd,
Voice/Fax: 61-7-55-905-008/013 Terranora,
Inet: academic@onthenet.com.au NSW, AUSTRALIA 2486
---

117. ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: David Mclean <dmclean@dfw.net>
Message-ID: <4dk7io$kd1@fnord.dfw.net>
Source record: 23184
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Hello all:

In the last message that I sent over usenet I forgot to include my
url for my web site. The URL is "http://www.dfw.net/~dmclean". I have
many things on my web page. Here is a list of many things:
1. Links to other ham stuff (QRZ,FCC,ARRL,ETC).
2. List of sites that have radio mod's.
3. A swap page to exchange junk on!
4. Repeter list for D/FW area (other states comming soon!)
5. List of web pages made by other ham.
6. Page to view all comments about my page (Not yet working but comming)
7. ***A fun place to be!!!***

If you have a web page or want to send a comment about my page please
send mail to dmclean@dfw.net. I Have more plans in work for the page. IRC
channel comming for talk. Keep you ears open!

--
David Mclean
From The World of Hamradio
KC5NNV is Clear!

---

118. Re: ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4dlre7$mkr@superb.csc.ti.com>
Source record: 23185
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4dk7io$kd1@fnord.dfw.net>, dmclean@dfw.net says...
>
>Hello all:
>
> In the last message that I sent over usenet I forgot to include my
>url for my web site. The URL is "http://www.dfw.net/~dmclean".
~~~~~~`
I tried this URL yesterday and again this morning with no results. Netscsape
keeps contacting the host forever. Please try your page from another site and
see if it can be accessed.

Ken Durham K5MBV mbv@ti.com
~~~~~~

119. Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: "John T. Young" <jtyoung@u.washington.edu>
Message-ID: <Pine.PTX.3.91j.960118081744.24755A-100000@carson.u.washington.edu>
Source record: 23186

Is Oscar 10 dead or do I have a corrupted batch of keps? My tracking program indicates that it has been high over the Pacific ocean the last few days and from my Seattle QTH I should be hearing the beacon loud and clear. Can't hear a peep! I have heard Oscar 13 and others, but no AO10. What's happening...any clues? 73 de John, KI7JB.

120. Re: MIR frequenties wanted.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <4dlt4q$9ka@newshost.lanl.gov>
Source record: 23187

145.550 MHZ simplex is the ham frequency invariably used by MIR cosmonauts. The packet digipeater/mini-bbs is left on most of the time when the cosmonauts are too busy to "talk" on the radio. I hear their packet bursts several times a day normally, and only hear them operating voice once a month or less.

--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
My views rarely (if ever) reflect those of my employers

121. NORAD Two-Line Orbital Element Set: Space Shuttle (96014.02418293)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4dmm9g$eq5@blackbird.afit.af.mil>
Source record: 23188

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

```
SFU
1 23521U 95011A 96014.02418293 .00002372 00000-0 70178-4 0 1553
2 23521 28.4507 75.3532 0006428 192.3933 167.4985 15.30655050 46253
STS 72
1 23762U 96001A 96018.25042824 .00000503 00000-0 00000+0 0 298
2 23762 28.4521 43.6030 0006452 345.0432 197.0355 15.88618313 1081
OAST
1 23763U 96001B 96018.21864063 .00021974 00000-0 72510-4 0 107
2 23763 28.4508 43.8463 0006913 345.1944 14.7833 15.88677931 1076
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

122. NORAD Two-Line Orbital Element Set: Space Shuttle (96014.02418293)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4dk4jn$9gb@blackbird.afit.af.mil>
Source record: 23189

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

```
SFU
1 23521U 95011A 96014.02418293 .00002372 00000-0 70178-4 0 1553
2 23521 28.4507 75.3532 0006428 192.3933 167.4985 15.30655050 46253
STS-72
1 23762U 96001A 96017.25042824 .00000503 00000-0 00000+0 0 264
2 23762 28.4516 51.0544 0006385 333.0829 237.8214 15.88600209 924
OAST
1 23763U 96001B 96017.21362610 .00040530 00000-0 13497-3 0 81
2 23763 28.4533 51.3351 0006196 329.3841 30.6372 15.88676622 910
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

123. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4dk4t8$n1u@usenet4.interramp.com>
Source record: 23190

John,

Currently Mir is transmitting packet and sometimes voice on 145.550 MHz,
narrow FM. They were running some voice tape recordings for a while on
145.800 MHz, but they stopped because they are having radio problems
right now. But try 145.550 MHz.

By the way, nice last name!

--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

124. Looking for info on legal cases involving commercial antenna-tower construction

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: dragottj@milwaukee.tec.wi.us
Message-ID: <4dk20l$e0a@news.milwaukee.tec.wi.us>
Source record: 23191
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.shortwave

I am looking for information about cases involving legal disputes between local government, city to be exact, and private industry. I am having trouble getting a local township to agree to let me raise my business tower to 500 feet. They have been stalling me for over a year now. Any information would greatly be appreciated.

Please either post information under this article or preferably e-mail me at 'dragottj@milwaukee.tec.wi.us'. Thanks.

125. Re: ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: kilgore@wichita.tivoli.com
Message-ID: <4dluna$qbs@tivoli.tivoli.com>
Source record: 23192
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

```
In article <4dlre7$mkr@superb.csc.ti.com>, mbv@ti.com (Ken Durham) writes:
|> In article <4dk7io$kd1@fnord.dfw.net>, dmclean@dfw.net says...
|> >
|> >Hello all:
|> >
|> > In the last message that I sent over usenet I forgot to include my
|> >url for my web site. The URL is "http://www.dfw.net/~dmclean".
|> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~`
|> I tried this URL yesterday and again this morning with no results. Netscsape
|> keeps contacting the host forever. Please try your page from another site and
|> see if it can be accessed.
|>
|> Ken Durham K5MBV mbv@ti.com
|>

It worked fine for me the other day, and I just checked it again and it's
working.

73,
Jeff Kilgore, KC1MK
```

126. Re: Micro-Processor ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: aranders@kosepc01.delcoelect.com
Message-ID: <4dljjc$emv@kocrsv08.delcoelect.com>
Source record: 23193

In <11870@mtlgw.ampr.org>, ve2har@mtlgw.ampr.ORG writes:
> I wonder how is the EPROM assembled and manufactured since hundreds
>of thousands transistors,resistors and diods exist on 1/4 inch chip.

Integrated circuits are made in much the same way as a color picture in a newspaper is created. The picture consists of hundreds of dots of varying size and color in a several square inch area, but one doesn't place each dot individually. One creates a master pattern and PRINTS it on the page. In a similar fashion, integrated circuits are "printed" as complex patterns of chemicals and connections on a silicon substrate.

Any further explanation is beyond the scope of this newsgroup. For more information, try asking in the sci.engr.semiconductors newsgroup.

= === === === = = = === === === === = = === = = = === = = === =
Alan Anderson # Ignorance can be fixed, but stupidity is permanent.
(I do not speak for Delco Electronics, and DE does not speak for me.)

127. MIR frequenties wanted.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-18 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4dk5sh$8qb@ping1.ping.be>
Source record: 23194

Hello,

Can someone tell me whats the received/transmitting frequenties ?

Thanks.

Geert Pirens,onl2057

128. Re: ***Ham WEB page For all people to use! WITH ADDRESS! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: vbook@vbook.com
Message-ID: <4dn3bb$amu@news.accessone.com>
Source record: 23195
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4df6ek$40k@fnord.dfw.net>, dmclean@dfw.net says...
>
>
>Hello to all:
>
> Come a take a look at my new web page. I have been working on it for
<snip>
>Hope you like what I have. the address is http://www.dfw.net/~dmclean
>
>--
> David Mclean
> From The World of Hamradio
> KC5NNV is Clear!
>_____

And after you visit his, come visit Ham Radio Online - feature stories, newsletters, real-time propagation and auroral condition information, newsletters, product reviews, and so much more! Updates almost daily.

http://www.accessone.com/~vbook/hronline.htm

Have fun and enjoy,
Ed, KF7VY
---
personal email to vbook@vbook.com
Visit Ham Radio Online, it's free, at
http://www.accessone.com/~vbook/hronline.htm

129. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: g_reed@icon.net
Message-ID: <N.011896.181400.63@icon.net>
Source record: 23196
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

> Hello to all:
>
> Come a take a look at my new web page. I have been working on it for
> the last 4 weeks. I have lots of thing that you will like. Some of the
> things that I have are: MODs, Swap Shop, Dfw repeter list, comment page,
> links to other good ham pages, call looks ups (updated by the sec), radio
> pricing, Links to QRZ,FCC,HRO, and many more. If you are a ham and would
> like you web page added to my list just send me e-mail. Please tell me
> what you like and dislike about the page. I want all types of comments.
> Hope you like what I have.
>
> --
> David Mclean
> From The World of Hamradio
> KC5NNV is Clear!
> ____
> ---
>
>

David,
Sounds like you have a good thing started. How 'bout the address?

<><><><><><><><><><><><><><><><><><><><><><><><><><><><><>
<> Glenn Reed <>
<> OK Wing Communications - C.A.P. <>
<> Sooner 44 <>
<> KF5XB <>
<><><><><><><><><><><><><><><><><><><><><><><><><><><><><>
Note: The above remarks do not necessarily
represent those of anything sentient.

130. Re: Construction of egg-beeter ant.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: jimeagle@execpc.com
Message-ID: <4dn9ie$bun@homer.alpha.net>
Source record: 23197

In article <Pine.OSF.3.91.960111123933.25876A-100000@unicorn.it.wsu.edu>,
ritz@wsunix.wsu.EDU (Big Dave) says:
>
>Hello, I have successfully gotting into the RS10/11 a couple of times
>with a vertical but i want to build an egg-beeter.
>
>Thank you!
> Big Dave

Two loops, one wavelength each at right angles. Feed them 90 degress
apart, electrically (1/4-wavelength). Balanced feed (twinax) is best
if good balance and circularity is to be achieved. The feedpoint needs
a balun to properly connect to the feedline. My recollection is that the
twinax is 90 Ohms and that the feedpoint needs 600V Mica caps at about
20-30 pf to achieve a good match. I believe that the eggbeater is slightly
"squashed" for best circularity and omnidirectionality. There is no
connection at the crossover points (top) and the whole thing is fed at
the bottom. A metal upright can be used for support but the top and
bottom are insulated from the vertical mast.

A crossed reflector underneath provides additional gain overhead without
too much loss towards the horizon.

131. Re: Which AZ-EL rotor is best?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960119122749.9862C-100000@qni.com>
Source record: 23198

The only problem with the 5400 rotors I had are
1 There IS NOT a good weather sealed. It is just a GLOB of grease to
attempt to keep the moisture and other elements out...
2. Is there Limit switches on the AZ rotor ?
If there is then the ones on my AZ rotor did now work from day one
The limit switch seems to work on the EL rotor ok

Other than SERVICE I have been happy with this rotor

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On Thu, 11 Jan 1996, Thomas Liang wrote:

> In article <4curv8$oss@lscruz.scf.lmsc.lockheed.com>, allen@lmsc.lockheed.com
> says...
> >
> >I have been thinking about buying an AZ-EL rotor. I see a few advertised.
> >Which are the good ones and which are the bad ones? Besides price. how
> >are they evaluated? I will be using it for 2M and 436 MHZ OSCAR antennas.
> >
> >Thanks, Allen WB6RWU Capitola Ca.
> Hi Allen. I have the YAESU G-5400B rotator operating with the Kansas City
> driver/tuner. That is one of the cheapest commercially made, and it always
> worked. I have M2 2M, 70cm, and a Bob Myers s-mode 2.4 ghz antenna. I do
> not have any problem with chatter (dead band set at 5 degrees), or any other
> problem. Tom
>
>
>

132. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: n7tcf@primenet.com
Message-ID: <4do5ep$c2s@nnrp1.news.primenet.com>
Source record: 23199

Oscar 10 has been "brain dead" for several years due to radition damage to
the computer. This leaves the batteries and charging system to radomly draining or
charging. When the bird finally builds enough power, the transponder works.
You might see a warning in some bulletins saying "don't use AO-10 if the
beacon is fm'ing." This indicates a low charge state.
As for not hearing the beacon at all, the loss of the computer means no
attitude control either. The antennas may be pointed away from earth.

Jim N7TCF

133. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: Markus Buehler <mbuehler@access.ch>
Message-ID: <4domov$inl@pacifica.access.ch>
Source record: 23200
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Hello
Thanks for your work.
I have some troubles to find your page...
Adress ??
So long
Greetings from HB9CPW, Switzerland

134. Reference for sat tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: cr780@FreeNet.Carleton.CA
Message-ID: <DLFynC.Dp3@freenet.carleton.ca>
Source record: 23201

Hello and thanks. Could someone give me some good references

on calcualtions for orbits and positions of sattelites.
I am interested in learning more about it and would like
to figure out how to go about writing a program for sattelite
tracking. Many thanks-Kennon

135. Searching Ham-related Software

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: Conrad.Weeseman@inter.NL.NET
Message-ID: <Pine.SUN.3.91.960119211807.14231A-100000@hatert.nijmegen.inter.nl.net>
Source record: 23202

Dr Hams!

I'am still using the ZX Spectrum [Versions:+, +2 and +3] and the
PCW 8256 [both machines Z80-processor / 4 Mhz ..hi] and my question
is, if anyone of you can help me to get software for both computers,
related to Ham-operations, such as satellite tracking, Orbit Simulation,
Satellite-telemetry decoding and so on.

Suggestions, comments, also about companies, who deliver, are welcome.

Best regards de Conrad , PA3171@amsat.org

136. ARLS001 Ham radio power supply aboard Mir fails

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls001.1996@arrl.org>
Source record: 23203
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS001
ARLS001 Ham radio power supply aboard Mir fails

ZCZC AS09
QST de W1AW
Space Bulletin 001 ARLS001
From ARRL Headquarters
Newington, CT January 19, 1996
To all radio amateurs

SB SPACE ARL ARLS001
ARLS001 Ham radio power supply aboard Mir fails

German cosmonaut Thomas Reiter, DF4TR/DP0MIR, aboard the Mir orbital complex, reports that a power supply used for some of the spacecraft's ham radio equipment failed on New Year's Eve. The remaining, older power supply is only capable of powering the old Icom 2-meter transceiver and one 1200-baud TNC. The digital voice module also has failed, so there will be no more automatic voice recordings in the near future.

Reiter reports all four fuses in the two connected transceivers have blown and only two spare fuses remain. Last month, Reiter used the digital voice recorder, built by Thomas Kieselbach, DL2MDE, to broadcast holiday messages. The primary transmitting frequency is 145.800 MHz.

Recently, the cosmonauts on Mir unpacked new Amateur Radio equipment delivered by rocket, including a 70-cm FM transceiver and 9600-baud packet gear.

Reiter was philosophical. ''Well, at least we can be reached and still can talk with the world,'' he said in a message to Dave Larsen, N6JLH.
NNNN
/EX

137. Kepler Elements Help Please

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: harts@argonet.co.uk
Message-ID: <internews469279ACA8@argonet.co.uk>
Source record: 23204

I hope someone can help.

We are experimenting in weather sats at school. (Science Dept). We have the basic equipment to receive and reproduce these images on our 386. We have STS+ to help predict when the best times are to have a go. BUT does anyone know of a FTP site that we can dial up to get the latest KEPLER TLE's.

If you can help please E-Mail us at harts@argonet.co.uk

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--. --. --. --. : : --- --- .---.
|_| |_| | _ | | | | |_ | |Internet provider for all Acorn RISC machines|
| | |\ | | | | |\| | | '---'
| | | \ |_| |_| | | |__ | harts@argonet.co.uk

138. TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: jmatk@tscm.com
Message-ID: <jmatk-1901962353000001@jmatk.tiac.net>
Source record: 23205
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

Here is the current list of frequencies used for bugging, technical surveillance and similar activities.

If you have any additions please E-mail them to us. mail:jmatk@tscm.com

also, check out the NEW usenet group: news:alt.security.tscm

http://www.tscm.com/

http://www.tscm.com/bugfreq.html

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Major "Real-World" Bugging Frequencies

Common Wireless Bugs (Low Power - Well under 35-50 mw)

44.500 - 51.000 mhz "Baby/Room" monitors
72.100 - 75.400 mhz Hearing Assistance systems
54.000 - 150.000 mhz "Kit" Bugs

98.000 - 108.000 mhz Cheap out-of-band FM Bugs
112.000 - 142.000 mhz Cheap out-of-band FM Bugs
140.000 - 160.000 mhz Cheap out-of-band FM Bugs

60.000 - 320.000 mhz Low Cost kit bugs
398.000 - 406.000 mhz DECO Bugs (398.600/605, 399.450/455, 399.025/030, 406mhz)
25.000 - 450.000 mhz European/English Kit Bugs

150.000 - 216.000 mhz Typical VHF "Body Wire" & Pro-Grade Bugs
109.000 - 140.000 mhz Digital VHF Pro-Grade Bugs
138.000 - 174.000 mhz Typical "Spy Shop" & LE Cheap VHF Bugs (155-172 Popular)
140.000 - 150.000 mhz Popular Xandi Flea power kits (143/144mhz)
150.000 - 170.000 mhz Popular Japanese Flea power kits (under 5mw)

150.000 - 220.000 mhz Commercial Wireless Microphones
169.000 - 172.000 mhz 47 CFR 90.265 Authorization *** VERY Popular ***
174.000 - 216.000 mhz 47 CFR 2.106 (NG115) Authorization
395.000 - 410.000 mhz German UHF Wireless Microphones (PK Electronics)
219.000 - 530.000 mhz English UHF Wireless Microphones (300-500 popular)
470.000 - 608.000 mhz Commercial Wireless Microphones
730.000 - 806.000 mhz Commercial Wireless Microphones

889.000 - 960.000 mhz Modified Cordless Phones (S/S & Hoppers)

380.000 - 480.000 mhz Video Bugs - US
890.000 - 960.000 mhz Video Bugs - US (902-928 Hot)
905.000 - 928.000 mhz Video/Audio Consumer Products (i.e.: Recoton)

1.700 - 1.930 ghz Video Bugs - US
2.400 - 2.500 ghz Video Bugs - US *** VERY Popular ***
5.725 - 5.850 ghz Video Bugs - US *** VERY Popular ***

1.100 - 1.400 ghz PAL Video Bugs *Very Hot in
England/France/etc*
2.400 - 2.500 ghz PAL Video Bugs *Very Hot in
England/France/etc*
3.500 - 4.500 ghz PAL Video Bugs *Very Hot in
England/France/etc*

430 - 550 mhz Popular French Video/Audio Bugging System
950 - 2500 mhz Popular French Video/Audio Bugging System
700 - 900 mhz Popular Italian Audio Bugging System

"Tactical" Bugs

225 - 400 mhz "Throw away" bugs (10uw-300mw Beer can bugs)
290 - 330 mhz Micro-powered Bugs (5uw-10mw Cigarette Butt Bugs)

30 - 500 mhz Tactical Repeaters (75mw-300mw)
285 - 400 mhz Tactical Repeaters (50mw-10watts)
100 - 152 mhz VHF Tactical Repeaters (300mw-25watts)
135 - 174 mhz VHF Tactical Repeaters (300mw-25watts)

VLF and Carrier Current Type Bugs

9khz - 490 khz Carrier Current 47 CFR 15.219 Auth (250 microvolts)
490khz - 1.705 mhz Lossy Cable 47 CFR 15.221 Auth (1000 microvolts)
450khz - 30.00 mhz PLA Systems 47 CFR 15.207 Auth (30 mv@ft/30ft)

3 - 200 khz 300 mw High Grade Pro Bugs (over 500$ each)
100 - 200 khz 50-100 mw Older Bugs
120 - 200 khz 30-50 mw Pre 1990 intercoms
200 - 300 khz 30-50 mw Post 1990 intercoms
300 - 400 khz 250-400 mw TELCO Line transmitters (355khz popular)

300hz - 30 khz Cable TV Carrier - Hardwired microphones
30khz -300 khz Cable TV Carrier - Coaxial Bugs

100 - 450 khz Threat Window #1 Most CC Bugs
3khz - 3 mhz Threat Window #2 Expensive "Pro-Grade" Bugs
5khz - 32 mhz Threat Window #3 Popular WJ Carrier Current Rcvr
3khz - 50 mhz Threat Window #4 Realistic Threat Window for Telephone Wire
15mhz - 70 mhz Threat Window #5 Audio/Video "Micro-Wire" RF circuits

WECO Bugs "boosted/ultrasonic audio" found on Power/CATV/Telco lines

64kbps to 1.5mbps Digital Bugs T-Carrier-Lo (T-1 and Below)
1.5mbps to 50mbps Digital Bugs T-Carrier-Hi (T-1 and above)

2.048mbps Digital Bugs Definity Circuit Pack Bug
32mbps Digital Bugs TMS Channel/Backplane bridge
Designed to transmit on CC or Microwave ISM Spread Spectrum (2.4-6.0ghz)

VLF Devices

25khz - 90khz Tape Recorder Bias Osc-Low End (35-45khz Common)
80khz - 145khz Tape Recorder Bias Osc-Mid Range (88.2, 96, 100khz Common)
100khz - 325khz Tape Recorder Bias Osc-Pro Grade (100, 150, 300khz Common)
40khz - 50khz Tape Recorder DAT/Hi8 (44.1/48khz Common)

8khz - 35khz Recorder Audio Servo Noise (10-20khz Common)

7khz - 35khz Video Camera VLF Detectable emmisions
15.750 mhz Common NTSC Video Camera
15.734 mhz CCD/PCB Video Camera (very easy to detect)
15.625 mhz Common Video Camera

Also, be aware of ultrasonic/audio emmisions from most VLF devices.
(Utilize a EOD/Bomb Tech Stethoscope, and Ultrasonic Spectrum Analyser)

Spread Spectrum/Hopping Bugging Frequencies

Legit Industrial Equipment (very inexpensive)
902 mhz - 928 mhz ISM band A (Very Popular)
2400 mhz - 2484 mhz ISM band B (Very Popular)
5725 mhz - 5850 mhz ISM band C
10500 mhz - 10550 mhz ISM band D
24075 mhz - 24250 mhz ISM band E

SS Amateur Radio Bands Often used for eavesdropping (very inexpensive)
50 mhz - 54 mhz 6.00m Amateur Radio Equipment (STA)
144 mhz - 148 mhz 2.00m Amateur Radio Equipment (STA)
222 mhz - 225 mhz 1.25m Amateur Radio Equipment (STA)
420 mhz - 450 mhz 70cm Amateur Radio Equipment (47 USC 97.305)
902 mhz - 928 mhz 33cm Amateur Radio Equipment (47 USC 97.305)
1240 mhz - 1300 mhz 23cm Amateur Radio Equipment (47 USC 97.305)
2300 mhz - 2450 mhz 13cm Amateur Radio Equipment (47 USC 97.305)
3300 mhz - 3500 mhz 9cm Amateur Radio Equipment (47 USC 97.305)
5650 mhz - 5925 mhz 5cm Amateur Radio Equipment (47 USC 97.305)

SS Amateur Radio Bands Occasionally used for eavesdropping
10.00 ghz - 10.50 ghz 3.0cm Amateur Radio Equipment (47 USC 97.305)
24.00 ghz - 24.25 ghz 1.2cm Amateur Radio Equipment (47 USC 97.305)
47.00 ghz - 47.20 ghz 6.0mm Amateur Radio Equipment (47 USC 97.305)

SS Amateur Radio Bands Rarely used for eavesdropping (very expensive)
75.50 ghz - 81.00 ghz 4.0mm Amateur Radio Equipment (47 USC 97.305)
119.98 ghz - 120.02 ghz 2.5mm Amateur Radio Equipment (47 USC 97.305)
142.00 ghz - 149.00 ghz 2.0mm Amateur Radio Equipment (47 USC 97.305)
241.00 ghz - 250.00 ghz 1.0mm Amateur Radio Equipment (47 USC 97.305)
300.00 ghz - Light (3 Thz) Amateur Radio Equipment (47 USC 97.305)

Note: Most commmon spread spectrum/hopping bugging equipment will hop at speeds
between 100 and 50,000 hops per second. Equipment is readily available that
hops even faster (100,000 to 300,000 hops per second). Dwell times can be as small as 1us (one widely used military system uses a dwell time of 3-5us)

Outband Equipment
ANY Television broadcast or Cable TV frequency
ANY FM radio broadcast frequency
ANY Paging or Beeper frequency
ANY Cellular Telephone frequency

820 mhz - 960 mhz Modified (902-928) Cordless Telephones
Modified Amateur Radio Equipment (can be on ANY frequency)

Keep in mind that wideband (non-ISM) Spread Spectrum/Hopping Bugs are very
difficult to detect(even if you are within a few feet). Watch for carrier feed-through, and "Noise Floor Humps".

All Spread Spectrum devices are detectable

Once Spread Spectrum/Hopping Bugs have been located (on the RF spectrum) all
that can be done is to locate the sourse of the emission... it is virtually
impossible to demodulate a SS signal unless you have access to the key.

Also, a 500mw ISM device can easily have an effective range of over 20 miles.

Look for spectral anomalies (humps) on the Spectrum Analyzer, and back up
with a Compressive receiver.

Commonly Used Law Enforcement Bugging Frequencies

37.000 - 952 mhz FCC Surveillance Blanket Authorization

47 CFR 90.19 "Physical surveillance, stakeouts, raids..."
Straight AM/FM, FM-Subcarrier, SSB, Spread Spectrum, and Hoppers.
If encrypted, it usually uses in-band voice inversion or DES.
(Normally well under 2 watts... most under 35-150mw)

148 - 174 mhz
135 - 250 mhz Out-band Wireless Microphone
174 - 216 mhz In-band Wireless Microphone
350 - 440 mhz Common Video Freqs
380 - 930 mhz Wide Band Hoppers
806 - 824 mhz
851 - 869 mhz
905 - 930 mhz Popular Audio/Video Band

1.4 - 1.5 ghz Common Video Freqs
1.7 - 1.9 ghz Common Video Freqs (1.710 - 1.755 REAL Popular at
1/10 watt)
2.4 - 2.5 ghz Common Video Freqs (2.400 - 2.450 REAL Popular)
5.7 - 5.9 ghz Common Video Freqs (5.725 - 5.850 REAL Popular)
8.5 - 10.8 ghz Common Video Freqs

173.075 - LOJACK Auto tracking system beacon (200ms burst every second)

Police Speed Enforcement Radar
10.450 - 10.600 ghz X-Band
11.488 - 11.628 ghz RD Detector
22.976 - 23.256 ghz RD Detector-2nd Harmonic
24.050 - 24.250 ghz X-Band
33.400 - 36.000 ghz Ka-Band
700nm - 1100nm Laser Threat

Electronic Article Suveillance/Anti-Shoplifting Systems
8.10mhz - 9.30mhz Checkpoint (Hi-Q Tags) 8.2mhz Common
57.75khz - 58.75khz Sensormatic (Magnetic) Books, CDs, and Tapes
915mhz and 1830mhz Knogo (Microwave Resonant) Adhesive Labels

25 - 50 mhz "Bumper Beepers" (38 - 47 mhz very popular)
135 - 170 mhz "Bumper Beepers" (150-170 mhz very popular)
450 - 512 mhz "Bumper Beepers"
903 - 904 mhz "Bumper Beepers"
904 - 912 mhz "Bumper Beepers"
918 - 926 mhz "Bumper Beepers"
926 - 927 mhz "Bumper Beepers"

WARNING:
The area between 900 mhz and 6 ghz is EXTREMELY DANGEROUS as
the eavesdropping equipment in that range is inexpensive, low power,
and highly directional.

Additionally, most TSCM people will not check frequencies above
1.0/1.5 ghz or
3 ghz (because the equipment is too expensive for them to buy).

I have seen surveillance video tapes of TSCM inspections where the video
cameras (Watec), microphones (Sony), and microwave RF transmitters (AID -
2.4ghz) were never detected by the inspectors (using 1ghz AVCOM Spectrum
Analyzers).

Surveillance Satellite (TK-Keyhole) Frequencies
Note: Mostly Wideband Spread Spectrum/LPI channels

420mhz - 450mhz
1.2ghz - 1.4ghz
1.7ghz - 1.9ghz (1.76-1.84 real active)
1.9ghz - 2.2ghz (2.115 real active)
4.9ghz - 5.0ghz
7.5ghz - 8.3ghz
10.6ghz - 12.6ghz (11.7-12.2 active)

23.6ghz - 24.0ghz
25.5ghz - 25.7ghz
22.8ghz - 33.5ghz
42.5ghz - 47.0ghz
50.3ghz - 52.4ghz
78.0ghz - 85.5ghz
86.3ghz - 98.3ghz (86-92 real active)

Commonly Used by Federal Agencies for Bugs, Wireless Microphones,
and Body Wires (also 138-220 mhz, and 399-420 mhz, under 25-50 mw).

149.3500, 165.9125, 167.3375, 167.3425, 167.4875, 168.0115,
169.2000, 169.4450, 169.5050, 170.2450, 170.3050, 171.0450,
171.1050, 171.4500, 171.6000, 171.7500, 171.8450, 171.8500,
171.9050, 172.0000, 172.2000, 172.2125, 172.2375, 172.2625,
172.2875, 172.3125, 172.3375, 172.3625, 172.3875, 172.5500
173.3375

169.445, 169.505, 170.245, 170.305, 171.045, 171.105, 171.845, 171.905

27.5750 Customs Low Power < 5 watts
27.5850 Customs Low Power < 5 watts
163.1000 Customs Low Power < 30 watts
418.5750 Customs Low Power < 30 watts

40.1200 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
40.1700 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
40.2200 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
40.2700 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"

164.9125 FBI Surveillance
165.9125 ATF F5 Surveillance
166.2875 ATF
170.4125 ATF
407.8000 Secret Service
406.2750 Secret Service
408.5000 Secret Service
408.9750 Secret Service

172.2000 DOJ/DEA CH.1
171.6000 DOJ/DEA CH.2
418.0500 DEA Low Power
418.0750 DEA Low Power
418.5750 DEA Low Power
418.7500 DEA
418.6750 DEA
418.9000 DEA F2 CINDY (416.325) Surveillance
418.7500 DEA F3 GAIL Surveillance/Strike Force
418.6750 DEA F4 EMILY (416.325) Surveillance

407.8000 CIA, State Department
408.0500 Federal Shared
408.5750 Federal Shared

409.4000 Federal Shared

960-1215mhz Spread Spectrum Systems (Wideband)

Generally Recognized Federal Bug/Spy Bands
Primary - 25-50mhz, 135-175mhz, 225-440mhz, 1710-1950mhz, 8.3-12.5ghz
Secondary - 890mhz-5.50ghz, 7.0-9.5ghz, 10-39.6ghz

Also, Wide Band Frequency Hopping centered on various UHF-TV channels
(ie: 510 or 670 mhz with a hopping width of +/- 25 mhz)

Keep in mind that the federal government can use virtually any
frequency between DC and light.

Band Width Resolution and Filters

Examine the spectrum with the following BW resolutions/filters:

Utilize all BW resolutions/filters between 5hz - 200mhz (depending
on band being checked)

Note: A programmable digital spectrum analyzer should be used!
(1/3/5/10/15/20/25/30/50/75/100/150/200... Sequence is prefered)

BW Res - Usage/Primary Function
100/200 mhz - Resonate Cavity Bugging Devices/SIGINT Devices
125/35/8mhz - Resonate Cavity Bugging Devices/SIGINT Devices

50/20/10mhz - Diplomatic/Intelligence Microwave Bugs
40/20/10mhz - Diplomatic/Intelligence Microwave Bugs

13/16/20mhz - Microwave Wideband
11/12/13mhz - Microwave Wideband
.5/1/2/5mhz - Microwave Wideband (Burst Bugs)
18/26/36mhz - Satellite Wideband (Video)
2/4/6/8 mhz - Microwave Wideband (Video)
3/6/12 mhz - Microwave Wideband (Video) - Common
.5/1/3 mhz - Microwave Wideband (Video/Burst/Pulse)

1.5/.75 khz - Frequency Hopping Bugs - VERY Common
.4/.2/.1khz - Frequency Hopping Bugs - VERY Common
3.2/6.4 khz - Frequency Hopping Bugs - VERY Common
10/20/25khz - Frequency Hopping Bugs - VERY Common
50/75 khz - Frequency Hopping Bugs - VERY Common
100/250 khz - Frequency Hopping Bugs
300/500 khz - Frequency Hopping Bugs
1/2/4/8 mhz - Frequency Hopping Bugs

300/250 khz - Regular Wide Band Broadcast FM
150 khz - Narrowband Broadcast FM Audio, Television Audio
280 khz - Narrowband Broadcast FM Audio, Television Audio

200/150 khz - Commercial Wireless Microphone - High Grade
150/100 khz - Commercial Wireless Microphone - Concert/Broadcast Grade
58/77/84khz - Commercial Wireless Microphone - Typical Body Wire

50/60/75khz - Commercial Wireless Microphone - Typical police device
8/25/50 khz - European/Japanese Industrial Bugging Devices

50/30 khz - Wideband FM two-way communications (ie: Cellular
Telephone)
16/15/6khz - Normal FM two-way communications
3/6/8/12khz - Narrowband Commercial - Voice
1/3.2/6khz - Narrowband (Marine, HF, etc...)

120/9/1 khz - Narrowband (Bias Osc./Video Cameras/SIGINT)
30/750/500hz- Narrowband (Bias Osc./Video Cameras/SIGINT)
56/75/100hz - Narrowband (Bias Osc./Video Cameras/SIGINT)
30/150/200hz- Narrowband (Bias Osc./Video Cameras/SIGINT)
250/300 hz - Narrowband (Bias Osc./Video Cameras/SIGINT)

300/250 hz - Narrowband OOK/FSK/Data, etc...
300/250 hz - Narrowband OOK/FSK/Data, etc...

Subcarrier Detection:

10 - 500 khz - Most Commonly Used Subcarriers
30 - 150 khz - Typical Broadcast FM Subcarrier (FMSubC)
19/27/38 khz - Typical Stereo Broadcast FM Subcarrier (FMSubC)
67 khz - Typical Musicast/Musak Broadcast FM Subcarrier (FMSubC)

2 - 10 mhz - Audio Subcarriers often used with Video (4.2-8 mhz
common)

5khz - 950khz - Realistic Subcarrier Threat (Audio)
1mhz - 15 mhz - Realistic Subcarrier Threat (Video)

Summary (this will catch 99.99% of all Non-Intell/Diplomatic RF bugs)

All TSCM Inspections should include the following frequencies:
(Expect to see less than 10-35 mw maximum at the TX antenna)
(Do not expect the signal to be present for more than 20uS-100uS)

To find RF transmitters a search grid of 15 foot by 15 foot (or
less) should be used.

Also, all phone rooms, riser closets, demarcs, boots, etc. MUST be
checked.

Remember that the microphone/camera can be hundreds of feet away
from the transmitter.

Use a digital spectrum analyzer and a wideband receiver with an analog
10.7/21.4mhz SDU on the IF, dispersions of 100/200/500khz).

RF Spectrum Analysis and monitoring should take place for at least
twelve
solid hours during a regular sweep (72 hours or more is preferred).

To prepare for IPM the spectrum should be evaluated/monitored for at
least four hours prior to the event.

Most non-gvt RF bugs will have a transmit frequency between 9khz
and 6ghz.

The Spectrum Analyzer inspection must cover at least 3khz to 40 ghz

VLF Detection-Audio .3 khz to 100 khz Video Cameras & Tape recorders
VLF Detection-RF 12 khz to 500 khz Video Cameras & Tape recorders
VLF Detection-Audio .3 khz to 150 khz Microphone/Ultrasonic
Chirping

Carrier Current Bugs 3 khz to 50 mhz 99% Voice

RF Bugs-HF 3 khz to 50 mhz 99% Voice
Space RF Bugs-VHF 30 mhz to 300 mhz 10% Video/80% Voice/10% Data
Space RF Bugs-UHF 300 mhz to 900 mhz 25% Video/60% Voice/15% Data

RF Bugs-Microwave1 900 mhz to 3.0 ghz 70% Video/20% Voice/10% Data
RF Bugs-Microwave2 3 ghz to 18.5 ghz 75% Video/15% Voice/10% Data
RF Bugs-Microwave3 18.5 ghz to 40.0 ghz 75% Video/ 5% Voice/20% Data

...and of Course Infrared! (Look for "IR Blooms")

700 - 1100nm Audio Transmitters/Lasers (CF between 880 and 950nm)
750 - 900nm Night Vision Illuminators
900 - 1710nm IR Video Illuminators

Note:
Most military/intelligence and governmental TSCM inspections look
for devices
between 3khz to 50mhz for Carrier Current, 20khz to 40ghz for
regular free
space RF radio devices, and directional microwave devices from
.5ghz to 120ghz.

-jma
==========
James M. Atkinson "...Shaken, not Stirred..."
TSCM.COM
127 Eastern Avenue #291
Gloucester, MA 01931-8008
URL: http://www.tscm.com/ E-Mail: jmatk@tscm.com
==========
The First, The Largest, The Most Popular, and the Most
Complete TSCM Counterintelligence Site on the Internet
==========

139. Re: ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: mandtsys@ix.netcom.com
Message-ID: <4do32b$e8m@ixnews6.ix.netcom.com>
Source record: 23206
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

In <4dlre7$mkr@superb.csc.ti.com> mbv@ti.com (Ken Durham) writes:
>
>In article <4dk7io$kd1@fnord.dfw.net>, dmclean@dfw.net says...
>>
>>Hello all:
>>
>> In the last message that I sent over usenet I forgot to include
my
>>url for my web site. The URL is "http://www.dfw.net/~dmclean".
>~~~~~~
~~~~~`
>I tried this URL yesterday and again this morning with no results.
Netscsape
>keeps contacting the host forever. Please try your page from another
site and
>see if it can be accessed.
>
>Ken Durham K5MBV mbv@ti.com
>

I accessed the site from the Netcom Irvine POP with no problems. Found
some interesting bits and pieces.

Robotic Regards,

Tom Thornton KE6NJC
~~~~~

140. WEATHER FAX software package

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: kelaero@iaccess.com.au
Message-ID: <4dmmu9$g0l@sleipnir.iaccess.com.au>
Source record: 23207

I would greatly appreciate any information on a software package called
WEATHER FAX that processes acquired weather data to produce weather maps.

Thanks,

Shiraz Iskenderian
shiraz@kel.com.au
Melbourne, Australia

141. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960119124312.11732A-100000@qni.com>
Source record: 23208

John,
Sorry about the previous post about this subject,
I have never heard the AO-10 beacon that I can recall.
Pease see text beloe from
www.amsat.org
Good luck with hearing the beacon if it is indead turned on by a random
act :->

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

[IMAGE] AMSAT-OSCAR-10

[INLINE] Satellite Summary

Name: AMSAT-OSCAR-10 aka Phase-3B
Nasa Catalog Number: 14129
Launched: June 16, 1983
Orbit: Elliptical
Period: 11 Hours, 39 Minutes
Modes: B

Beacons:
* 145.810 MHz (General) (Unmodulated carrier)
* 145.987 MHz (Engineering) (Switched off)

Features:
* Molniya Orbit - Long Communications Time

Linear Transponders: Inverting (CW, SSB)
* Mode B Uplink: 435.030 - 435.180 MHz LSB
* Mode B Downlink: 145.825 - 145.975 MHz USB

[INLINE] Description

AMSAT-OSCAR-10 was launched in 1983. On December 1986 the main
computer failed. Thus, the ability to control the spacecraft was lost.
It is presently operational on mode B. However, due to the inability
to orient the satellite, the batteries are not always fully charged.
So operation is random as AO-10 goes in and out of the sunlight.
Communications are encouraged when the transponder is operational and,
of course, discouraged when the downlink frequency is FMing.

The following is an informative note from Peter, DB2OS:

The onboard computer of AMSAT-OSCAR-10 failed due to radiation damage of the memory chips. Since then we have had no more attitude control and due to seasonal changes of the alignment of the Sun in respect to the solar panels, there are times were no electrical power will be available and the spacecraft goes into hibernation until the sunangle is better again. The battery is indeed fully depleted and due to the harsh environment it may already have lost its capability to store electrical energy.

If the electrical power from the solar array is getting marginal, the transponders starts FMing, which means that your carrier is moving back and forth in frequency depending on the current transponder load. During those "undervoltage conditions," it sometimes happens that the onboard computer (IHU) starts to execute random code from the memory, which might turn transponders or beacons randomly on/off. The beacon may even sound like OSCAR-13, but that's mainly because the 400 Bit/s BPSK is done by hardware; indeed it contains no useful information. Under normal circumstances the transponder is on and the general beacon is transmitting only an unmodulated carrier.

Satellite operators frequently ask "what is the attitude of Oscar-10", or "can I have ALON/ALAT values for my computer program." Here's the analysis written by James Miller, G3RUH.

[INLINE] References

J.A. King, "Phase III: Toward the Ultimate Amateur Satellite," Part 1, QST, Jun 1977, pp 11-14.

J.A. King, "Phase III: Toward the Ultimate Amateur Satellite," Part 2, QST, Jul 1977, pp 52-55.

J.A. King, "Phase III: Toward the Ultimate Amateur Satellite," Part 3, QST, Aug 1977, pp 11-13.

Satellite Experimenters Handbook by Marty Davidoff, K2UBC

<-- Return to Satellite Summary

Last update December 11, 1995 - N7HPR

On Thu, 18 Jan 1996, John T. Young wrote:

> Is Oscar 10 dead or do I have a corrupted batch of keps? My tracking
> program indicates that it has been high over the Pacific ocean the last
> few days and from my Seattle QTH I should be hearing the beacon loud and
> clear. Can't hear a peep! I have heard Oscar 13 and others, but no AO10.
> What's happening...any clues? 73 de John, KI7JB.
>

>

142. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-19 00:00:00 UTC
From: "Charles A. Rubenstein" <rubenc@iglou.com>
Message-ID: <DLEL5M.wF@iglou.com>
Source record: 23209

Really.....I've been wondering the same. Also havent heard anything from AO13 either. Are we outta business til Phase 3D???

Hope not.

de Charlie
KB8BWE
rubenc@iglou.com

143. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DLH8Eu.5p5@pe1chl.ampr.org>
Source record: 23117

In <4dpl76$nm6@over.mhv.net> trandall@mhv.net (Thomas Randall) writes:

>In article <4dk4t8$n1u@usenet4.interramp.com>,
> Keith Stein <us011192@pop3.interramp.com> wrote:
>>John,
>>
>>Currently Mir is transmitting packet and sometimes voice on 145.550 MHz,
>>narrow FM. They were running some voice tape recordings for a while on
>>145.800 MHz, but they stopped because they are having radio problems
>>right now. But try 145.550 MHz.
>>
>>By the way, nice last name!
>>

> I have to add to this that there was a radio power supply failer on Mir.
>Another was installed but is only capable of running the old Icom and one
>tnc. The digi voice module also has failed. All 4 fuses in the 2 connected
>transcievers blew, only 2 spares are left to run the icom. this info
>received from packet radio in the last week or so.

Indeed, that is what was announced.

I am often very amazed when I read about the amateur radio project
aboard Mir...
Missing components, no manuals, wrong connector on cable, and now a
supply failure.
It sure doesn't look like a job well prepared (on earth).

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

144. Re: uplink and downlink freqs. for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4dpl76$nm6@over.mhv.net>
Source record: 23210

In article <4dk4t8$n1u@usenet4.interramp.com>,
Keith Stein <us011192@pop3.interramp.com> wrote:
>John,
>
>Currently Mir is transmitting packet and sometimes voice on 145.550 MHz,
>narrow FM. They were running some voice tape recordings for a while on
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I have to add to this that there was a radio power supply failer on Mir.
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transcievers blew, only 2 spares are left to run the icom. this info
received from packet radio in the last week or so.

Tom
KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

145. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: jlundgre@delta1.deltanet.com
Message-ID: <4dr4pv$k8v@news2.deltanet.com>
Source record: 23211
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

Almost all of this list is so non-specific that it seems to be almost
useless.

James M. Atkinson, Communications Engineer (jmatk@tscm.com) penned:

: Here is the current list of frequencies used for bugging, technical
: surveillance and similar activities.

: If you have any additions please E-mail them to us. mail:jmatk@tscm.com

: also, check out the NEW usenet group: news:alt.security.tscm

: http://www.tscm.com/

: http://www.tscm.com/bugfreq.html

: ==

: Major "Real-World" Bugging Frequencies

: Common Wireless Bugs (Low Power - Well under 35-50 mw)

: 44.500 - 51.000 mhz "Baby/Room" monitors
: 72.100 - 75.400 mhz Hearing Assistance systems
: 54.000 - 150.000 mhz "Kit" Bugs
:
: 98.000 - 108.000 mhz Cheap out-of-band FM Bugs
: 112.000 - 142.000 mhz Cheap out-of-band FM Bugs
: 140.000 - 160.000 mhz Cheap out-of-band FM Bugs
:
: 60.000 - 320.000 mhz Low Cost kit bugs
: 398.000 - 406.000 mhz DECO Bugs (398.600/605, 399.450/455,
: 399.025/030, 406mhz)
: 25.000 - 450.000 mhz European/English Kit Bugs
:
: 150.000 - 216.000 mhz Typical VHF "Body Wire" & Pro-Grade Bugs
: 109.000 - 140.000 mhz Digital VHF Pro-Grade Bugs
: 138.000 - 174.000 mhz Typical "Spy Shop" & LE Cheap VHF Bugs
: (155-172 Popular)
: 140.000 - 150.000 mhz Popular Xandi Flea power kits (143/144mhz)
: 150.000 - 170.000 mhz Popular Japanese Flea power kits (under 5mw)
:
: 150.000 - 220.000 mhz Commercial Wireless Microphones
: 169.000 - 172.000 mhz 47 CFR 90.265 Authorization *** VERY Popular ***
: 174.000 - 216.000 mhz 47 CFR 2.106 (NG115) Authorization

: 395.000 - 410.000 mhz German UHF Wireless Microphones (PK Electronics)
: 219.000 - 530.000 mhz English UHF Wireless Microphones (300-500
: popular)
: 470.000 - 608.000 mhz Commercial Wireless Microphones
: 730.000 - 806.000 mhz Commercial Wireless Microphones
:
: 889.000 - 960.000 mhz Modified Cordless Phones (S/S & Hoppers)
:
: 380.000 - 480.000 mhz Video Bugs - US
: 890.000 - 960.000 mhz Video Bugs - US (902-928 Hot)
: 905.000 - 928.000 mhz Video/Audio Consumer Products (i.e.: Recoton)
:
: 1.700 - 1.930 ghz Video Bugs - US
: 2.400 - 2.500 ghz Video Bugs - US *** VERY Popular ***
: 5.725 - 5.850 ghz Video Bugs - US *** VERY Popular ***
:
: 1.100 - 1.400 ghz PAL Video Bugs *Very Hot in
: England/France/etc*
: 2.400 - 2.500 ghz PAL Video Bugs *Very Hot in
: England/France/etc*
: 3.500 - 4.500 ghz PAL Video Bugs *Very Hot in
: England/France/etc*

: 430 - 550 mhz Popular French Video/Audio Bugging System
: 950 - 2500 mhz Popular French Video/Audio Bugging System
: 700 - 900 mhz Popular Italian Audio Bugging System

: "Tactical" Bugs

: 225 - 400 mhz "Throw away" bugs (10uw-300mw Beer can bugs)
: 290 - 330 mhz Micro-powered Bugs (5uw-10mw Cigarette Butt Bugs)
:
: 30 - 500 mhz Tactical Repeaters (75mw-300mw)
: 285 - 400 mhz Tactical Repeaters (50mw-10watts)
: 100 - 152 mhz VHF Tactical Repeaters (300mw-25watts)
: 135 - 174 mhz VHF Tactical Repeaters (300mw-25watts)

: VLF and Carrier Current Type Bugs

: 9khz - 490 khz Carrier Current 47 CFR 15.219 Auth (250 microvolts)
: 490khz - 1.705 mhz Lossy Cable 47 CFR 15.221 Auth (1000 microvolts)
: 450khz - 30.00 mhz PLA Systems 47 CFR 15.207 Auth (30 mv@ft/30ft)

: 3 - 200 khz 300 mw High Grade Pro Bugs (over 500$ each)
: 100 - 200 khz 50-100 mw Older Bugs
: 120 - 200 khz 30-50 mw Pre 1990 intercoms
: 200 - 300 khz 30-50 mw Post 1990 intercoms
: 300 - 400 khz 250-400 mw TELCO Line transmitters (355khz popular)

: 300hz - 30 khz Cable TV Carrier - Hardwired microphones
: 30khz -300 khz Cable TV Carrier - Coaxial Bugs

: 100 - 450 khz Threat Window #1 Most CC Bugs
: 3khz - 3 mhz Threat Window #2 Expensive "Pro-Grade" Bugs
: 5khz - 32 mhz Threat Window #3 Popular WJ Carrier Current Rcvr
: 3khz - 50 mhz Threat Window #4 Realistic Threat Window for Telephone Wire
: 15mhz - 70 mhz Threat Window #5 Audio/Video "Micro-Wire" RF circuits
:
: WECO Bugs "boosted/ultrasonic audio" found on Power/CATV/Telco lines
:
: 64kbps to 1.5mbps Digital Bugs T-Carrier-Lo (T-1 and Below)
: 1.5mbps to 50mbps Digital Bugs T-Carrier-Hi (T-1 and above)
: 2.048mbps Digital Bugs Definity Circuit Pack Bug
: 32mbps Digital Bugs TMS Channel/Backplane bridge
: Designed to transmit on CC or Microwave ISM Spread Spectrum (2.4-6.0ghz)

: VLF Devices

: 25khz - 90khz Tape Recorder Bias Osc-Low End (35-45khz Common)
: 80khz - 145khz Tape Recorder Bias Osc-Mid Range (88.2, 96, 100khz Common)
: 100khz - 325khz Tape Recorder Bias Osc-Pro Grade (100, 150, 300khz Common)
: 40khz - 50khz Tape Recorder DAT/Hi8 (44.1/48khz Common)
:
: 8khz - 35khz Recorder Audio Servo Noise (10-20khz Common)

: 7khz - 35khz Video Camera VLF Detectable emmisions
: 15.750 mhz Common NTSC Video Camera
: 15.734 mhz CCD/PCB Video Camera (very easy to detect)
: 15.625 mhz Common Video Camera

: Also, be aware of ultrasonic/audio emmisions from most VLF devices.
: (Utilize a EOD/Bomb Tech Stethoscope, and Ultrasonic Spectrum Analyser)

: Spread Spectrum/Hopping Bugging Frequencies

: Legit Industrial Equipment (very inexpensive)
: 902 mhz - 928 mhz ISM band A (Very Popular)
: 2400 mhz - 2484 mhz ISM band B (Very Popular)
: 5725 mhz - 5850 mhz ISM band C
: 10500 mhz - 10550 mhz ISM band D
: 24075 mhz - 24250 mhz ISM band E

: SS Amateur Radio Bands Often used for eavesdropping (very inexpensive)
: 50 mhz - 54 mhz 6.00m Amateur Radio Equipment (STA)
: 144 mhz - 148 mhz 2.00m Amateur Radio Equipment (STA)
: 222 mhz - 225 mhz 1.25m Amateur Radio Equipment (STA)
: 420 mhz - 450 mhz 70cm Amateur Radio Equipment (47 USC 97.305)
: 902 mhz - 928 mhz 33cm Amateur Radio Equipment (47 USC 97.305)
: 1240 mhz - 1300 mhz 23cm Amateur Radio Equipment (47 USC 97.305)
: 2300 mhz - 2450 mhz 13cm Amateur Radio Equipment (47 USC 97.305)
: 3300 mhz - 3500 mhz 9cm Amateur Radio Equipment (47 USC 97.305)
: 5650 mhz - 5925 mhz 5cm Amateur Radio Equipment (47 USC 97.305)

: SS Amateur Radio Bands Occasionally used for eavesdropping
: 10.00 ghz - 10.50 ghz 3.0cm Amateur Radio Equipment (47 USC 97.305)
: 24.00 ghz - 24.25 ghz 1.2cm Amateur Radio Equipment (47 USC 97.305)

: 47.00 ghz - 47.20 ghz 6.0mm Amateur Radio Equipment (47 USC 97.305)

: SS Amateur Radio Bands Rarely used for eavesdropping (very expensive)
: 75.50 ghz - 81.00 ghz 4.0mm Amateur Radio Equipment (47 USC 97.305)
: 119.98 ghz - 120.02 ghz 2.5mm Amateur Radio Equipment (47 USC 97.305)
: 142.00 ghz - 149.00 ghz 2.0mm Amateur Radio Equipment (47 USC 97.305)
: 241.00 ghz - 250.00 ghz 1.0mm Amateur Radio Equipment (47 USC 97.305)
: 300.00 ghz - Light (3 Thz) Amateur Radio Equipment (47 USC 97.305)

: Note: Most commmon spread spectrum/hopping bugging equipment will
: hop at speeds
: between 100 and 50,000 hops per second. Equipment is readily
: available that
: hops even faster (100,000 to 300,000 hops per second). Dwell times
: can be as small as 1us (one widely used military system uses a dwell
: time of 3-5us)

: Outband Equipment
: ANY Television broadcast or Cable TV frequency
: ANY FM radio broadcast frequency
: ANY Paging or Beeper frequency
: ANY Cellular Telephone frequency

: 820 mhz - 960 mhz Modified (902-928) Cordless Telephones
: Modified Amateur Radio Equipment (can be on ANY frequency)

: Keep in mind that wideband (non-ISM) Spread Spectrum/Hopping Bugs
: are very
: difficult to detect(even if you are within a few feet). Watch for carrier
: feed-through, and "Noise Floor Humps".

: All Spread Spectrum devices are detectable

: Once Spread Spectrum/Hopping Bugs have been located (on the RF
: spectrum) all
: that can be done is to locate the sourse of the emission... it is
: virtually
: impossible to demodulate a SS signal unless you have access to the key.

: Also, a 500mw ISM device can easily have an effective range of over
: 20 miles.

: Look for spectral anomalies (humps) on the Spectrum Analyzer, and
: back up
: with a Compressive receiver.

: Commonly Used Law Enforcement Bugging Frequencies

: 37.000 - 952 mhz FCC Surveillance Blanket Authorization

: 47 CFR 90.19 "Physical surveillance, stakeouts, raids..."
: Straight AM/FM, FM-Subcarrier, SSB, Spread Spectrum, and Hoppers.
: If encrypted, it usually uses in-band voice inversion or DES.
: (Normally well under 2 watts... most under 35-150mw)

: 148 - 174 mhz
: 135 - 250 mhz Out-band Wireless Microphone
: 174 - 216 mhz In-band Wireless Microphone
: 350 - 440 mhz Common Video Freqs
: 380 - 930 mhz Wide Band Hoppers
: 806 - 824 mhz
: 851 - 869 mhz
: 905 - 930 mhz Popular Audio/Video Band

: 1.4 - 1.5 ghz Common Video Freqs
: 1.7 - 1.9 ghz Common Video Freqs (1.710 - 1.755 REAL Popular at
: 1/10 watt)
: 2.4 - 2.5 ghz Common Video Freqs (2.400 - 2.450 REAL Popular)
: 5.7 - 5.9 ghz Common Video Freqs (5.725 - 5.850 REAL Popular)
: 8.5 - 10.8 ghz Common Video Freqs

: 173.075 - LOJACK Auto tracking system beacon (200ms burst every second)

: Police Speed Enforcement Radar
: 10.450 - 10.600 ghz X-Band
: 11.488 - 11.628 ghz RD Detector
: 22.976 - 23.256 ghz RD Detector-2nd Harmonic
: 24.050 - 24.250 ghz X-Band
: 33.400 - 36.000 ghz Ka-Band
: 700nm - 1100nm Laser Threat
:

: Electronic Article Suveillance/Anti-Shoplifting Systems
: 8.10mhz - 9.30mhz Checkpoint (Hi-Q Tags) 8.2mhz Common
: 57.75khz - 58.75khz Sensormatic (Magnetic) Books, CDs, and Tapes
: 915mhz and 1830mhz Knogo (Microwave Resonant) Adhesive Labels

: 25 - 50 mhz "Bumper Beepers" (38 - 47 mhz very popular)
: 135 - 170 mhz "Bumper Beepers" (150-170 mhz very popular)
: 450 - 512 mhz "Bumper Beepers"
: 903 - 904 mhz "Bumper Beepers"
: 904 - 912 mhz "Bumper Beepers"
: 918 - 926 mhz "Bumper Beepers"
: 926 - 927 mhz "Bumper Beepers"

: WARNING:
: The area between 900 mhz and 6 ghz is EXTREMELY DANGEROUS as
: the eavesdropping equipment in that range is inexpensive, low power,
: and highly directional.

: Additionally, most TSCM people will not check frequencies above
: 1.0/1.5 ghz or
: 3 ghz (because the equipment is too expensive for them to buy).

: I have seen surveillance video tapes of TSCM inspections where the video
: cameras (Watec), microphones (Sony), and microwave RF transmitters (AID -
: 2.4ghz) were never detected by the inspectors (using 1ghz AVCOM Spectrum
: Analyzers).

: Surveillance Satellite (TK-Keyhole) Frequencies
: Note: Mostly Wideband Spread Spectrum/LPI channels

: 420mhz - 450mhz
: 1.2ghz - 1.4ghz
: 1.7ghz - 1.9ghz (1.76-1.84 real active)
: 1.9ghz - 2.2ghz (2.115 real active)
: 4.9ghz - 5.0ghz
: 7.5ghz - 8.3ghz
: 10.6ghz - 12.6ghz (11.7-12.2 active)
: 23.6ghz - 24.0ghz
: 25.5ghz - 25.7ghz
: 22.8ghz - 33.5ghz
: 42.5ghz - 47.0ghz
: 50.3ghz - 52.4ghz
: 78.0ghz - 85.5ghz
: 86.3ghz - 98.3ghz (86-92 real active)

: Commonly Used by Federal Agencies for Bugs, Wireless Microphones,
: and Body Wires (also 138-220 mhz, and 399-420 mhz, under 25-50 mw).

: 149.3500, 165.9125, 167.3375, 167.3425, 167.4875, 168.0115,
: 169.2000, 169.4450, 169.5050, 170.2450, 170.3050, 171.0450,
: 171.1050, 171.4500, 171.6000, 171.7500, 171.8450, 171.8500,
: 171.9050, 172.0000, 172.2000, 172.2125, 172.2375, 172.2625,
: 172.2875, 172.3125, 172.3375, 172.3625, 172.3875, 172.5500
: 173.3375

: 169.445, 169.505, 170.245, 170.305, 171.045, 171.105, 171.845, 171.905

: 27.5750 Customs Low Power < 5 watts
: 27.5850 Customs Low Power < 5 watts
: 163.1000 Customs Low Power < 30 watts
: 418.5750 Customs Low Power < 30 watts

: 40.1200 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
: 40.1700 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
: 40.2200 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"
: 40.2700 Federal Shared Mobile Locator Tranmitters "Bumper Beepers"

: 164.9125 FBI Surveillance
: 165.9125 ATF F5 Surveillance
: 166.2875 ATF
: 170.4125 ATF
: 407.8000 Secret Service
: 406.2750 Secret Service
: 408.5000 Secret Service
: 408.9750 Secret Service
:
: 172.2000 DOJ/DEA CH.1
: 171.6000 DOJ/DEA CH.2
: 418.0500 DEA Low Power
: 418.0750 DEA Low Power

: 418.5750 DEA Low Power
: 418.7500 DEA
: 418.6750 DEA
: 418.9000 DEA F2 CINDY (416.325) Surveillance
: 418.7500 DEA F3 GAIL Surveillance/Strike Force
: 418.6750 DEA F4 EMILY (416.325) Surveillance

: 407.8000 CIA, State Department
: 408.0500 Federal Shared
: 408.5750 Federal Shared
: 409.4000 Federal Shared

: 960-1215mhz Spread Spectrum Systems (Wideband)

: Generally Recognized Federal Bug/Spy Bands
: Primary - 25-50mhz, 135-175mhz, 225-440mhz, 1710-1950mhz, 8.3-12.5ghz
: Secondary - 890mhz-5.50ghz, 7.0-9.5ghz, 10-39.6ghz

: Also, Wide Band Frequency Hopping centered on various UHF-TV channels
: (ie: 510 or 670 mhz with a hopping width of +/- 25 mhz)

: Keep in mind that the federal government can use virtually any
: frequency between DC and light.

: Band Width Resolution and Filters

: Examine the spectrum with the following BW resolutions/filters:

: Utilize all BW resolutions/filters between 5hz - 200mhz (depending
: on band being checked)

: Note: A programmable digital spectrum analyzer should be used!
: (1/3/5/10/15/20/25/30/50/75/100/150/200... Sequence is prefered)

: BW Res - Usage/Primary Function
: 100/200 mhz - Resonate Cavity Bugging Devices/SIGINT Devices
: 125/35/8mhz - Resonate Cavity Bugging Devices/SIGINT Devices
:
: 50/20/10mhz - Diplomatic/Intelligence Microwave Bugs
: 40/20/10mhz - Diplomatic/Intelligence Microwave Bugs
:
: 13/16/20mhz - Microwave Wideband
: 11/12/13mhz - Microwave Wideband
: .5/1/2/5mhz - Microwave Wideband (Burst Bugs)
: 18/26/36mhz - Satellite Wideband (Video)
: 2/4/6/8 mhz - Microwave Wideband (Video)
: 3/6/12 mhz - Microwave Wideband (Video) - Common
: .5/1/3 mhz - Microwave Wideband (Video/Burst/Pulse)

: 1.5/.75 khz - Frequency Hopping Bugs - VERY Common
: .4/.2/.1khz - Frequency Hopping Bugs - VERY Common
: 3.2/6.4 khz - Frequency Hopping Bugs - VERY Common
: 10/20/25khz - Frequency Hopping Bugs - VERY Common
: 50/75 khz - Frequency Hopping Bugs - VERY Common

: 100/250 khz - Frequency Hopping Bugs
: 300/500 khz - Frequency Hopping Bugs
: 1/2/4/8 mhz - Frequency Hopping Bugs

: 300/250 khz - Regular Wide Band Broadcast FM
: 150 khz - Narrowband Broadcast FM Audio, Television Audio
: 280 khz - Narrowband Broadcast FM Audio, Television Audio

: 200/150 khz - Commercial Wireless Microphone - High Grade
: 150/100 khz - Commercial Wireless Microphone - Concert/Broadcast Grade
: 58/77/84khz - Commercial Wireless Microphone - Typical Body Wire
: 50/60/75khz - Commercial Wireless Microphone - Typical police device
: 8/25/50 khz - European/Japanese Industrial Bugging Devices

: 50/30 khz - Wideband FM two-way communications (ie: Cellular
: Telephone)
: 16/15/6khz - Normal FM two-way communications
: 3/6/8/12khz - Narrowband Commercial - Voice
: 1/3.2/6khz - Narrowband (Marine, HF, etc...)

: 120/9/1 khz - Narrowband (Bias Osc./Video Cameras/SIGINT)
: 30/750/500hz- Narrowband (Bias Osc./Video Cameras/SIGINT)
: 56/75/100hz - Narrowband (Bias Osc./Video Cameras/SIGINT)
: 30/150/200hz- Narrowband (Bias Osc./Video Cameras/SIGINT)
: 250/300 hz - Narrowband (Bias Osc./Video Cameras/SIGINT)

: 300/250 hz - Narrowband OOK/FSK/Data, etc...
: 300/250 hz - Narrowband OOK/FSK/Data, etc...

: Subcarrier Detection:

: 10 - 500 khz - Most Commonly Used Subcarriers
: 30 - 150 khz - Typical Broadcast FM Subcarrier (FMSubC)
: 19/27/38 khz - Typical Stereo Broadcast FM Subcarrier (FMSubC)
: 67 khz - Typical Musicast/Musak Broadcast FM Subcarrier (FMSubC)

: 2 - 10 mhz - Audio Subcarriers often used with Video (4.2-8 mhz
: common)

: 5khz - 950khz - Realistic Subcarrier Threat (Audio)
: 1mhz - 15 mhz - Realistic Subcarrier Threat (Video)

: Summary (this will catch 99.99% of all Non-Intell/Diplomatic RF bugs)

: All TSCM Inspections should include the following frequencies:
: (Expect to see less than 10-35 mw maximum at the TX antenna)
: (Do not expect the signal to be present for more than 20uS-100uS)

: To find RF transmitters a search grid of 15 foot by 15 foot (or
: less) should be used.

: Also, all phone rooms, riser closets, demarcs, boots, etc. MUST be
: checked.

: Remember that the microphone/camera can be hundreds of feet away
: from the transmitter.

: Use a digital spectrum analyzer and a wideband receiver with an analog
: 10.7/21.4mhz SDU on the IF, dispersions of 100/200/500khz).

: RF Spectrum Analysis and monitoring should take place for at least
: twelve
: solid hours during a regular sweep (72 hours or more is preferred).

: To prepare for IPM the spectrum should be evaluated/monitored for at
: least four hours prior to the event.

: Most non-gvt RF bugs will have a transmit frequency between 9khz
: and 6ghz.

: The Spectrum Analyzer inspection must cover at least 3khz to 40 ghz

: VLF Detection-Audio .3 khz to 100 khz Video Cameras & Tape recorders
: VLF Detection-RF 12 khz to 500 khz Video Cameras & Tape recorders
: VLF Detection-Audio .3 khz to 150 khz Microphone/Ultrasonic
: Chirping

: Carrier Current Bugs 3 khz to 50 mhz 99% Voice
:
: RF Bugs-HF 3 khz to 50 mhz 99% Voice
: Space RF Bugs-VHF 30 mhz to 300 mhz 10% Video/80% Voice/10% Data
: Space RF Bugs-UHF 300 mhz to 900 mhz 25% Video/60% Voice/15% Data
:
: RF Bugs-Microwave1 900 mhz to 3.0 ghz 70% Video/20% Voice/10% Data
: RF Bugs-Microwave2 3 ghz to 18.5 ghz 75% Video/15% Voice/10% Data
: RF Bugs-Microwave3 18.5 ghz to 40.0 ghz 75% Video/ 5% Voice/20% Data
:
: ...and of Course Infrared! (Look for "IR Blooms")
:
: 700 - 1100nm Audio Transmitters/Lasers (CF between 880 and 950nm)
: 750 - 900nm Night Vision Illuminators
: 900 - 1710nm IR Video Illuminators

: Note:
: Most military/intelligence and governmental TSCM inspections look
: for devices
: between 3khz to 50mhz for Carrier Current, 20khz to 40ghz for
: regular free
: space RF radio devices, and directional microwave devices from
: .5ghz to 120ghz.

: -jma
: ==
: James M. Atkinson "...Shaken, not Stirred..."
: TSCM.COM
: 127 Eastern Avenue #291
: Gloucester, MA 01931-8008
: URL: http://www.tscm.com/ E-Mail: jmatk@tscm.com

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: ===============================================================
: The First, The Largest, The Most Popular, and the Most
: Complete TSCM Counterintelligence Site on the Internet
: ===============================================================
:

--
#======P=G=P==k=e=y==a=v=a=i=l=a=b=l=e==u=p=o=n==r=e=q=u=e=s=t======#
| John Lundgren - Elec Tech - Info Tech Svcs. | jlundgre@delta1 |
| Rancho Santiago Community College District | .deltanet.com |
| 17th St at Bristol \ Santa Ana, CA 92706 | http://rsc.rancho|
| My opinions are my own, and not my employer's. | .cc.ca.us |
| I have gone out to look for myself.. If I should |
| return before I get back, hold me until I get here. |
| "You can flame your brains out -- it won't take long." |
#===T=u=z=l=a==C=o=m=p=a=n=y=.=.===t=h=r=e=e='=s==L=e==C=r=o=w=d=!==#
```

146. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: mike@kempston.demon.co.uk
Message-ID: <31011cc8.1673454@pubnews.demon.co.uk>
Source record: 23212
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

In article <4dr4pv$k8v@news2.deltanet.com>,
jlundgre@delta1.deltanet.com (John Lundgren) wrote:

>Almost all of this list is so non-specific that it seems to be almost
>useless.

[enormous snip]

Then why did you feel it necessary to quote all of the previous post,
thus making us all pay to download it once again?

Please learn how to quote the minimum necessary in order to make your
point. This technique is described in numerous netiquette guides.

Regards, Mike.

--
Home: mike@kempston.demon.co.uk | mike@kempston.powernet.co.uk
PGP 2.6.2i public key available from pgp@kempston.demon.co.uk

147. ARLK003 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk003.1996@arrl.org>
Source record: 23213
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK003
ARLK003 Keplerian data

ZCZC SK03
QST de W1AW
Keplerian Bulletin 3 ARLK003
From ARRL Headquarters
Newington, CT January 20, 1996
To all radio amateurs

SB KEP ARL ARLK003
ARLK003 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-72
1 23762U 96001A 96019.26041667 .00000503 00000-0 00000+0 0 339
2 23762 28.4527 36.0690 0006412 358.4488 212.2475 15.88647970 1242
Mir
1 16609U 86017A 96018.84893201 .00002182 00000-0 35527-4 0 3884
2 16609 51.6441 157.2960 0005716 230.8869 129.1718 15.57709610566579
AO-10
1 14129U 83058B 96018.87817788 .00000114 00000-0 10000-3 0 3993
2 14129 26.3980 228.2556 5981557 343.7734 3.3294 2.05879661 66779
RS-10/11
1 18129U 87054A 96015.72530052 .00000083 00000-0 74083-4 0 1595
2 18129 82.9249 261.9616 0010331 216.6240 143.4200 13.72361637429128
UO-11
1 14781U 84021B 96016.53339982 .00000029 00000-0 12752-4 0 8553
2 14781 97.7888 14.1469 0010962 214.6485 145.4008 14.69418042635233
RS-12/13
1 21089U 91007A 96019.18197039 .00000012 00000-0 -31664-5 0 8606
2 21089 82.9221 300.5848 0027835 293.5775 66.2462 13.74064612248438
AO-13
1 19216U 88051B 96019.49045988 -.00000052 00000-0 13138-4 0 1375
2 19216 57.3714 140.2058 7370512 29.2735 356.6644 2.09726697 26696
UO-14
1 20437U 90005B 96016.71614754 .00000002 00000-0 17723-4 0 1546
2 20437 98.5565 102.5299 0010511 294.8057 65.2025 14.29909581312269
```

```
RS-15
1 23439U 94085A 96017.78675490 -.00000039 00000-0 10000-3 0 1063
2 23439 64.8235 267.9299 0164219 225.6798 133.0566 11.27523837 43715
AO-16
1 20439U 90005D 96018.21915813 -.00000014 00000-0 11548-4 0 9535
2 20439 98.5694 105.9840 0010659 290.3196 69.6844 14.29964067312493
DO-17
1 20440U 90005E 96017.27684182 -.00000017 00000-0 10425-4 0 9530
2 20440 98.5714 105.6177 0010998 293.5780 66.4244 14.30105432312380
WO-18
1 20441U 90005F 96015.72423236 -.00000015 00000-0 11000-4 0 9572
2 20441 98.5692 104.0382 0011234 297.6424 62.3615 14.30075579312162
LO-19
1 20442U 90005G 96017.27072227 .00000020 00000-0 24687-4 0 9531
2 20442 98.5723 105.9963 0011855 293.5040 66.4894 14.30182267312405
FO-20
1 20480U 90013C 96016.18140402 .00000000 00000-0 64701-4 0 8495
2 20480 99.0493 69.9996 0541257 111.1787 254.8011 12.83232579278266
AO-21
1 21087U 91006A 96018.18543123 .00000093 00000-0 82657-4 0 6693
2 21087 82.9399 73.4750 0034105 268.8775 90.8472 13.74563852249269
UO-22
1 21575U 91050B 96016.70249701 .00000043 00000-0 28923-4 0 6595
2 21575 98.3725 87.4856 0008634 6.6345 353.4946 14.37008688236166
KO-23
1 22077U 92052B 96015.46139297 -.00000037 00000-0 10000-3 0 5494
2 22077 66.0791 151.3209 0005896 342.0269 18.0534 12.86295297161037
KO-25
1 22828U 93061F 96017.72151630 .00000020 00000-0 25484-4 0 4241
2 22828 98.5924 96.0897 0010117 306.3084 53.7155 14.28127058 88497
IO-26
1 22826U 93061D 96016.16303813 .00000008 00000-0 20902-4 0 4457
2 22826 98.5984 94.5110 0009360 326.4329 33.6262 14.27792533120167
AO-27
1 22825U 93061C 96016.22522004 -.00000002 00000-0 16932-4 0 4462
2 22825 98.5997 94.4383 0008557 325.0479 35.0135 14.27684586120162
PO-28
1 22829U 93061G 96018.71697046 -.00000027 00000-0 66479-5 0 4381
2 22829 98.5951 97.1193 0009818 304.0181 56.0053 14.28107857120550

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
January 23, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

148. New Book about TESLA

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: U60082@uicvm.uic.edu
Message-ID: <96020.132601U60082@uicvm.uic.edu>
Source record: 23214
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.homebrew

We have translated the book: Tesla's Correspondence with Relatives in
ENGLESH. It contains more than 200 pages and we recommend that it gets
wide distribution in the scholastic community and elsewhere. It contains
a Preface by Dr. A.S. Marincic, Introduction by Dr. Nenad V. Mandich,
Tesla's relative and translated by Nicholas Kosanovich.

-=*=-

TESLA MEMORIAL SOCIETY, Inc. http://www.neuronet.pitt.edu/~bogdan/tesla
453 Martin Road
Lackawanna, NY 14218 http://www.eskimo.com/~billb/tesla/telsa.html Voice: (716) 822-0281
-*-

THE PURPOSE of this society is to honor and perpetuate the memory and
ideals of the great scientist and inovator, Nikola Tesla through
appropriate academic conferences, scholarship awards, and various
cultural activities. It is a nonpolitical and nonprofit organization.

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==========

149. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: dtwitkowski@ucdavis.edu
Message-ID: <dtwitkowski-2001961120160001@reqf-030.ucdavis.edu>
Source record: 23215
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

jlundgre@delta1.deltanet.com (John Lundgren) wrote:
>>Almost all of this list is so non-specific that it seems to be almost
>>useless.

mike@kempston.demon.co.uk (Mike Mann) wrote:
>Then why did you feel it necessary to quote all of the previous post,
>thus making us all pay to download it once again?

I agree completely. Think before posting.

...dtw

--

```
-----------------------------------------------------------------------
| On the average, a person has one testicle. |
| 1 + 1 = 3, for sufficiently large values of 1. |
| http://www.ece.ucdavis.edu/~witkowsk/ |
-----------------------------------------------------------------------
```

150. sts-72 deorbit

Newsgroup: rec.radio.amateur.space
Date: 1996-01-20 00:00:00 UTC
From: bkline@primenet.com
Message-ID: <4drd3l$c7f@nnrp1.news.primenet.com>
Source record: 23216

The deorbit plume was visiable in Phoenix from Horizon to Horizon. A bright red glow followed by an Ion trail.

Keep up those night landings NASA.

Bob Kline

bkline@primenet.com

151. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-21 00:00:00 UTC
From: post@fc.hp.com
Message-ID: <4dsrh5$nj3@fcnews.fc.hp.com>
Source record: 23118
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

John Lundgren (jlundgre@delta1.deltanet.com) wrote:
>Almost all of this list is so non-specific that it seems to be almost
>useless.

Not if you have the right kind of equipment to sniff around with. You can't get by with a scanner. Also note that there is a great deal of overlap in frequencies for different types of equipment.

David Post post@fc.hp.com

152. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-21 00:00:00 UTC
From: gravyman@bcl.net
Message-ID: <DLI4us.lzx@bcl.net>
Source record: 23119
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

David Mclean <dmclean@dfw.net> wrote:

>Hello to all:

> Come a take a look at my new web page. I have been working on it for
>the last 4 weeks. I have lots of thing that you will like. Some of the
>things that I have are: MODs, Swap Shop, Dfw repeter list, comment page,
>links to other good ham pages, call looks ups (updated by the sec), radio
>pricing, Links to QRZ,FCC,HRO, and many more. If you are a ham and would
>like you web page added to my list just send me e-mail. Please tell me
>what you like and dislike about the page. I want all types of comments.
>Hope you like what I have.

>--
> David Mclean
> From The World of Hamradio
> KC5NNV is Clear!
>_____
>-----

Dave,

I guess I might be overlooking something, but I don't see a URL listed
here. You might want to post that so people can check out your page.

73,
Mike (AA9NQ)

153. help with SAREX

Newsgroup: rec.radio.amateur.space
Date: 1996-01-21 00:00:00 UTC
From: XE2MXU/N5UHB <fjorozco@academ07.mty.itesm.mx>
Message-ID: <Pine.A32.3.91.960121204815.24523I-100000@academ07.mty.itesm.mx>
Source record: 23120

Hello all, we would like to get one of the local schools into the SAREX program, and I would like to hear from other hams who have helped out in SAREX school contacts.

Also, I've been asked to speak to a group of high school kids about SAREX, and I would like to hear suggestions from sarex 'veterans' as to what I can focus on so kids who've seldom had any contact with amateur radio can become excited about ham radio, and particularly SAREX. This talk would be either at the end of this week or during the next one.

Thanks in advance!

Luis XE2MXU/N5UHB

"Failure is NOT an option!"
-- G. Kranz

154. Upcoming SAREX-and Mir-Docking Mission STS-76

Newsgroup: rec.radio.amateur.space
Date: 1996-01-21 00:00:00 UTC
From: Conrad.Weeseman@inter.NL.NET
Message-ID: <Pine.SUN.3.91.960121142606.6165L-100000@hatert.nijmegen.inter.nl.net>
Source record: 23121

SAREX TO FLY ON STS-76

The Shuttle Amateur Radio EXperiment, or SAREX will fly again on Shuttle Mission STS-76 set for launch March 21, 1996 at 0834 UTC (3:34 AM EST) from the Kennedy Space Center, Cape Canaveral, Florida. Landing is scheduled for March 30, 1995 at 1707 UTC (12:07 AM EST) at the Kennedy Space Center, Florida. 9 day mission.

Among those in the crew who hold amateur licenses are, Astronaut Richard A. Searfoss KC5CKM who will serve as the Shuttle's Pilot, Mission Specialist Linda M. Godwin, N5RAX and Ronald M. Sega, KC5ETH, The remaining crew members include Commander Kevin P. Chilton, and Mission Specialists Shannon W. Lucid (who is expected to have his amateur license by that time) and Michael R. Clifford.

This will be Linda Godwin's third shuttle flight. She used ham radio aboard the shuttle Atlantis during STS-37 in April 1991, and from aboard Endeavour during STS-59 in April 1994.. Searfoss last operated SAREX from the Space Shuttle Columbia during mission STS-58 in October/November 1993. This will be his second Shuttle flight. Ronald Sega used SAREX from Discovery during the first joint US/Russian shuttle mission, STS-60, in February 1994.

During the mission, the shuttle will rendezvous and dock with the Russian Space Station Mir. Later, the shuttle will return to Earth, leaving Shannon Lucid with Mir for a 5 month stay aboard the Russian complex.

The launch will place the shuttle into Earth orbit at an altitude of 196-245 statute miles (315-394 km) and an inclination of 51.6 degrees.

During SAREX missions, the astronauts will typically make Amateur Radio scheduled contacts with schools, personal contacts with family members and random contacts with the Amateur Radio operators.

Additional STS-76 mission information can be obtained from NASA:
* NASA Spacelink computer information system (look under Spacelink.Hot.Topics)
BBS: (205) 895-0028 [VT-100, 8-N-1]
Telnet, FTP, and Gopher: spacelink.msfc.nasa.gov
World Wide Web: http://spacelink.msfc.nasa.gov
Internet TCP/IP address: 192.149.89.61
* NASA Shuttle World Wide Web Home Page: http://shuttle.nasa.gov

The Shuttle Amateur Radio EXperiment (SAREX) is sponsored by the American Radio Relay League (ARRL), The Radio Amateur Satellite Corporation (AMSAT) and The National Aeronautics and Space Administration (NASA). SAREX is supported by the Federal Communications Commission (FCC).

155. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: vrsheb%ebmv12.dnet@gpo.nsc.COM
Message-ID: <9601221236.AA21247@gpo.nsc.com>
Source record: 23122

```
help
```

156. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: mindseye@eskimo.com
Message-ID: <DLKDML.DCn@eskimo.com>
Source record: 23123
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

In article <30FAAD5C.2FDF@novell.com>, mpeterson@novell.com says...
>
>Bob Argyle wrote:
>>
>> Does anyone know of a site that list components that have been used in
space?
>
>As I understand it, IC's are giving a "industrial" or "military" rating
>at production time depending on their performance in a hostile
>environment. Digikey, Mouser, etc. all carry industrial-grade ic's -
>you'll probably have to contact the manufacturer to find sources for
>military-grade.
>
>Matt

Sorry, the "military" specs relate primarly to the temperature range that the device is rated to perform over, nothing to do with radiation resistance.

In nearly all cases, the only difference between the commercial and military parts is the level of testing, with military parts actually tested for the specified parameters. Commercial grade parts come from the same assembly line, but are less expensive due to the limited testing they receive (basically functional testing at ambient temperature).

In a cost savings move, the government has gone away from requiring "military grade" in most (all?) applications, since they all perform the same anyway.

In trully critical applications; either certified parts are specified (tested fully against all parameters), or the sub-contractor will buy commercial grade parts and test the themselves for whatever parameters are critical for their application (temperature, pulse rise time, etc..

Tim Haupt
mindseye@eskimo.com

157. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DLKvor.Ao7@pe1chl.ampr.org>
Source record: 23124
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

In <4dsrh5$nj3@fcnews.fc.hp.com> post@fc.hp.com (David Post) writes:

>John Lundgren (jlundgre@delta1.deltanet.com) wrote:
> >Almost all of this list is so non-specific that it seems to be almost
> >useless.

>Not if you have the right kind of equipment to sniff around with. You can't
>get by with a scanner. Also note that there is a great deal of overlap in
>frequencies for different types of equipment.

Yes, it would have been much easier to just have 1 line:

0-30 GHz: bugs

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

158. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: rong@computer.net
Message-ID: <4dunbd$rdc@news.computer.net>
Source record: 23125
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

David Mclean <dmclean@dfw.net> wrote:

>Hello to all:

> Come a take a look at my new web page. I have been working on it for
>the last 4 weeks. I have lots of thing that you will like. Some of the
>things that I have are: MODs, Swap Shop, Dfw repeter list, comment page,
>links to other good ham pages, call looks ups (updated by the sec), radio
>pricing, Links to QRZ,FCC,HRO, and many more. If you are a ham and would
>like you web page added to my list just send me e-mail. Please tell me
>what you like and dislike about the page. I want all types of comments.
>Hope you like what I have.

>--
> David Mclean
> From The World of Hamradio
> KC5NNV is Clear!
>_____
>---

Try our web page:

www.computer.net/nwara/wb2ixr.html

RON
****

RON GOLDSTEIN---KA2IIA
******
STAY YOUNG---DRIVE A VINTAGE 427 CORVETTE
KEEP YOUR MIND ACTIVE--BECOME AN AMATEUR RADIO OPERATOR

159. Re: WEATHER FAX software package

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4e0rg9$t50@service2.uky.edu>
Source record: 23126

In article <4dmmu9$g0l@sleipnir.iaccess.com.au>, kelaero@iaccess.com.au (Shiraz Iskenderian) says:
>
>I would greatly appreciate any information on a software package called
>WEATHER FAX that processes acquired weather data to produce weather maps.
>
>Thanks,
>
>Shiraz Iskenderian
>shiraz@kel.com.au
>Melbourne, Australia
Try JVFAX 7.0 (or 7.1 not much difference, but I think the docs woth 7.0 are better). With a simple uA741 circuit, you can receive hf fax on SW. I am unfamiliar wiht what fax stations you have "down under".
I routinly receive NAM 8080 on a real bad antenna. You will also need a fairly stable radio. I have a Kenwood R2000 that works great. I have an older Panasonic RF2200 that is totally unsuited to any data reception.
You can "grab" JVFAX at the AMSAT web site.
If you are wanting to get wx sat photos JVFAX will also work for that.
I would recomend that you get Dr. Ralph Tagerts Latest WX sat handbook.
I do not know how things work in Australia, but assume that if it came to the worst case, you could order it from the ARRL. JVFAX supports a real simple voc that goes between you VHF receiver and the uA741 hf fax demod. This is a cheap, fun way to get into wx sat fax. A "real" wx demodulator will work circles around this cheap methode.
Good luck and happy faxing.

160. test, please ignor

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Tom Kreyche <tkreyche@well.com>
Message-ID: <4dv59s$sbi@nkosi.well.com>
Source record: 23127

```
ignore, please
```

161. Mir Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4duke0$7b9@vivaldi.telepac.pt>
Source record: 23128

Hi, Geert
If you're looking for amateur frequencies, the most used is 145.550MHz.
This freq. is also used for packet-radio up and downlink.
But the crew is often heard on other frequencies (145.800, 145.850) and
in ocasions (like EUROMIR) using duplex. UHF (voice and 9600 pk) activity
is expected also.

If you look for non-amateur frequencies, the most used is 143.620.
But there are reports of MIR activity between 165.870 and 166.155
(165.870, 166.122, 166.130 and 166.140 are popular).
If you can, check also the 900MHz band (between 922-926) Try 922.755MHz

A very reliable source is Chris van den Berg reports. I don't know if
they are avaliable via Internet, but you can read them on OSCAR NEWS,
AMSAT-UK journal.

Best 73ï¿½s F.Costa CT1EAT

162. ARLS001 Ham radio power supply aboard Mir fails (fwd)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Conrad.Weeseman@inter.NL.NET
Message-ID: <Pine.SUN.3.91.960122150140.8176A-100000@hatert.nijmegen.inter.nl.net>
Source record: 23129

```
---------- Forwarded message ----------
Date: Fri, 19 Jan 1996 16:34:03 EST
From: w1aw@arrl.org
To: QST@arrl.org
Subject: ARLS001 Ham radio power supply aboard Mir fails

SB SPACE @ ARL $ARLS001
ARLS001 Ham radio power supply aboard Mir fails

ZCZC AS09
QST de W1AW
Space Bulletin 001 ARLS001
>From ARRL Headquarters
Newington, CT January 19, 1996
To all radio amateurs

SB SPACE ARL ARLS001
ARLS001 Ham radio power supply aboard Mir fails

German cosmonaut Thomas Reiter, DF4TR/DP0MIR, aboard the Mir orbital
complex, reports that a power supply used for some of the
spacecraft's ham radio equipment failed on New Year's Eve. The
remaining, older power supply is only capable of powering the old
Icom 2-meter transceiver and one 1200-baud TNC. The digital voice
module also has failed, so there will be no more automatic voice
recordings in the near future.

Reiter reports all four fuses in the two connected transceivers have
blown and only two spare fuses remain. Last month, Reiter used the
digital voice recorder, built by Thomas Kieselbach, DL2MDE, to
broadcast holiday messages. The primary transmitting frequency is
145.800 MHz.

Recently, the cosmonauts on Mir unpacked new Amateur Radio equipment
delivered by rocket, including a 70-cm FM transceiver and 9600-baud
packet gear.

Reiter was philosophical. ''Well, at least we can be reached and
still can talk with the world,'' he said in a message to Dave Larsen,
N6JLH.
NNNN
/EX
```

163. Re: ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Bob Fritz <bfritz@sd.inri.com>
Message-ID: <4e09l9$o88@gozer.inri.com>
Source record: 23130
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Response is extremely slow - never did get to more than a blank page in about four minutes of waiting.

164. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: vstueb%ebvx04.dnet@gpo.nsc.COM
Message-ID: <9601221239.AA21475@gpo.nsc.com>
Source record: 23131

```
help
```

165. Re: New Book about TESLA

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: aranders@kosepc01.delcoelect.com
Message-ID: <4e04fs$5tj@kocrsv08.delcoelect.com>
Source record: 23132
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.homebrew

In <96020.132601U60082@uicvm.uic.edu>, <U60082@uicvm.uic.edu> writes:

>We have translated the book: Tesla's Correspondence with Relatives in
>ENGLESH.

If this is indicative of the quality of the translation, I'll pass. :-)

166. Re: WANTED: KANSAS CITY TRACKER, INFORMATION WANTED.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: bmm1@freenet3.scri.fsu.edu
Message-ID: <4e16kv$f51@freenet3.scri.fsu.edu>
Source record: 23133

L.L.Grace
POB 1345
Voorhees NJ
08043
--
Bruce M. Marshall bmm1@freenet.fsu.edu voice 423 481 0990 fax 423 481 8039

167. Re: ***ONE OF THE BEST HAM WEB PAGES ON THE INTERNET. TRY IT OUT!!***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: jlyons@CAM.ORG
Message-ID: <4e0m8n$gmh@stratus.CAM.ORG>
Source record: 23134
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

On 18 Jan 1996, Ken Durham wrote:

> In article <4dk7io$kd1@fnord.dfw.net>, dmclean@dfw.net says...
> >
> >Hello all:
> >
> > In the last message that I sent over usenet I forgot to include my
> >url for my web site. The URL is "http://www.dfw.net/~dmclean".
> ~~~~~~`
> I tried this URL yesterday and again this morning with no results. Netscsape
> keeps contacting the host forever. Please try your page from another site and
> see if it can be accessed.
>
> Ken Durham K5MBV mbv@ti.com
>
>
>

I had no problem accessing it yesterday (Sunday) afternoon, twice ...
once via Netscape and once via Lynx.

Jim Lyons

168. WANTED address for ordering a TRAKBOX is a antenna tracking box.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-22 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4dvsee$arg@ping1.ping.be>
Source record: 23135

Hello

can someone give me the address for to order an TRAKBOX ?

All information is welkom!

Addresses of USA or EUROPE are all welkom!

Thanks in advance.

Geert Pirens, ONL2057

169. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: henry@zoo.toronto.edu
Message-ID: <DLnH3G.Ly@zoo.toronto.edu>
Source record: 23136
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

In article <DLKDML.DCn@eskimo.com> mindseye@eskimo.com (Rose Haupt) writes:
>Sorry, the "military" specs relate primarly to the temperature range that
>the device is rated to perform over, nothing to do with radiation
>resistance.
>
>In nearly all cases, the only difference between the commercial and
>military parts is the level of testing...

Well, the other difference is the packaging: the military parts use expensive hermetically-sealed ceramic packages, while the commercial parts use plastic packages, because of the different temperature ranges envisioned for their use. The plastic packages can't hold a hermetic seal if they are temperature-cycled too drastically.

The military actually has been known to use plastic packages in some situations. There was a Vietnam-era incident where proximity fuzes which had worked fine in Vietnam were showing a high failure rate in peacetime use afterwards. Turned out that the problem was plastic IC packages. They were fine when the fuzes went straight from the factory onto a plane for Vietnam, but less satisfactory when the fuzes sat in an unheated warehouse for a couple of years before use.

170. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: jmatk@tscm.com
Message-ID: <jmatk-2301962131430001@jmatk.tiac.net>
Source record: 23137
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

In article <DLKvor.Ao7@pe1chl.ampr.org>, pe1chl@wab-tis.rabobank.nl wrote:

> In <4dsrh5$nj3@fcnews.fc.hp.com> post@fc.hp.com (David Post) writes:
>
> >John Lundgren (jlundgre@delta1.deltanet.com) wrote:
> > >Almost all of this list is so non-specific that it seems to be almost
> > >useless.
>
> >Not if you have the right kind of equipment to sniff around with. You can't
> >get by with a scanner. Also note that there is a great deal of overlap in
> >frequencies for different types of equipment.
>
> Yes, it would have been much easier to just have 1 line:
>
> 0-30 GHz: bugs
>
> Rob
> --

Or better yet,

0- 30 ghz: bugs
30-275 ghz: bugs (State Dept)
275-452 ghz: bugs (NSA/CIA)
452-900 ghz: bugs (NSA mm-wave)

and
900ghz-375Thz: bugs (MIT Bugs)
(Tongue in Cheek) ;->

==========
James M. Atkinson "...Shaken, not Stirred..."
TSCM.COM
127 Eastern Avenue #291
Gloucester, MA 01931-8008
URL: http://www.tscm.com/ E-Mail: jmatk@tscm.com
==========
The First, The Largest, The Most Popular, and the Most
Complete TSCM Counterintelligence Site on the Internet
==========

171. * SpaceNews 22-Jan-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4e3a4l$7ug@pilot.njin.net>
Source record: 23138
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 22-Jan-96 *
Date: 23 Jan 1996 13:41:25 -0500
Organization: Rutgers University
Message-ID: <4e3a4l$7ug@pilot.njin.net>

SB NEWS @ AMSAT $SPC0122
* SpaceNews 22-Jan-96 *

BID: $SPC0122

=========
SpaceNews
=========

MONDAY JANUARY 22, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* OSCAR-10 NEWS *
=================
AMSAT-OSCAR-10's orientation is such that its solar panels are not receiving
adequate illumination to maintain a charge on its storage batteries. As a
result, the downlink recently experienced frequency instability, and has now
gone silent. Users should refrain from using AO-10 until sun angles improve
to the point where its storage batteries can one again be charged.

* WEBERSAT-OSCAR-18 NEWS *
==========================
WEBERSAT (WO-18) is currently sending telemetry, photos, weekly whole
orbit data (WOD), and light spectra of the Sun or Earth on Mondays.

The satellite's digipeater is on and can be accessed on an uplink frequency
of 145.900 MHz. Using a terminal program connected to your TNC/PSK modem,
try connecting to yourself or calling CQ "VIA WEBER-1". Repeated packets
will appear on the downlink between telemetry and CCD image data
transmissions.

Photo 10/14 of Ethiopia is the current image. It has great contrast with
very few clouds and land features clearly visible. Use WW1.3 to convert the
photo to a GIF image, then use your favorite graphics program to size it,
and adjust the contrast and brightness slightly.

The satellite continues to have a weak and relatively steady tone of about
1200 Hz in the downlink signal, which can cause reception problems with some

modems. If this problem occurs, a ground-based solution is to adjust the IF-shift of the receiver to suppress the carrier into the skirts of the IF filter. Night reception seems to be better than in the daytime.

WOD collection and broadcast will adhere to the following schedule:

13 January/Week4: Temperatures and impact detector, Ch# 14 2F 30 35 3B 40
20 January/Week1: Array currents, Ch# 26 27 28 29 2A 2B
27 January/Week2: User requested channels, Ch# ?? ?? ?? ?? ?? ??
3 February/Week3: BCR, 21 22 29 2F 33 36
10 February/Week4: Temperatures and impact detector, Ch# 14 2F 30 35 3B 40
17 February/Week1: Array currents, Ch# 26 27 28 29 2A 2B

Check your local BBS, an issue of SpaceNews, or AMSAT bulletin for the current status of your favorite satellite.

[Info via Tom, IK3WVJ]

* OSCAR-11 NEWS *
==========
The UoSAT-OSCAR-11 continues to function well. UO-11 may be copied transmitting AFSK data on a narrowband FM carrier frequency of 145.826 MHz. OSCAR-11 transmits binary and ASCII data at a rate of 1200 bits per second. Surplus Bell-202 modems can be used to demodulate OSCAR-11 data provided the demodulated data stream is inverted prior to its application to the computer's serial port.

The following computer status report was recently received from OSCAR-11 by IK3WVJ:

** UoSAT-OSCAR-11 OBC **
Diary Operating System V3.6

Date: 13 /1 /96 (Saturday)
Time: 16 :19 :37 UTC
Auto Mode is selected
Spin Period: - 319
Z Mag firings: 50
+ SPIN firings: 1
- SPIN firings: 28
SEU count -28451
RAM WASH pointer at EF2D
WOD commenced 9 /1 /96 at 0 :0 :5
with channels 1 ,2 ,3 ,61 ,
Last Command: 109 to 0 , 0
Attitude control initiated, mode 3

* W1WXZ SILENT KEY *
==========
Chuck, W9ODI, has reported of the passing of James B. Caton, W1WXZ of Cape Cod, Massachusettes. Jim died on 18-Jan-96 of a massive heart attack while he was home. He was 76 years old. Jim was very active on the satellites, and his callsign was frequently seen in the Pacsat queues. Jim worked over

170 countries on the OSCAR satellites -- quite an achievement. He will be missed by his many friends.

* STS-72 NEWS *
==========
Space Shuttle mission STS-72 ended on Saturday with a successful pre-dawn landing at the Kenneday Space Center, Florida.

Kazu Sakamoto, JJ1WTK, provided the following packet radio frames received by Tunetaka Oguro, JG1KOE, on 14-Jan-96 at approximately 15:30 UTC:

W3EAX>WORLD:REFLEX 01:17:35>
AA558000000000000000000000000000000000000000000000
BV1AF>PL04VQ,W3EAX*:45 W into 13 db beam
W3EAX>WORLD:REFLEX 01:17:35>
AA5580000000000000000000000000000000000000000000000000
W3EAX>WORLD:REFLEX 01:17:35>
AA5580000000000000000000000000000000000000000000000000
W3EAX>WORLD:REFLEX 01:17:36>
AA5580000000000000000000000000000000000000000000000000
W3EAX>WORLD:REFLEX 01:17:36>
AA5580000000000000000000000000000000000000000000000000
W3EAX>WORLD:REFLEX 01:17:36>
AA5580000000000000000000000000000000000000000000000000
W3EAX>WORLD:SPRE_TELEM 01:17:57>
00:8B 01:9A 02:00 03:9B 04:00 05:CF 06:00 07:ABC
W3EAX>WORLD:GPS_TIME 01:17:48>
414759DF130344413000001003
W3EAX>WORLD:GPS_LOCATION 01:17:26>
83414773605845C9D341551D31EC81FE6641404B83ED33
BV1AF>PL04VQ,W3EAX*:45 W into 13 db beam
W3EAX>WORLD:GPS_TIME 01:18:22>
41475A001B0344413000001003

* FEEDBACK/INPUT WELCOMED *
==========
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

172. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: asi@escape.ca
Message-ID: <asi.95.00159409@escape.ca>
Source record: 23139
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

>John Lundgren (jlundgre@delta1.deltanet.com) wrote:
> >Almost all of this list is so non-specific that it seems to be almost
> >useless.

>Not if you have the right kind of equipment to sniff around with. You can't
>get by with a scanner. Also note that there is a great deal of overlap in
>frequencies for different types of equipment.

>David Post post@fc.hp.com

The only problem is, you really have to search your building every day to make
sure that no bugs are around. I would just leave the bugs in the building
and fill them with dis-information.

173. Re: Kepler Elements Help Please

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <4e1ivu$83n@ixnews4.ix.netcom.com>
Source record: 23140

I know that AMSAT (the Radio Amateur Satellite Corporation) has a web page with the keplerian elements available. I don't have the URL handy right now. Try finding it on Yahoo, and if you can't find it, e-mail me back (hamdan@ix.netcom.com), and I'll get it for you. There is also a way to subscribe to a mailing list for the elements. If you want that, I can dig that up for you as well.

73's de Bernie, KF0QS. Denver, Colorado.

174. Space Report January 20, 1996

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: Conrad.Weeseman@inter.NL.NET
Message-ID: <Pine.SUN.3.91.960123152110.6378A-100000@hatert.nijmegen.inter.nl.net>
Source record: 23141

JONATHAN'S SPACE REPORT - LATEST ISSUE

Jonathan's Space Report
No 273 1996 Jan 20 Cambridge, MA

-

Shuttle

Shuttle mission STS-72 has been completed with two satellite retrievals and two spacewalks. Endeavour completed its rendezvous with the Space Flyer Unit satellite on Jan 13. The SFU successfully retracted its solar panels, but failed to latch them, so the decision was made to jettison them. The first panel was ejected at 0935 UTC and the second at 0947 UTC. At 1057 UTC the RMS 303 robot arm was used to grapple SFU, and it was berthed in Endeavour's payload bay at 1139 UTC. SFU carried science and technology experiments for Japan's National Space Development Agency.

Endeavour then lowered its orbit to 302 x 311 km x 28.5 deg. The OAST-Flyer (Spartan 206) satellite was released using the RMS arm at 1132 UTC on Jan 14. OAST-Flyer carries an experiment to measure contamination caused by spacecraft outgassing, and a test of a laser-fired explosive separation device to make sure the device doesn't go off accidentally in sunlight. It also carried an amateur radio experiment.

Astronauts Leroy Chiao and Daniel Barry carried out a spacewalk on Jan 15. The airlock was depressurized at 0525 UTC, and NASA declared the EVA in progress at 0535 UTC. The hatch was opened at 0540 UTC. Chiao and Barry tested out Space Station equipment including a portable work platform and a rigid umbilical truss for carrying electrical cables and fluid lines. The astronauts returned to the airlock at 1130 UTC and closed the hatch 3 minutes later, returning their suits to orbiter power and repressurizing the airlock at 1144 UTC. NASA's official time for the walk was 6h 9m 19s, while I would give it an extra ten minutes (counting from depressurization rather than battery power).

On Jan 15-16 the Shuttle carried out a series of rendezvous burns to approach the OAST-Flyer Spartan, and on Jan 16 at 0947 UTC Wakata grappled the satellite with the RMS arm.

The second spacewalk to test out Space Station tools and equipment was performed by Chiao and Winston Scott. It started a little behind schedule, with depressurization at 0534 UTC on Jan 17, and hatch opening

at 0554. The spacewalk ended at 1234 UTC, for a duration of 7 hours 0 min (depress to repress) or 6h 53m 41s (on-battery-power to repress, the official NASA number). Scott tested out the thermal modifications to the spacesuit by standing in shadow on the Spartan Flight Support Structure while the Orbiter was turned to make the payload bay as cold as possible.

Endeavour closed its payload bay doors early on Jan 20, firing its braking rockets at 0641 UTC and reentered to a nighttime landing on runway 15 at Kennedy Space Center at 0742 UTC on Jan 20.
The next Shuttle mission is STS-75, with orbiter Columbia and the reflight of the 20 km long tethered satellite, which failed on its first flight in 1992.

Errata

I was wrong! Fred Cerkan informs me that STS-72 was not the first flight with no TAL requirement - STS-1, the very first mission, had no TAL requirement or TAL capability.

IRS-1C's panchromatic camera has a resolution of under 6 m, not 10m as I said earlier. Thanks to several readers for the correction.

Request for Info

Know anyone who worked for ABL in the 1960s? I'm trying to find information on the MG-18 rocket, a version of the X-258 Altair II used as an upper stage on Scout and Thor. Any info welcome.

Recent Launches

Ariane V82 was launched on Jan 12 from Kourou. It was an Ariane 44L model with the H-10-III upper stage. V82 carried two communications satellites, PAS 3R and Measat 1. PAS 3R is a Hughes HS-601 comsat with a launch mass of 2918 kg, to provide C and Ku band communications and television broadcasting services for the Atlantic Ocean region. It is due to be stationed at 43 deg W, and carries 16 C-band and 16 Ku-band transponders. PAS 3R replaces PAS 3, lost in a launch accident in 1994. MEASAT 1 (Malaysia/East Asia Satellite) is another Hughes satellite, this time the older HS-376 spin-stabilized model. Measat 1 is owned by Binariang Sdn. Bhd., the Malaysian telecommunications agency, and will provide C and Ku-band telecommunications services over Malaysia and the rest of SE Asia.

Delta 231 was launched on Jan 14 from Cape Canaveral Air Station and successfully rocketed to geostationary transfer orbit of 1357 x 35418 km x 21.0 deg. Payload of Delta 231 was Koreasat 2, a Lockheed Martin Astro Space AS3000 class comsat. Koreasat 1, launched last year, used up half its stationkeeping fuel reaching geostationary orbit after a launch malfunction left it in a lower than normal transfer orbit. The Koreasat

(Mugunghwa) satellites are owned by Korea Telecom. The McDonnell Douglas launch vehicle was a 7925 model.

Kosmos-2327 was launched on Jan 16 from Plesetsk into a 947 x 1020 km x 83.0 deg orbit, characteristic of a navigation satellite in the Parus series. It is in the same plane as the Parus satellite launched in Nov 1993 and named Kosmos-2266. The ground track is consistent with an ontime launch at 1534 UTC. Launch vehicle was a Kosmos-3M from the Polyot organization.

It has now been confirmed that the capsule found in Ghana last year is the reentry vehicle from the German Express microgravity satellite which failed to reach its planned orbit in Jan 1995. Negotiations are underway for its return to Germany.

Table of Recent Launches

Date UT Name Launch Vehicle Site Mission INTL.
DES.

Dec 2 0808 SOHO Atlas IIAS Canaveral LC36B Astronomy 65A
Dec 5 2118 USA 116 Titan 4 Vandenberg SLC4E Recon 66A
Dec 6 2323 Telecom 2C) Ariane 44L Kourou ELA2 Comsat 67A
Insat 2C) Comsat 67B
Dec 14 0610 Kosmos-2323) Navsat 68A
Kosmos-2324) Proton-K/DM2 Baykonur LC200L Navsat 68B
Kosmos-2325) Navsat 68C
Dec 15 0023 Galaxy IIIR Atlas IIA Canaveral LC36A Comsat 69A
Dec 18 1431 Progress M-30 Soyuz-U Baykonur LC1 Cargo ship 70A
Dec 20 0052 Kosmos-2326 Tsiklon-2 Baykonur LC90 Eorsat/Sci 71A
Dec 28 0645 IRS-1C) Molniya-M Baykonur LC31 Rem.sensing 72A
Skipper) Military 72B
Dec 28 1150 Echostar 1 Chang Zheng 2E Xichang Comsat 73A
Dec 30 1348 XTE Delta 7920 Canaveral LC17A Astronomy 74A
Jan 11 0941 Endeavour Shuttle Kennedy LC39 Spaceship 01A
Jan 12 2310 Panamsat 3R) Ariane 44L Kourou ELA2 Comsat 02A
Measat 1) Comsat 02B
Jan 14 1111 Koreasat 2 Delta 7925 Canaveral LC17B Comsat 03A
Jan 14 1132 OAST-Flyer OV105, LEO Science 01B
Jan 16 1534? Kosmos-2327 Kosmos-3M Plesetsk Navsat 04A

Payloads no longer in orbit

Dec 7 Galileo Probe Entered Jovian atmosphere
Dec 11 Kosmos-398 Reentered over Pacific
Dec 18 Kosmos-2305 Deorbited
Jan 20 Endeavour Landed at KSC

Current Shuttle Processing Status

Orbiters Location Mission Launch Due

OV-102 Columbia OPF Bay 2 STS-75 Feb 22
OV-103 Discovery Palmdale OMDP
OV-104 Atlantis OPF Bay 1 STS-76 Mar 21
OV-105 Endeavour KSC RW15 STS-72

ML/SRB/ET/OV stacks

ML1/
ML2/
ML3/RSRM-53 VAB Bay 1 STS-75

.---.
Jonathan McDowell	phone : (617) 495-7176
Harvard-Smithsonian Center for	
Astrophysics	
60 Garden St, MS6	
Cambridge MA 02138	inter : jcm@urania.harvard.edu
USA	jmcdowell@cfa.harvard.edu
JSR: http://hea-www.harvard.edu/QEDT/jcm/space/jsr/jsr.html
ftp://sao-ftp.harvard.edu/pub/jcm/space/news/news.*
'---'

175. EXECUTIVE SURVEILLANCE PRODUCTS

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: mcintyre@pcix.com
Message-ID: <mcintyre-2301961913070001@dial111.pcix.com>
Source record: 23142
Cross-posted to: alt.radio.scanner,rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

New site will help you protect your privacy : "Executive Surveillance Products" http://www.espro.com

We offer over 70 products to help you protect yourself from prying eyes ! Mace, phone tap detectors, recording devices, night vision, bug detectors, mini-video surveilance equipement : You name it , we have it !

Lowest prices anywhere !!!

IN AN INFORMATION SOCIETY , ISN'T IT BEST TO AT LEAST TAKE A LOOK AT THE PRODUCTS WHICH ARE DESIGNED TO PROTECT YOU ??

176. Re: WANTED address for ordering a TRAKBOX is a antenna tracking box.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-23 00:00:00 UTC
From: Jack Davis <jedavis@deltanet.com>
Message-ID: <NEWTNews.822384719.29062.jed@Deltanet.deltanet.com>
Source record: 23143

In Article<4dvsee$arg@ping1.ping.be>, <Geert.Pirens@ping.be> write:
> Path: news.deltanet.com!uunet!in1.uu.net!newsfeed.internetmci.com!EU.net!Belgium.EU.net!ping.be!news
> From: Geert.Pirens@ping.be (Geert Pirens)
> Newsgroups: rec.radio.amateur.space
> Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.
> Date: Mon, 22 Jan 1996 11:29:55 GMT
> Organization: PING Belgium
> Lines: 13
> Message-ID: <4dvsee$arg@ping1.ping.be>
> NNTP-Posting-Host: dialup05.hasselt.eunet.be
> X-Newsreader: Forte Free Agent 1.0.82
>
> Hello
>
> can someone give me the address for to order an TRAKBOX ?
>
> All information is welkom!
>
> Addresses of USA or EUROPE are all welkom!
>
> Thanks in advance.
>
> Geert Pirens, ONL2057
>
>
I can provide the TrakBox kit at this time. I have 3
that are not sold or spoken for. Contact me at:

jedavis@deltanet.com

for additional info.

Jack Davis

177. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: towarth@ix.netcom.com
Message-ID: <4e5p4a$e57@ixnews5.ix.netcom.com>
Source record: 23144
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

>In <jmatk-2301962131430001@jmatk.tiac.net> jmatk@tscm.com (James M.
>Atkinson, Communications Engineer) writes:

>Or better yet,
>
> 0- 30 ghz: bugs
> 30-275 ghz: bugs (State Dept)
>275-452 ghz: bugs (NSA/CIA)
>452-900 ghz: bugs (NSA mm-wave)
>
>and
>900ghz-375Thz: bugs (MIT Bugs)
>(Tongue in Cheek) ;->
>

Short of a gigadollar sprectrum analyzer or sweeping consult, what
equipment would you recommend that is capable of alerting on these
incredible 200-900ghz toys? So much for the "moderately priced"
handhelds..

tw

178. NASA SPACE PHOTOS

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: rconrad@iag.net
Message-ID: <4e5n14$68q@news.iag.net>
Source record: 23145

Worth LOOKING at:

** NASA Space Images **

200 high resolution images (JPEG Format). The images are royalty-free
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classroom, advertising, or whatever.

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Telehone: (407) 321-7912
email: solution@env-sol.com

179. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: tweek@netcom.com
Message-ID: <tweekDLpJDH.HDt@netcom.com>
Source record: 23146
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

Todd Warth <towarth@ix.netcom.com> wrote:
>
>The only case that I know of where an entire building was bugged, was
>the US Embassy in Moscow, dutifully constructed by Soviet "craftsmen."
>No doubt all our CI guys got the normal promotions for their diligence.

From what I understand... some of those bugs belonged to some of
our own intelligence sections.

--
tweek@netcom.com tweek@tweekco.ness.com tweek@io.com DoD #MCMLX SP-3
Fodder-Line: Rogue Agent Hubbard Thetan Scientology Clear OT Course Clam
http://www.io.com/~tweek/ tweek@ccnet.com OT-7 Dr. Doo's little Llama

180. TSCM Counter Surveill

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: amcleod@anjo.hi.net
Message-ID: <414.35.39@anjo.hi.net>
Source record: 23147

```
JL| Almost all of this list is so non-specific that it seems to be almost
| useless.

JL| James M. Atkinson, Communications Engineer (jmatk@tscm.com) penned:

JL| : Here is the current list of frequencies used for bugging, technical
| : surveillance and similar activities.

{clip}

So why did you post the entire thing back onto the NG again? Bad enough
I had to pay for it once...es shouldn't b!
////////////////////////////////////////////////////////
The ANJO BBS - amcleod@anjo.hi.net <Angus Mcleod>
```

181. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <mzenierDLr12M.Mz4@netcom.com>
Source record: 23148
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

in <4e5obn$i11@ixnews6.ix.netcom.com>, Todd Warth wrote:
: The only case that I know of where an entire building was bugged, was
: the US Embassy in Moscow, dutifully constructed by Soviet "craftsmen."
: No doubt all our CI guys got the normal promotions for their diligence.

There was a big recruiting drive by US State Department Security about
that time. They were looking for both counterbugging and computer
security people. Not only did they have nationwide magazine ads
(Electronics Mag.), they also had a road show that had inteviews set up
all over the country. (I kind of regret not interviewing for the job,
just for the entertainment value of it).

Looks like they used it as an opportunity to expand.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com

182. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-24 00:00:00 UTC
From: towarth@ix.netcom.com
Message-ID: <4e5obn$i11@ixnews6.ix.netcom.com>
Source record: 23149
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

>In <asi.95.00159409@escape.ca> asi@escape.ca writes:
>
>The only problem is, you really have to search your building every day
>to make sure that no bugs are around. I would just leave the bugs in
>the building >and fill them with dis-information.

Would be useful if you knew precisely where in the building the little suckers are located. Unless you are working in Congress, most federal agencies, or the White House (first, and, in particular, the *second* floor), it's hard to fill the day with useless and distorted bullshit and keep your business afloat.

The only case that I know of where an entire building was bugged, was the US Embassy in Moscow, dutifully constructed by Soviet "craftsmen." No doubt all our CI guys got the normal promotions for their diligence.

I suppose there are monitoring devices and ways to install tamper-indicating seals and so on to determine the reintroduction of common listening devices once the place has been "swept."
tw

183. Re: Hamtronics Weather Satellite Receiver

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: trapps@hpcc01.corp.hp.com
Message-ID: <58330002@hpcc01.corp.hp.com>
Source record: 23150

Hi Chuck,

I got the kit and haven't built it yet.

It looks well made. I'd go for the newer version -138 vs -137 or something
that allows diode switching the crystals and has a more stable double sided
PC board.

From what I have read, you really need a 40 kHz bandpass or so to get a
good clean signal without distortion.

The directions are good and there is tune up info. Generally uses a
10.7 and 137 MHz generator to set the IF cans and crystal trimmer caps.

73,
Steve, N4DG

184. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199601250951.BAA19803@UCSD.EDU>
Source record: 23151

```
From smtp Tue Jan 23 09:54 PST 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 23 Jan 96 09:54 PST
Received: by mail.ucsd.edu; id EAA04245
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:39 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA04239
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:38 -0800 for ham-space-ddist
Errors-To: ham-space-relay@ucsd.edu
Content-Length: 7263
Content-Type: text
Sender: ham-space-relay@ucsd.edu
Precedence: List
Message-Id: <199601231230.EAA04239@mail.ucsd.edu>
Date: Tue, 23 Jan 96 04:30:36 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #14
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 23 Jan 96 Volume 96 : Issue 14

Today's Topics:
(none) (2 msgs)
African Stations via RS-12/13, etc.
ARLS001 Ham radio power supply aboard Mir fails (fwd)
help with SAREX
sts-72 deorbit
test, please ignor
uplink and downlink freqs. for MIR
WANTED address for ordering a TRAKBOX is a antenna tracking box.

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 22 Jan 96 12:36:14 GMT
From: vrsheb%ebmv12.dnet@gpo.nsc.COM
Subject: (none)

help

Date: 22 Jan 96 12:39:52 GMT
From: vstueb%ebvx04.dnet@gpo.nsc.COM (SUJIT U.)
Subject: (none)

help

Date: 17 Jan 1996 13:57:55 GMT
From: kebsch@pdb.sni.de (Waldemar Kebsch)
Subject: African Stations via RS-12/13, etc.

Hi,

I am looking for African Stations who like to have a sked with me
via the satellite RS-12/13 (maybe RS-10/11 and/or RS-15 if you like?).

If you don't have any experience with RS-12/13 then I would be happy
to give you all instructions you need. All what you need to work via
the satellite RS-12/13 is your normal HF equipment. No special radio
or antennas or training necessary!

BTW: If you are not from Africa and would like to have a sked with me,
don't worry and feel free to drop me an e-mail!

Vy 73 de Waldemar, DK3VN
--
E-Mail: kebsch.pad@sni.de Packet Radio DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [7f]

Date: 22 Jan 96 14:02:17 GMT
From: Conrad.Weeseman@inter.NL.NET (Conrad.Weeseman)
Subject: ARLS001 Ham radio power supply aboard Mir fails (fwd)

---------- Forwarded message ----------
Date: Fri, 19 Jan 1996 16:34:03 EST
From: w1aw@arrl.org
To: QST@arrl.org
Subject: ARLS001 Ham radio power supply aboard Mir fails

SB SPACE @ ARL $ARLS001
ARLS001 Ham radio power supply aboard Mir fails

ZCZC AS09
QST de W1AW
Space Bulletin 001 ARLS001

>From ARRL Headquarters
Newington, CT January 19, 1996
To all radio amateurs

SB SPACE ARL ARLS001
ARLS001 Ham radio power supply aboard Mir fails

German cosmonaut Thomas Reiter, DF4TR/DP0MIR, aboard the Mir orbital complex, reports that a power supply used for some of the spacecraft's ham radio equipment failed on New Year's Eve. The remaining, older power supply is only capable of powering the old Icom 2-meter transceiver and one 1200-baud TNC. The digital voice module also has failed, so there will be no more automatic voice recordings in the near future.

Reiter reports all four fuses in the two connected transceivers have blown and only two spare fuses remain. Last month, Reiter used the digital voice recorder, built by Thomas Kieselbach, DL2MDE, to broadcast holiday messages. The primary transmitting frequency is 145.800 MHz.

Recently, the cosmonauts on Mir unpacked new Amateur Radio equipment delivered by rocket, including a 70-cm FM transceiver and 9600-baud packet gear.

Reiter was philosophical. ''Well, at least we can be reached and still can talk with the world,'' he said in a message to Dave Larsen, N6JLH.
NNNN
/EX

Date: Sun, 21 Jan 1996 20:51:57 -0600
From: XE2MXU/N5UHB <fjorozco@academ07.mty.itesm.mx>
Subject: help with SAREX

Hello all, we would like to get one of the local schools into the SAREX program, and I would like to hear from other hams who have helped out in SAREX school contacts.

Also, I've been asked to speak to a group of high school kids about SAREX, and I would like to hear suggestions from sarex 'veterans' as to what I can focus on so kids who've seldom had any contact with amateur radio can become excited about ham radio, and particularly SAREX. This talk would be either at the end of this week or during the next one.

Thanks in advance!

Luis XE2MXU/N5UHB

"Failure is NOT an option!"
-- G. Kranz

Date: 20 Jan 1996 11:43:01 -0700
From: bkline@primenet.com (bob kline)
Subject: sts-72 deorbit

The deorbit plume was visiable in Phoenix from Horizon to Horizon. A bright red glow followed by an Ion trail.

Keep up those night landings NASA.

Bob Kline

bkline@primenet.com

Date: 22 Jan 1996 04:54:20 GMT
From: Tom Kreyche <tkreyche@well.com>
Subject: test, please ignor

ignore, please

Date: 9 Jan 1996 23:31:16 GMT
From: Jim Devenport <jdevenport@lanl.gov>
Subject: uplink and downlink freqs. for MIR

The MIR space station is much easier to contact via radio than ANY of the USA Shuttle missions but it isn't overly easy either. I don't even bother to use satellite tracking programs for MIR any more, I just put 145.55 simplex into my 2 meter mobile and remote base memories and add it to the scanning lists. Several times a day I'll hear the packet buzzing away and with simple packet equipment I've contacted the MIR system several times but rarely have gotten more than the successful connect or a busy (DM) signal from the MIR TNC. A "busy" signal is actually, to me, a successful 2-way packet contact especially if you compare it to the usual USA SAREX policy of hoping to someday see your callsign in a published "stations heard" list. If you get a busy signal from MIR (very likely) it proves MIR has successfully heard you and you have successfully heard MIR. Full callsign exchanges and all: a legit 2-way contact. But confirming it may be a problem. Voice operation seems to be getting rarer and rarer from MIR but the cosmonauts still pop up on voice unexpectedly from time to time. I have called them repeatedly with high and low power without success but there are at least several local stations in Northern New Mexico who have successfully QSO'ed with MIR using 10 watts or less into omnidirectional outside antennas.
--

|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
My views rarely (if ever) reflect those of my employers

Date: Mon, 22 Jan 1996 11:29:55 GMT
From: Geert.Pirens@ping.be (Geert Pirens)
Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.

Hello

can someone give me the address for to order an TRAKBOX ?

All information is welkom!

Addresses of USA or EUROPE are all welkom!

Thanks in advance.

Geert Pirens, ONL2057

End of Ham-Space Digest V96 #14
****

185. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: towarth@ix.netcom.com
Message-ID: <4e8ke3$jqo@ixnews5.ix.netcom.com>
Source record: 23152
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

>In <tweekDLpJDH.HDt@netcom.com> tweek@netcom.com (R R M Tweek)
>writes:
>
>Todd Warth <towarth@ix.netcom.com> wrote:
>>
>>The only case that I know of where an entire building was bugged, was
>>the US Embassy in Moscow, dutifully constructed by Soviet
"craftsmen."
>>No doubt all our CI guys got the normal promotions for their
diligence.
>
>From what I understand... some of those bugs belonged to some of
>our own intelligence sections.

Our guys secreted bugs in the embassy fiasco that ultimately had a 200 million dollar price tag? It must have been a great laugh to see the Soviet and American "construction workers" fighting over choice bug placement spots and exchanging pointers on the relative merits of different devices. I wonder who negotiated the frequency allocations--then again, Aldrich Ames may have been the "referee"

The reality is that we probably botched the job, and any explanation that our bugs were in the mix is just good ol' nickel and dime CYA politics by the PR folks.
tw

186. WANTED schematic of a IF-100 interface

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4e6kdp$qp0@ping1.ping.be>
Source record: 23153

Can someone help me on a schematic of an IF-100 interface ?

All information is welkom !

Geert Pirens,ONL2057

187. Looking for University Cal. Irvine police freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: Adrian Palazuelos <bigpoppa@taurus.oac.uci.edu>
Message-ID: <Pine.SUN.3.91.960125114033.3030E-100000@taurus.oac.uci.edu>
Source record: 23154
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

Hey if anyone of you out their can let me know the frequencies, thank you.
Bigpoppa

188. SPRE Post Mission Report

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4e97t2$dbs@volt.isr.umd.edu>
Source record: 23155

```
SPARTAN PACKET RADIO EXPERIMENT (SPRE)
------------------------------------------------------------------------

SPRE Post Mission Report

By: Ken McCaughey (N3FZX)
File: postmis1.txt
Date: 22-Jan-96

The SPRE mission has been a success meeting all the mission objectives!

Mission Objectives
------------------

* Promote amateur radio and amateur satellite communications.
* Test GPS and packet radio based tracking system using a Low Earth
Orbit (LEO) satellite.
* Provide an educational tool to inspire elementary and high school
students to pursue science and engineering.
* Provide a unique hands-on educational opportunity for college students.

Mission Statistics
------------------

At this time we are still receiving and processing SPRE and ARRtrak data.
We have been able to estimate the following statistics:

Number of amateur radio operators who where successful with APRtrak:
* approximately 100 in eight counties

Number of schools attempting to work SPRE:
* approximately 20, two were also on our control network

First station to receive SPRE telemetry:
* NH6TK at Pearl City High School, Hawaii,
(this station barely beat our control network :)

First station to digi through SPRE:
* BV1AF in Taiwan

Lowest powered station used to make a contact:
* 5 Watts by XE1KK in Mexico

Amateur radio operators in the following countries attempted to
participate with SPRE:
* Argentina
Australia
Columbia
```

Greece
France
Honduras
Hong Kong
Hungry
Japan
Peru
Portugal
South Africa
Spain
Taiwan
United States

Time from concept to flight:
* two years!

APRtrak

APRtrak was very successful even though opportunities were cut short. There were very few callsign duplications. There has been an overwhelming positive response from the amateur radio community. Everyone enjoyed being able to see the locations of the stations they where hearing. The turn out was pretty good considering the passes over the US were around 3am. The international turn out was very good as well.

A composite of the data collected by ground stations is being put together. When this is available, the data will be able to be replayed using APRtrak.

SPRE Ground Control Network

In addition to the main objectives, the control network was also a significant success story. There were nine control stations linked real-time via the Internet. This showed that the Internet could be used to support real-time amateur radio operations beyond wormholes and mail.

A big thanks goes out to all of the control stations that supported SPRE. They were a very capable, patient, and skilled group of HAMs. They made SPRE a joy to fly.

SPRE Loss of Signal

SPRE operated for 17 hours and 21 minutes before it suddenly stopped sending data. Right up to this event SPRE was performing as expected with no signs of any problems. Contrary to any rumors, SPRE was not purposely or inadvertently turned off by a control station contact. The exact cause of the problem is undetermined based on telemetry. In a few weeks the SPRE Team will have the hardware back and we will find out what happened.

SPRE Future

Many people have asked when SPRE is going to fly again. Right now it is
too early to say what is in store for the future of SPRE. A second flight
is not out of the question.

The End...

#==#

Ken McCaughey - N3FZX SPRE - Spartan Packet Radio Experiment
SPRE Project Lead U. of Md. Amateur Radio Assc. - W3EAX

e-mail: kenneth@w3eax.umd.edu SPRE Info on the Internet
n3fzx@amsat.org WWW Page: URL = http://w3eax.umd.edu
packet: n3fzx@wa3nan.md.usa.noam FTP Site: URL = ftp://w3eax.umd.edu

#==#

189. TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: jordan@tesla.iar.nrc.ca
Message-ID: <4e88ib$scm@nrcnet0.nrc.ca>
Source record: 23156
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

Greetings,

We are considering the purchase of an aeronautical mobile satellite
phone terminal for use with AMSC/MSAT. This terminal provides an RS-232C
data port operating at 4800 bps and the literature claims it can be used
with any data communications software.

What I need to know is if one can run TCP/IP using SLIP or PPP over
such a link without problems ? Note: the MSAT satellite is geostationary
and would present a 300 odd msec. propagation delay It is connected
to the terrestial phone system through a gateway.

If not, what other protocol could be used for Internet access and
ftp file transfers ?

Thanks for any information or experience reports,
Jim

Jim Jordan e-mail: jordan@convax.iar.nrc.ca
National Research Council jordan@tesla.iar.nrc.ca
Ottawa, Canada K1A 0R6 http://www.nrc.ca/iar/index.html

190. Re: Hamtronics Weather Satellite Receiver

Newsgroup: rec.radio.amateur.space
Date: 1996-01-25 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4e861m$981@service2.uky.edu>
Source record: 23157

In article <58330002@hpcc01.corp.hp.com>, trapps@hpcc01.corp.hp.com (Stephen M Trapp)
says:
>
>Hi Chuck,
>
>I got the kit and haven't built it yet.
>
>It looks well made. I'd go for the newer version -138 vs -137 or something
>that allows diode switching the crystals and has a more stable double sided
>PC board.
>
>From what I have read, you really need a 40 kHz bandpass or so to get a
>good clean signal without distortion.
>
>The directions are good and there is tune up info. Generally uses a
>10.7 and 137 MHz generator to set the IF cans and crystal trimmer caps.
>
>73,
>Steve, N4DG
>
When you get this baby up and runnng could you post your results to the
group. I am currently using(yes I know thi isnot the "right" way to do it)
a Pro2004 in the wideband mode. The BW is way to wide, but I get pretty
good pix. I have a crossed dipole up 40' wiht an older(ancient) Vangard
JFET preamp. I have been tinkering with a comercial Sienhieser wireless
microhone receiver. While it has a better noise floor and the proper bw
(about 38Kc with gentle skirt out another 5 or 6kc then real step), it
is prone to im(busness band and ham nbfm) and aircraft trafic down around
120MHz. I was forced to go back to the Pro2004. I have been thinking
about the Hmatronics receiver.
Has anyone compared the "performance" of a cross dipole/turnstill with
the "eggbeater"? Does the Eggbeater have a narrower bw? Narrowed bw
might help my "out of band" interferrence problems.
Good luck

191. Band width

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: beckley@oasys.dt.navy.mil
Message-ID: <4ebf5sINN6i3@oasys.dt.navy.mil>
Source record: 23067

Ok,
I know all you brainiacs out there will laugh at this question,
but...What exactly is bandwidth? I read about it all the time in relation
to communications, but how does it affect the transmission of data?
I always hear, "Need more bandwidth!" Is this the equivalent of "Need
a bigger hammer!"? The more complicated the answer the better.

Thanks alot,
Jim

192. PC Track, Where?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: "Paul \\Jimbo\" Duncan GW7KES <pdu>"
Message-ID: <4eaa9k$ea@kwuz.nerc-keyworth.ac.uk>
Source record: 23068

Hi,

A couple of years ago I remember seeing a very friendly satellite tracking program for DOS called PC-Track. I know it has been distributed on CD-ROM in the past, but don't know which one.

Does anyone know if it is available on the net, and if so where? And if it's not available does anyone have any recomendations on what to use instead?

Its for tracking Mir, just in case you're interested.

Thanks for any help,

Paul
~~~~
~~~~

193. Mir 9600 Packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: "Paul \\Jimbo\" Duncan GW7KES <pdu>"
Message-ID: <4eadrn$ea@kwuz.nerc-keyworth.ac.uk>
Source record: 23069

Someone said that there was 9600 baud packet equipment operating on 70cms aboard
the Mir space station, they also said it was down at the mo, due to a failed power supply. Does anyone know when a new power supply will be sent up?

Also, do they give QSL cards out for Mir? If so, where do I send the card, and how many dollars is the going rate?

Thanks,

Paul
~~~~
~~~~

194. Re: Kepler Elements Help Please

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: garym@nosc.mil
Message-ID: <1996Jan26.013337.24854@nosc.mil>
Source record: 23070

"Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com> writes:
>I know that AMSAT (the Radio Amateur Satellite Corporation) has a web
>page with the keplerian elements available. I don't have the URL handy
>right now. Try finding it on Yahoo, and if you can't find it, e-mail me
>back (hamdan@ix.netcom.com), and I'll get it for you. There is also a
>way to subscribe to a mailing list for the elements. If you want that, I
>can dig that up for you as well.

You can find a list of web sites, ftp sites and mailing lists for Keplerian
Elements on my Shuttle Tracking Site in the references page, the URL is

http://www.cts.com/browse/garym/elements/references.html#keps

If anyone knows of mailing lists or sites that are not on that page please
email me so I can update it.
--GaryM

195. WAS-Satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <3108A2C1.19D5@primenet.com>
Source record: 23158

I need the following states for WAS-Satellite. If you live in these states and are interested in making a sked please drop me a note.

Arkansas, Delaware, Indiana, Kentucky, Lousiana, Mississippi, Montana, North Carolina, North Dakota, Oklahoma, South Carolina, Wyoming.

Thanks,

Stephanie KC7DBA
kc7dba@primenet.com

196. Larsen Antennas Job Posting

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: stobty@pacifier.com
Message-ID: <4ea07f$9a7@vixen.cso.uiuc.edu>
Source record: 23159
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.broadcasting,rec.radio.cb,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

MARKET MANAGER - ANTENNA PRODUCTS

Larsen Electronics is an internationally recognized supplier of quality antenna products for two-way communications. We are seeking an experienced Market/Product Manager for Amateur and Commercial antennas.

Successful candidates will have in-depth experience in radio related products up to 800 MHz. Direct experience with LMR and Amateur markets is preferred. Bachelor92s degree in Business or Marketing, or extensive related business experience required. Position responsibilities include: Product line management, pricing, sales programs, new products, training, and technical support. This position will also include a competitive compensation, incentive, and benefits plan.

Interested candidates may respond by forwarding a resume92 including income history to:

Larsen Electronics, Inc.
ATT: Human Resources Manager
P.O. Box 1799
Vancouver, WA. 98668-1799
FAX: 1-360-944-7556

Pre-employment drug screen required. Larsen Electronics is an Equal Opportunity Employer.

--

-

Pacifier Online Data Service Dialup SLIP/PPP User
To register: (360) 693-0325 or telnet pods.pacifier.com

-
---

197. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199601260957.BAA01526@UCSD.EDU>
Source record: 23160

```
From smtp Wed Jan 24 09:00 PST 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 24 Jan 96 09:00 PST
Received: by mail.ucsd.edu; id EAA16262
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jan 1996 04:30:31 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA16256
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jan 1996 04:30:29 -0800 for ham-space-ddist
Errors-To: ham-space-relay@UCSD.EDU
Content-Length: 14987
Content-Type: text
Sender: ham-space-relay@UCSD.EDU
Precedence: List
Message-Id: <199601241230.EAA16256@mail.ucsd.edu>
Date: Wed, 24 Jan 96 04:30:29 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #15
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 24 Jan 96 Volume 96 : Issue 15

Today's Topics:
Ceck out nice Space Links
Hamtronics Weather Satellite Receiver
Kepler Elements Help Please
LATEST ORBITALS ELEMENTS from nice...
New Book about TESLA
Space Report January 20, 1996
WANTED: KANSAS CITY TRACKER, INFORMATION WANTED.
WANTED address for ordering a TRAKBOX is a antenna tracking box.
WEATHER FAX software package

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 23 Jan 1996 13:51:21 GMT
From: p@pgy.pp.fi (p. gylfe)
Subject: Ceck out nice Space Links

ckeck out the best space links on the net

http://www.mediaport.org/~phil/indexl.html

Date: 13 Jan 1996 05:35:09 GMT
From: Chuck Freeman <cfreeman@sound.net>
Subject: Hamtronics Weather Satellite Receiver

Has anyone out there tried the Hamtronics Weather Satellite Receiver. If so how well does it work and does it provide better pictures from the NOAA series of satellites comparied to a normal narrow band scanner. Your help would be appreciated.

73's Chuck WD0ASJ

Date: 23 Jan 1996 03:00:14 GMT
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Subject: Kepler Elements Help Please

I know that AMSAT (the Radio Amateur Satellite Corporation) has a web page with the keplerian elements available. I don't have the URL handy right now. Try finding it on Yahoo, and if you can't find it, e-mail me back (hamdan@ix.netcom.com), and I'll get it for you. There is also a way to subscribe to a mailing list for the elements. If you want that, I can dig that up for you as well.

73's de Bernie, KF0QS. Denver, Colorado.

Date: Tue, 23 Jan 1996 11:44:43 +0000
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Subject: LATEST ORBITALS ELEMENTS from nice...

Space news :

Ham radio latest ortbitals elements on

http://miage.unice.fr/~cecchina

Date: 22 Jan 1996 13:46:36 GMT
From: aranders@kosepc01.delcoelect.com (Alan Anderson)
Subject: New Book about TESLA

In <96020.132601U60082@uicvm.uic.edu>, <U60082@uicvm.uic.edu> writes:

>We have translated the book: Tesla's Correspondence with Relatives in
>ENGLESH.

If this is indicative of the quality of the translation, I'll pass. :-)

Date: 23 Jan 96 14:25:24 GMT
From: Conrad.Weeseman@inter.NL.NET (Conrad.Weeseman)
Subject: Space Report January 20, 1996

JONATHAN'S SPACE REPORT - LATEST ISSUE

Jonathan's Space Report
No 273 1996 Jan 20 Cambridge, MA

-

Shuttle

Shuttle mission STS-72 has been completed with two satellite retrievals and two spacewalks. Endeavour completed its rendezvous with the Space Flyer Unit satellite on Jan 13. The SFU successfully retracted its solar panels, but failed to latch them, so the decision was made to jettison them. The first panel was ejected at 0935 UTC and the second at 0947 UTC. At 1057 UTC the RMS 303 robot arm was used to grapple SFU, and it was berthed in Endeavour's payload bay at 1139 UTC. SFU carried science and technology experiments for Japan's National Space Development Agency.

Endeavour then lowered its orbit to 302 x 311 km x 28.5 deg. The OAST-Flyer (Spartan 206) satellite was released using the RMS arm at 1132 UTC on Jan 14. OAST-Flyer carries an experiment to measure contamination caused by spacecraft outgassing, and a test of a laser-fired explosive separation device to make sure the device doesn't go off accidentally in sunlight. It also carried an amateur radio experiment.

Astronauts Leroy Chiao and Daniel Barry carried out a spacewalk on Jan 15. The airlock was depressurized at 0525 UTC, and NASA declared the EVA in progress at 0535 UTC. The hatch was opened at 0540 UTC. Chiao and Barry tested out Space Station equipment including a portable work platform and a rigid umbilical truss for carrying electrical cables and fluid lines. The astronauts returned to the airlock at 1130 UTC and closed the hatch 3 minutes later, returning their suits to orbiter power and repressurizing the airlock at 1144 UTC. NASA's official time for the walk was 6h 9m 19s, while I would give it an extra ten minutes (counting from depressurization rather than battery power).

On Jan 15-16 the Shuttle carried out a series of rendezvous burns to approach the OAST-Flyer Spartan, and on Jan 16 at 0947 UTC Wakata grappled the satellite with the RMS arm.

The second spacewalk to test out Space Station tools and equipment was performed by Chiao and Winston Scott. It started a little behind schedule, with depressurization at 0534 UTC on Jan 17, and hatch opening

at 0554. The spacewalk ended at 1234 UTC, for a duration of 7 hours 0 min (depress to repress) or 6h 53m 41s (on-battery-power to repress, the official NASA number). Scott tested out the thermal modifications to the spacesuit by standing in shadow on the Spartan Flight Support Structure while the Orbiter was turned to make the payload bay as cold as possible.

Endeavour closed its payload bay doors early on Jan 20, firing its braking rockets at 0641 UTC and reentered to a nighttime landing on runway 15 at Kennedy Space Center at 0742 UTC on Jan 20.
The next Shuttle mission is STS-75, with orbiter Columbia and the reflight of the 20 km long tethered satellite, which failed on its first flight in 1992.

Errata

I was wrong! Fred Cerkan informs me that STS-72 was not the first flight with no TAL requirement - STS-1, the very first mission, had no TAL requirement or TAL capability.

IRS-1C's panchromatic camera has a resolution of under 6 m, not 10m as I said earlier. Thanks to several readers for the correction.

Request for Info

Know anyone who worked for ABL in the 1960s? I'm trying to find information on the MG-18 rocket, a version of the X-258 Altair II used as an upper stage on Scout and Thor. Any info welcome.

Recent Launches

Ariane V82 was launched on Jan 12 from Kourou. It was an Ariane 44L model with the H-10-III upper stage. V82 carried two communications satellites, PAS 3R and Measat 1. PAS 3R is a Hughes HS-601 comsat with a launch mass of 2918 kg, to provide C and Ku band communications and television broadcasting services for the Atlantic Ocean region. It is due to be stationed at 43 deg W, and carries 16 C-band and 16 Ku-band transponders. PAS 3R replaces PAS 3, lost in a launch accident in 1994. MEASAT 1 (Malaysia/East Asia Satellite) is another Hughes satellite, this time the older HS-376 spin-stabilized model. Measat 1 is owned by Binariang Sdn. Bhd., the Malaysian telecommunications agency, and will provide C and Ku-band telecommunications services over Malaysia and the rest of SE Asia.

Delta 231 was launched on Jan 14 from Cape Canaveral Air Station and successfully rocketed to geostationary transfer orbit of 1357 x 35418 km x 21.0 deg. Payload of Delta 231 was Koreasat 2, a Lockheed Martin Astro Space AS3000 class comsat. Koreasat 1, launched last year, used up half its stationkeeping fuel reaching geostationary orbit after a launch malfunction left it in a lower than normal transfer orbit. The Koreasat

(Mugunghwa) satellites are owned by Korea Telecom. The McDonnell Douglas launch vehicle was a 7925 model.

Kosmos-2327 was launched on Jan 16 from Plesetsk into a 947 x 1020 km x 83.0 deg orbit, characteristic of a navigation satellite in the Parus series. It is in the same plane as the Parus satellite launched in Nov 1993 and named Kosmos-2266. The ground track is consistent with an ontime launch at 1534 UTC. Launch vehicle was a Kosmos-3M from the Polyot organization.

It has now been confirmed that the capsule found in Ghana last year is the reentry vehicle from the German Express microgravity satellite which failed to reach its planned orbit in Jan 1995. Negotiations are underway for its return to Germany.

Table of Recent Launches

Date UT Name Launch Vehicle Site Mission INTL.
DES.

Dec 2 0808 SOHO Atlas IIAS Canaveral LC36B Astronomy 65A
Dec 5 2118 USA 116 Titan 4 Vandenberg SLC4E Recon 66A
Dec 6 2323 Telecom 2C) Ariane 44L Kourou ELA2 Comsat 67A
Insat 2C) Comsat 67B
Dec 14 0610 Kosmos-2323) Navsat 68A
Kosmos-2324) Proton-K/DM2 Baykonur LC200L Navsat 68B
Kosmos-2325) Navsat 68C
Dec 15 0023 Galaxy IIIR Atlas IIA Canaveral LC36A Comsat 69A
Dec 18 1431 Progress M-30 Soyuz-U Baykonur LC1 Cargo ship 70A
Dec 20 0052 Kosmos-2326 Tsiklon-2 Baykonur LC90 Eorsat/Sci 71A
Dec 28 0645 IRS-1C) Molniya-M Baykonur LC31 Rem.sensing 72A
Skipper) Military 72B
Dec 28 1150 Echostar 1 Chang Zheng 2E Xichang Comsat 73A
Dec 30 1348 XTE Delta 7920 Canaveral LC17A Astronomy 74A
Jan 11 0941 Endeavour Shuttle Kennedy LC39 Spaceship 01A
Jan 12 2310 Panamsat 3R) Ariane 44L Kourou ELA2 Comsat 02A
Measat 1) Comsat 02B
Jan 14 1111 Koreasat 2 Delta 7925 Canaveral LC17B Comsat 03A
Jan 14 1132 OAST-Flyer OV105, LEO Science 01B
Jan 16 1534? Kosmos-2327 Kosmos-3M Plesetsk Navsat 04A

Payloads no longer in orbit

Dec 7 Galileo Probe Entered Jovian atmosphere
Dec 11 Kosmos-398 Reentered over Pacific
Dec 18 Kosmos-2305 Deorbited
Jan 20 Endeavour Landed at KSC

Current Shuttle Processing Status

Orbiters Location Mission Launch Due

OV-102 Columbia OPF Bay 2 STS-75 Feb 22
OV-103 Discovery Palmdale OMDP
OV-104 Atlantis OPF Bay 1 STS-76 Mar 21
OV-105 Endeavour KSC RW15 STS-72

ML/SRB/ET/OV stacks

ML1/
ML2/
ML3/RSRM-53 VAB Bay 1 STS-75

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Jonathan McDowell	phone : (617) 495-7176
Harvard-Smithsonian Center for	
Astrophysics	
60 Garden St, MS6	
Cambridge MA 02138	inter : jcm@urania.harvard.edu
USA	jmcdowell@cfa.harvard.edu
JSR: http://hea-www.harvard.edu/QEDT/jcm/space/jsr/jsr.html
ftp://sao-ftp.harvard.edu/pub/jcm/space/news/news.*
'---'

Date: 22 Jan 1996 18:29:35 -0500
From: bmm1@freenet3.scri.fsu.edu (Bruce M. Marshall)
Subject: WANTED: KANSAS CITY TRACKER, INFORMATION WANTED.

L.L.Grace
POB 1345
Voorhees NJ
08043
--
Bruce M. Marshall bmm1@freenet.fsu.edu voice 423 481 0990 fax 423 481 8039

Date: Tue, 23 Jan 96 00:10:37 PST
From: Jack Davis <jedavis@deltanet.com>
Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.

In Article<4dvsee$arg@ping1.ping.be>, <Geert.Pirens@ping.be> write:
> Path: news.deltanet.com!uunet!in1.uu.net!newsfeed.internetmci.com!EU.net!Belgium.EU.net!
ping.be!news
> From: Geert.Pirens@ping.be (Geert Pirens)
> Newsgroups: rec.radio.amateur.space
> Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.
> Date: Mon, 22 Jan 1996 11:29:55 GMT
> Organization: PING Belgium
> Lines: 13
> Message-ID: <4dvsee$arg@ping1.ping.be>
> NNTP-Posting-Host: dialup05.hasselt.eunet.be
> X-Newsreader: Forte Free Agent 1.0.82

>
> Hello
>
> can someone give me the address for to order an TRAKBOX ?
>
> All information is welkom!
>
> Addresses of USA or EUROPE are all welkom!
>
> Thanks in advance.
>
> Geert Pirens, ONL2057
>
>
I can provide the TrakBox kit at this time. I have 3
that are not sold or spoken for. Contact me at:

jedavis@deltanet.com

for additional info.

Jack Davis

Date: 22 Jan 1996 20:19:21 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: WEATHER FAX software package

In article <4dmmu9$g0l@sleipnir.iaccess.com.au>, kelaero@iaccess.com.au (Shiraz
Iskenderian) says:
>
>I would greatly appreciate any information on a software package called
>WEATHER FAX that processes acquired weather data to produce weather maps.
>
>Thanks,
>
>Shiraz Iskenderian
>shiraz@kel.com.au
>Melbourne, Australia
Try JVFAX 7.0 (or 7.1 not much difference, but I think the docs woth 7.0
are better). With a simple uA741 circuit, you can receive hf fax on
SW. I am unfamiliar wiht what fax stations you have "down under".
I routinly receive NAM 8080 on a real bad antenna. You will also need
a fairly stable radio. I have a Kenwood R2000 that works great. I have
an older Panasonic RF2200 that is totally unsuited to any data reception.
You can "grab" JVFAX at the AMSAT web site.
If you are wanting to get wx sat photos JVFAX will also work for that.
I would recomend that you get Dr. Ralph Tagerts Latest WX sat handbook.
I do not know how things work in Australia, but assume that if it came
to the worst case, you could order it from the ARRL. JVFAX supports
a real simple voc that goes between you VHF receiver and the uA741 hf

fax demod. This is a cheap, fun way to get into wx sat fax. A "real"
wx demodulator will work circles around this cheap methode.
Good luck and happy faxing.

End of Ham-Space Digest V96 #15
****

198. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199601260951.BAA01449@UCSD.EDU>
Source record: 23161

```
From smtp Tue Jan 23 09:54 PST 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 23 Jan 96 09:54 PST
Received: by mail.ucsd.edu; id EAA04245
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:39 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA04239
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:38 -0800 for ham-space-ddist
Errors-To: ham-space-relay@ucsd.edu
Content-Length: 7263
Content-Type: text
Sender: ham-space-relay@ucsd.edu
Precedence: List
Message-Id: <199601231230.EAA04239@mail.ucsd.edu>
Date: Tue, 23 Jan 96 04:30:36 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #14
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 23 Jan 96 Volume 96 : Issue 14

Today's Topics:
(none) (2 msgs)
African Stations via RS-12/13, etc.
ARLS001 Ham radio power supply aboard Mir fails (fwd)
help with SAREX
sts-72 deorbit
test, please ignor
uplink and downlink freqs. for MIR
WANTED address for ordering a TRAKBOX is a antenna tracking box.

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
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Date: 22 Jan 96 12:36:14 GMT
From: vrsheb%ebmv12.dnet@gpo.nsc.COM
Subject: (none)

help

Date: 22 Jan 96 12:39:52 GMT
From: vstueb%ebvx04.dnet@gpo.nsc.COM (SUJIT U.)
Subject: (none)

help

Date: 17 Jan 1996 13:57:55 GMT
From: kebsch@pdb.sni.de (Waldemar Kebsch)
Subject: African Stations via RS-12/13, etc.

Hi,

I am looking for African Stations who like to have a sked with me
via the satellite RS-12/13 (maybe RS-10/11 and/or RS-15 if you like?).

If you don't have any experience with RS-12/13 then I would be happy
to give you all instructions you need. All what you need to work via
the satellite RS-12/13 is your normal HF equipment. No special radio
or antennas or training necessary!

BTW: If you are not from Africa and would like to have a sked with me,
don't worry and feel free to drop me an e-mail!

Vy 73 de Waldemar, DK3VN
--
E-Mail: kebsch.pad@sni.de Packet Radio DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [7f]

Date: 22 Jan 96 14:02:17 GMT
From: Conrad.Weeseman@inter.NL.NET (Conrad.Weeseman)
Subject: ARLS001 Ham radio power supply aboard Mir fails (fwd)

---------- Forwarded message ----------
Date: Fri, 19 Jan 1996 16:34:03 EST
From: w1aw@arrl.org
To: QST@arrl.org
Subject: ARLS001 Ham radio power supply aboard Mir fails

SB SPACE @ ARL $ARLS001
ARLS001 Ham radio power supply aboard Mir fails

ZCZC AS09
QST de W1AW
Space Bulletin 001 ARLS001

>From ARRL Headquarters
Newington, CT January 19, 1996
To all radio amateurs

SB SPACE ARL ARLS001
ARLS001 Ham radio power supply aboard Mir fails

German cosmonaut Thomas Reiter, DF4TR/DP0MIR, aboard the Mir orbital complex, reports that a power supply used for some of the spacecraft's ham radio equipment failed on New Year's Eve. The remaining, older power supply is only capable of powering the old Icom 2-meter transceiver and one 1200-baud TNC. The digital voice module also has failed, so there will be no more automatic voice recordings in the near future.

Reiter reports all four fuses in the two connected transceivers have blown and only two spare fuses remain. Last month, Reiter used the digital voice recorder, built by Thomas Kieselbach, DL2MDE, to broadcast holiday messages. The primary transmitting frequency is 145.800 MHz.

Recently, the cosmonauts on Mir unpacked new Amateur Radio equipment delivered by rocket, including a 70-cm FM transceiver and 9600-baud packet gear.

Reiter was philosophical. ''Well, at least we can be reached and still can talk with the world,'' he said in a message to Dave Larsen, N6JLH.
NNNN
/EX

Date: Sun, 21 Jan 1996 20:51:57 -0600
From: XE2MXU/N5UHB <fjorozco@academ07.mty.itesm.mx>
Subject: help with SAREX

Hello all, we would like to get one of the local schools into the SAREX program, and I would like to hear from other hams who have helped out in SAREX school contacts.

Also, I've been asked to speak to a group of high school kids about SAREX, and I would like to hear suggestions from sarex 'veterans' as to what I can focus on so kids who've seldom had any contact with amateur radio can become excited about ham radio, and particularly SAREX. This talk would be either at the end of this week or during the next one.

Thanks in advance!

Luis XE2MXU/N5UHB

"Failure is NOT an option!"
-- G. Kranz

Date: 20 Jan 1996 11:43:01 -0700
From: bkline@primenet.com (bob kline)
Subject: sts-72 deorbit

The deorbit plume was visiable in Phoenix from Horizon to Horizon. A bright red glow followed by an Ion trail.

Keep up those night landings NASA.

Bob Kline

bkline@primenet.com

Date: 22 Jan 1996 04:54:20 GMT
From: Tom Kreyche <tkreyche@well.com>
Subject: test, please ignor

ignore, please

Date: 9 Jan 1996 23:31:16 GMT
From: Jim Devenport <jdevenport@lanl.gov>
Subject: uplink and downlink freqs. for MIR

The MIR space station is much easier to contact via radio than ANY of the USA Shuttle missions but it isn't overly easy either. I don't even bother to use satellite tracking programs for MIR any more, I just put 145.55 simplex into my 2 meter mobile and remote base memories and add it to the scanning lists. Several times a day I'll hear the packet buzzing away and with simple packet equipment I've contacted the MIR system several times but rarely have gotten more than the successful connect or a busy (DM) signal from the MIR TNC. A "busy" signal is actually, to me, a successful 2-way packet contact especially if you compare it to the usual USA SAREX policy of hoping to someday see your callsign in a published "stations heard" list. If you get a busy signal from MIR (very likely) it proves MIR has successfully heard you and you have successfully heard MIR. Full callsign exchanges and all: a legit 2-way contact. But confirming it may be a problem. Voice operation seems to be getting rarer and rarer from MIR but the cosmonauts still pop up on voice unexpectedly from time to time. I have called them repeatedly with high and low power without success but there are at least several local stations in Northern New Mexico who have successfully QSO'ed with MIR using 10 watts or less into omnidirectional outside antennas.
--

|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
My views rarely (if ever) reflect those of my employers

Date: Mon, 22 Jan 1996 11:29:55 GMT
From: Geert.Pirens@ping.be (Geert Pirens)
Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.

Hello

can someone give me the address for to order an TRAKBOX ?

All information is welkom!

Addresses of USA or EUROPE are all welkom!

Thanks in advance.

Geert Pirens, ONL2057

End of Ham-Space Digest V96 #14
****

199. Re: Looking for Shuttle Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: kf4dte@aol.com
Message-ID: <4eaa2b$8c3@newsbf02.news.aol.com>
Source record: 23162

the person who wrote the receiving equipment for these transmisions was extreamely expensive was right. our local repeater broadcasts the shuttle link through a sat. link. you could use your scanner to copy this, however it is a secondary user of the frequency. maybe you have something like this in your area. contact your local ham radio club. hope this helped.
73 mike kf4dte

200. Re: Looking for University Cal. Irvine police freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: Firefox@quick.net
Message-ID: <Firefox-2501962059220001@205.153.188.105>
Source record: 23163
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

In article <Pine.SUN.3.91.960125114033.3030E-100000@taurus.oac.uci.edu>,
Adrian Palazuelos <bigpoppa@taurus.oac.uci.edu> wrote:

> Hey if anyone of you out their can let me know the frequencies, thank you.
> Bigpoppa

UCI PD freqs:

F-1 155.445 MHz
F-2 155.505 MHz

The UC system is suppossed to be switching over to 800 MHz trunked system
for each campus (which will include all radio users from the PD to
maintenance), but I'm not sure when. The UCI allocated freqs are:

866.4875; 866.9875; 867.4875; 867.9875; 867.9875; 868.4875.

Any other info you want, feel free to E-mail me.

Firefox@quick.net (Mike)
Irvine, CA

201. what does a newcomer need to get a specific radio show via satellite?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: rol@uhc.com
Message-ID: <4ebeh2$r7t@rohcs1.uhc.com>
Source record: 23164
Cross-posted to: rec.radio.amateur.space,rec.radio.shortwave,rec.radio.amateur.equipment

I sent something very similar to the below to support@grove.net --
it should interest the readers on this group -- and they might be
able to help out as well.

It is a inquiry pursuing something someone whose email address is no
longer good who posted the below quote to the Rush Limbaugh FAQ
(see below).

Thanks! -- Roleigh Martin (rol@uhc.com)

P.S. Please also reply by email to. Also, does anyone know what is
the current email address for:
Kenneth Carlson <carlsenk@seq.oit.osshe.edu> -- this address is no
longer valid. Thanks again!

==========

To - support@grove.net

Dear Sirs:

For an writeup I'm doing on what to do if you are a diehard Rush
Limbaugh fan who lives in an area where there is no local AM radio
station who carries his show. I'm touching on Shortwave and
Satellite Alternatives. I am quoting from some email and usenet postings
pertain I believe to a product you sell that I want to ask you if so, and if
so, what all has to be ordered and at what cost. I'd like to give my readers
enough information to order a complete kit from you.

I reprint this part of the Internet Rush Limbaugh FAQ, per the written
permission of the FAQ posters:*

"Q7: What satellite channels carry Rush's Radio and TV shows?
A7: Kenneth Carlson <carlsenk@seq.oit.osshe.edu> writes:
Rush Limbaugh Radio Show on Satellite:

I have had a few inquires for satellite locations, since Waterfront
Communications has moved to different satellites. You of course, have
my permission to post. The United States Armed Forces Radio and
Television Service (AFRTS) broadcast live, the first hour of radio
show on Spacenet 2, Transponder 20, 7.40 MHz. On this feed will have
his national show and Armed Forces PSA's.

The Rush Limbaugh Radio Show is broadcasted to radio stations on
SatCom C5, Transponder 23. This feed is digital, thus needing special
equipment to pick it up, which cost thousands of dollars.

There is another radio show feed on Galaxy 4, transponder 3. This SCPC which requires a receiver for @$US500 dollars. On this feed you will get the national feed, PSA's and bogus commericals that Rush's Radio Show produced."

My question to you is this. Regarding his last paragraph, is he referring to something like what is shown on your web page: http://catmac.grove.net/CGI.SPG?L=F&P=RCV+27

SCPC-100 Satellite Audio Receiver
Receive Hundreds of SCPC Radio Channels on Your TVRO System!
RCV 27
Years ago most radio networks--ABC,
CBS, Mutual, NBC, NPR and others
distributed their programming by
telephone lines or microwave systems.
Single Channel Per Carrier (SCPC)
technology has allowed these networks
to use satellite transmissions to their
affiliates and users.

Now you can expand your home satellite system to receive all of these "hidden signals" and programs with the Universal SCPC-100 Satellite SCPC Audio Receiver.

The new SCPC-100 receiver is the first high quality unit that is affordable, rivaling many commercial SCPC receivers costing thousands of dollars. Features include:

Stable microprocessor--controlled tuning with two buttons. No knobs; frequency agile. 50-channel program memory with instant one-button recall;Non- volatile; holds memory when power is off. Receives entire 950-1450 MHz LNB frequency range from your satellite system. Easy-to-read 1/2" LED's; 4 digits, 7 segment numbers. Receives high quality music from hundreds of stations; Simple 3 minute hook-up; easy to use; no user fees or subscriptions required for reception. Receives all C- and Ku-band SCPC signals and programming.

Unit made and assembled in the U.S.A.
Manufacturer: Universal
Price: $399.95
Shipping Rates
US Rates: UPS 2nd: $5.50 Priority Mail: $7.50
Canadian Rates: Can App: $8.00 Can UPS: $9.00
For International Shipping Rates call or E-Mail: order@grove.net

Is the above capable of allowing U.S. citizens who are living in the USA in areas where they are not near an AM radio station that carries Rush Limbaugh, the Radio Show, to get Rush's Radio Show via the "feed on Galaxy 4, transponder 3. This SCPC which requires a receiver for @$US500 dollars. On this feed you will get the national feed, PSA's and bogus commericals that Rush's Radio Show produced." [By the way, what is a "PSA"--do you know?]

If your receiver is what is needed, what other things will people have to order: eg, perhaps antennas, masts, cables, directional-rotators (is that what it is called?), descramblers or decoders--what will they need to order? I'm interested in a fully spec'ed out items of things to buy but I do not want to recommend to the readers any frivolous, overkill items.

Last, do you know if the above satellite feed is capable of reaching all across America, including Alaska, Canada, and Hawaii?

Thank you for your attention. I will want to reprint your reply, so please make it specified in your reply that you are aware and okay such reprinting in a commercial book.

Thanks! -- Roleigh Martin, 5511 Malibu Drive, Edina MN 55436

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P.S. Regarding the "*" footnote, I got written permission to reprint the whole FAQ, which I'm including in the Appendix. I do focus on this paragraph too.

202. NORAD Two-Line Orbital Element Sets (TLE744)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ebmlu$m65@blackbird.afit.af.mil>
Source record: 23165

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

```
- Current Two-Line Element Sets #744 -
Alouette 1
1 00424U 62049A 96024.83430616 .00000115 00000-0 12451-3 0 1695
2 00424 80.4541 66.1829 0024648 45.9929 314.3242 13.67861067662602
ATS 1
1 02608U 66110A 96024.41471424 -.00000217 00000-0 10000-3 0 9522
2 02608 14.6380 354.3640 0009550 82.3512 277.7755 1.00399819 23415
ATS 3
1 03029U 67111A 96025.24692843 -.00000125 00000-0 10000-3 0 4459
2 03029 14.8905 1.3330 0009897 267.2141 198.7236 1.00272439103322
Starlette
1 07646U 75010A 96025.16423547 -.00000125 00000-0 15566-4 0 9446
2 07646 49.8276 357.0520 0206015 114.9191 247.3257 13.82189999 59040
LAGEOS
1 08820U 76039A 96023.60063036 .00000005 00000-0 10000-3 0 1662
2 08820 109.8585 336.1263 0044156 160.5693 199.6432 6.38664360204530
ETS-2
1 09852U 77014A 96020.31218175 -.00000161 00000-0 10000-3 0 587
2 09852 13.0451 34.6431 0003762 135.8892 224.1925 1.00024685 16159
GOES 2
1 10061U 77048A 96023.78334696 .00000042 00000-0 10000-3 0 6324
2 10061 12.1557 38.7897 0009429 149.4095 40.6448 1.00259122 12987
IUE
1 10637U 78012A 96026.07810442 -.00000265 00000-0 10000-3 0 2243
2 10637 35.5461 85.4059 1348206 53.1966 342.2944 1.00271543 18503
GPS BI-01
1 10684U 78020A 96025.91039607 -.00000042 00000-0 10000-3 0 4214
2 10684 64.9374 28.1286 0059387 162.9088 197.3437 1.98069504116573
GPS BI-02
1 10893U 78047A 96024.97845125 -.00000006 00000-0 10000-3 0 2117
2 10893 63.2262 265.6097 0228612 15.1934 345.5127 2.01626491129902
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GOES 3
1 10953U 78062A 96026.21234475 -.00000133 00000-0 10000-3 0 6025
2 10953 11.1454 41.5830 0002476 178.1936 238.6372 1.00278722 17627
SeaSat 1
1 10967U 78064A 96022.59225423 -.00000044 00000-0 29904-4 0 4597
2 10967 108.0009 231.4525 0002788 255.7129 104.3707 14.38082604920370
GPS BI-03
1 11054U 78093A 96025.82624531 -.00000006 00000-0 10000-3 0 3783
2 11054 62.9383 264.3838 0045810 179.8499 180.2113 1.93505289125885
Nimbus 7
1 11080U 78098A 96026.17807051 -.00000085 00000-0 -39041-4 0 5604
2 11080 98.9702 255.2065 0009476 358.0368 2.0750 13.83697112871394
GPS BI-04
1 11141U 78112A 96021.58284669 -.00000032 00000-0 10000-3 0 231
2 11141 64.9349 30.4342 0049082 28.7291 331.5769 1.92894720 15038
GPS BI-05
1 11690U 80011A 96024.26174985 -.00000043 00000-0 10000-3 0 9835
2 11690 65.2722 29.6978 0147909 193.2701 166.3410 2.00569911131297
GPS BI-06
1 11783U 80032A 96017.96948765 .00000058 00000-0 10000-3 0 1247
2 11783 62.3662 258.7390 0223889 29.7115 331.6297 2.03456556115754
GOES 5
1 12472U 81049A 96026.06233627 -.00000165 00000-0 10000-3 0 9098
2 12472 7.9295 51.7286 0005112 45.6614 314.4290 1.00207243 11660
Cosmos 1383
1 13301U 82066A 96023.63824058 .00000010 00000-0 -53890-5 0 4667
2 13301 82.9289 240.5046 0026394 283.2951 76.5255 13.68071302677475
LandSat 4
1 13367U 82072A 96023.52441378 .00000035 00000-0 17575-4 0 8360
2 13367 98.0981 78.7014 0005615 229.9426 130.1306 14.57167915719327
DMSP B5D2-1
1 13736U 82118A 96026.06527747 -.00000022 00000-0 91486-5 0 9371
2 13736 98.6255 216.7359 0009422 86.3102 273.9154 14.25768398680678
IRAS
1 13777U 83004A 96026.06268039 -.00000280 00000-0 -16287-3 0 2102
2 13777 98.9612 214.6016 0013349 133.3828 226.8452 13.99241124333352
Cosmos 1447
1 13916U 83021A 96025.21429408 .00000013 00000-0 -20930-5 0 5637
2 13916 82.9484 297.5267 0037014 191.1754 168.8583 13.74334698643963
TDRS 1
1 13969U 83026B 96025.25485326 -.00000081 00000-0 00000+0 0 5359
2 13969 8.7475 45.0899 0003403 257.2210 159.0691 1.00434714 19943
GOES 6
1 14050U 83041A 96026.23783959 -.00000260 00000-0 10000-3 0 4814
2 14050 6.7595 55.0025 0002663 7.6538 69.2057 1.00297757104762
OSCAR 10
1 14129U 83058B 96025.67771955 -.00000231 00000-0 10000-3 0 4008
2 14129 26.3997 227.1522 5982348 345.5889 2.9498 2.05882518 66910
LandSat 5
1 14780U 84021A 96024.18377314 .00000002 00000-0 10887-4 0 4186
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2 14780 98.3533 81.8363 0003471 37.8804 322.2637 14.57037513632818
UoSat 2
1 14781U 84021B 96025.52198378 .00000110 00000-0 26453-4 0 8570
2 14781 97.7895 22.7233 0011595 184.7796 175.3299 14.69421225636557
GPS BI-09
1 15039U 84059A 96023.12802874 -.00000048 00000-0 10000-3 0 3885
2 15039 64.5931 24.7390 0082079 18.3203 342.0047 1.92302258 84628
Cosmos 1574
1 15055U 84062A 96025.90160525 .00000027 00000-0 12127-4 0 7642
2 15055 82.9540 351.6109 0028909 22.7546 337.4872 13.73631281581312
GPS BI-10
1 15271U 84097A 96025.39334267 .00000003 00000-0 10000-3 0 1048
2 15271 62.0710 258.9851 0158236 357.3228 2.6509 2.00608326 82387
Cosmos 1602
1 15331U 84105A 96025.63795480 .00000140 00000-0 13527-4 0 4481
2 15331 82.5338 247.5100 0022232 62.8428 297.5042 14.84716467611672
NOAA 9
1 15427U 84123A 96026.03689302 .00000045 00000-0 47685-4 0 5596
2 15427 98.9672 90.7569 0015210 1.8823 358.2401 14.13757051573405
GPS BI-11
1 16129U 85093A 96018.26356224 -.00000003 00000-0 10000-3 0 7006
2 16129 65.2657 28.3305 0155538 85.4616 276.3616 1.89368004 19066
Mir
1 16609U 86017A 96025.26428985 .00002086 00000-0 34222-4 0 3942
2 16609 51.6454 125.1481 0005517 257.1219 102.9131 15.57741229567576
SPOT 1
1 16613U 86019A 96024.21123190 .00000090 00000-0 62356-4 0 8928
2 16613 98.6275 95.3656 0000962 59.3023 300.8248 14.20087684199733
Cosmos 1766
1 16881U 86055A 96024.19527052 .00000152 00000-0 15351-4 0 3632
2 16881 82.5184 306.6302 0021151 92.6143 267.7494 14.83704132512346
EGP
1 16908U 86061A 96019.22738594 -.00000083 00000-0 10000-3 0 582
2 16908 50.0093 98.0436 0011022 351.4870 8.5776 12.44413615 97737
NOAA 10
1 16969U 86073A 96026.02875672 -.00000007 00000-0 15170-4 0 4794
2 16969 98.5159 27.2463 0014256 53.6806 306.5688 14.24971414486214
MOS-1
1 17527U 87018A 96022.54691991 -.00000044 00000-0 00000+0 0 3788
2 17527 98.9695 87.6238 0017430 16.9068 343.2684 14.00431714454467
GOES 7
1 17561U 87022A 96025.36261999 .00000059 00000-0 10000-3 0 7352
2 17561 2.7801 70.5594 0000823 260.4571 150.2802 1.00292513 15869
Kvant-1
1 17845U 87030A 96025.96996638 .00027931 00000-0 37372-3 0 5129
2 17845 51.6461 121.6174 0005391 258.8784 101.1684 15.57781687501790
DMSP B5D2-3
1 18123U 87053A 96026.01978329 -.00000017 00000-0 13686-4 0 2978
2 18123 98.7724 218.6368 0013730 306.6917 53.2994 14.15430173444243
RS-10/11
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1 18129U 87054A 96026.15116730 .00000051 00000-0 39314-4 0 1657
2 18129 82.9248 254.2548 0010731 185.7021 174.4015 13.72361692430551
Meteor 2-16
1 18312U 87068A 96022.71388070 .00000047 00000-0 28913-4 0 4541
2 18312 82.5561 108.2702 0010955 276.6392 83.3523 13.84070772425913
Meteor 2-17
1 18820U 88005A 96025.39697274 .00000010 00000-0 -42974-5 0 8362
2 18820 82.5429 161.4885 0016314 336.2491 23.7911 13.84749768403622
DMSP B5D2-4
1 18822U 88006A 96025.06010985 .00000002 00000-0 19071-4 0 1709
2 18822 98.3894 223.9320 0006980 67.5068 292.6843 14.23178881414073
Glonass 34
1 19163U 88043A 96018.42463024 -.00000004 00000-0 10000-3 0 486
2 19163 65.1950 90.9298 0007711 158.8231 201.2646 2.13102483 59020
Glonass 36
1 19165U 88043C 96024.11253532 -.00000017 00000-0 10000-3 0 4569
2 19165 65.1849 90.6901 0001574 313.2606 46.7874 2.13102074 59763
METEOSAT 3
1 19215U 88051A 96024.12883137 -.00000069 00000-0 10000-3 0 2357
2 19215 2.9727 68.4510 0003727 146.3846 213.6761 0.96946977 15775
AO-13
1 19216U 88051B 96023.30494554 -.00000455 00000-0 50843-5 0 1391
2 19216 57.3682 139.4625 7372089 29.5815 356.6881 2.09730994 26770
OKEAN 1
1 19274U 88056A 96019.07516172 .00000199 00000-0 21897-4 0 625
2 19274 82.5133 52.1085 0017771 260.1800 99.7419 14.82436721407130
Meteor 3-2
1 19336U 88064A 96024.20960462 .00000051 00000-0 10000-3 0 4544
2 19336 82.5410 269.0081 0015482 237.9805 121.9811 13.16976007360398
Glonass 39
1 19503U 88085C 96025.08032632 -.00000059 00000-0 10000-3 0 3457
2 19503 65.6320 329.5826 0006246 167.1965 192.8358 2.13101859 57277
NOAA 11
1 19531U 88089A 96025.99233410 .00000035 00000-0 43984-4 0 3708
2 19531 99.1928 40.3281 0011269 285.6892 74.3032 14.13079879378226
TDRS 2
1 19548U 88091B 96025.97469395 -.00000206 00000-0 10000-3 0 1767
2 19548 2.2145 73.2106 0006365 184.6584 302.9874 1.00274981 14097
Glonass 40
1 19749U 89001A 96023.24132967 -.00000008 00000-0 10000-3 0 5632
2 19749 65.1501 90.2896 0006133 248.4777 111.5341 2.13101446 54744
Glonass 41
1 19750U 89001B 96025.17353978 -.00000029 00000-0 10000-3 0 4693
2 19750 65.1704 90.2916 0006717 232.7492 127.2485 2.13101750 54800
GPS BII-01
1 19802U 89013A 96022.56495707 -.00000009 00000-0 10000-3 0 1775
2 19802 55.3088 116.4859 0029802 164.4567 195.6201 2.00557954 50779
Akebono
1 19822U 89016A 96023.98065286 .00005982 00000-0 32659-3 0 6494
2 19822 75.0877 207.9449 3757049 215.5829 112.4793 7.89703033155211
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Meteor 2-18
1 19851U 89018A 96024.51593391 .00000060 00000-0 40294-4 0 4531
2 19851 82.5170 36.4349 0015650 26.5453 333.6507 13.84404927348813
MOP-1
1 19876U 89020B 96021.20073606 -.00000065 00000-0 10000-3 0 1754
2 19876 1.6815 71.4656 0019139 277.0788 82.5654 0.97108858 5185
TDRS 3
1 19883U 89021B 96022.75892222 -.00000281 00000-0 00000+0 0 1718
2 19883 0.0427 102.0880 0003095 186.2601 65.1440 1.00266371197636
GPS BII-02
1 20061U 89044A 96025.89426545 -.00000065 00000-0 10000-3 0 1795
2 20061 54.2866 292.3144 0148842 217.1294 141.8843 2.00562952 48585
Nadezhda 1
1 20103U 89050A 96026.03088473 .00000027 00000-0 11809-4 0 6522
2 20103 82.9592 214.2401 0038955 91.8123 268.7495 13.73862557329025
GPS BII-03
1 20185U 89064A 96024.23693357 -.00000016 00000-0 10000-3 0 1907
2 20185 55.0758 116.9240 0020247 309.2244 50.6152 2.00556524 47122
GMS 4
1 20217U 89070A 96024.77364034 -.00000380 00000-0 10000-3 0 2967
2 20217 1.5124 76.2897 0001301 81.8779 3.8629 1.00277976 23979
INTERCOSMOS 24
1 20261U 89080A 96026.06714873 .00000088 00000-0 21963-4 0 4711
2 20261 82.5906 2.1357 1243015 7.1526 354.5582 12.47314693288064
GPS BII-04
1 20302U 89085A 96023.77649869 .00000026 00000-0 10000-3 0 1841
2 20302 53.2941 232.2970 0016824 134.8029 225.3629 2.00562247 45912
Meteor 3-3
1 20305U 89086A 96026.07905800 .00000044 00000-0 10000-3 0 4833
2 20305 82.5458 223.5168 0006130 308.0342 52.0477 13.04418578299546
COBE
1 20322U 89089A 96022.08888877 -.00000042 00000-0 12753-5 0 1831
2 20322 98.9482 39.7513 0009625 85.1107 275.1155 14.03458436316298
Kvant-2
1 20335U 89093A 96025.96996638 .00027931 00000-0 37372-3 0 4925
2 20335 51.6461 121.6174 0005391 258.8784 101.1684 15.57781687350802
GPS BII-05
1 20361U 89097A 96025.28339453 -.00000060 00000-0 10000-3 0 255
2 20361 55.9055 58.9708 0086492 131.5284 229.2717 2.00562853 35428
COSMOS 2054 (Altair-1)
1 20391U 89101A 96025.04430774 -.00000147 00000-0 00000+0 0 2833
2 20391 3.5602 64.3968 0001092 221.6190 197.4096 1.00273736 22551
SPOT 2
1 20436U 90005A 96024.27339003 .00000169 00000-0 10000-3 0 235
2 20436 98.7132 100.2929 0001341 48.3801 311.7476 14.20037224311271
UO-14
1 20437U 90005B 96025.18305430 .00000013 00000-0 21842-4 0 1566
2 20437 98.5559 110.8486 0010400 269.4937 90.5053 14.29910314313476
UO-15
1 20438U 90005C 96024.76751729 -.00000028 00000-0 60731-5 0 9528
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2 20438 98.5486 108.6197 0009463 275.8551 84.1552 14.29223184313295
PACSAT
1 20439U 90005D 96022.27751998 -.00000021 00000-0 88540-5 0 9544
2 20439 98.5688 109.9764 0010596 278.0055 81.9923 14.29964340313076
DO-17
1 20440U 90005E 96026.23234165 -.00000030 00000-0 53484-5 0 9558
2 20440 98.5701 114.4320 0010639 264.7539 95.2430 14.30105959313661
WO-18
1 20441U 90005F 96024.26011834 .00000004 00000-0 18333-4 0 9593
2 20441 98.5690 112.4421 0011281 271.1741 88.8145 14.30076456313389
LO-19
1 20442U 90005G 96026.22574268 .00000025 00000-0 26501-4 0 9552
2 20442 98.5711 114.8132 0011456 265.4862 94.5001 14.30183081313684
GPS BII-06
1 20452U 90008A 96025.68043075 .00000043 00000-0 10000-3 0 1213
2 20452 54.0346 172.6086 0060474 86.0006 274.6509 2.00558792 43938
MOS-1B
1 20478U 90013A 96023.55210006 .00000090 00000-0 10000-3 0 8850
2 20478 99.1259 94.7811 0000779 86.0364 274.0882 13.94865818224257
DEBUT
1 20479U 90013B 96024.18782864 -.00000042 00000-0 -31228-4 0 9549
2 20479 99.0506 76.6794 0540859 92.4844 273.8254 12.83337343279303
FO-20
1 20480U 90013C 96024.67981859 -.00000054 00000-0 -57425-4 0 8516
2 20480 99.0480 76.8970 0541253 91.9351 274.3790 12.83232011279352
MOS-1B R/B
1 20491U 90013D 96026.16570442 -.00000408 00000-0 -69960-3 0 2104
2 20491 99.0718 138.5715 0469181 269.3504 85.3867 13.02971343283238
LACE
1 20496U 90015A 96024.16894538 .00001223 00000-0 43180-4 0 6143
2 20496 43.1034 310.9708 0009717 201.8329 158.2113 15.35296170331530
Nadezhda 2
1 20508U 90017A 96025.90744565 .00000037 00000-0 22555-4 0 6534
2 20508 82.9508 348.8649 0045800 45.2645 315.2220 13.73503495296220
OKEAN 2
1 20510U 90018A 96025.43796032 .00000168 00000-0 19782-4 0 4724
2 20510 82.5214 359.3627 0021121 68.7930 291.5534 14.78568757318433
GPS BII-07
1 20533U 90025A 96025.08248012 -.00000060 00000-0 10000-3 0 1630
2 20533 54.6634 293.0240 0050719 76.0803 284.5333 2.00576721 42698
PegSat
1 20546U 90028A 96025.22026304 .00003875 00000-0 74715-4 0 8908
2 20546 94.1246 270.4585 0060117 199.5276 160.3675 15.46007000322750
HST
1 20580U 90037B 96025.47267613 .00001306 00000-0 11403-3 0 7644
2 20580 28.4690 62.3141 0006202 107.1352 252.9918 14.91010880117111
MACSAT 2
1 20608U 90043B 96022.82933652 .00000124 00000-0 18736-4 0 1559
2 20608 89.9265 174.6279 0104089 206.7149 152.8687 14.64894055304868
Glonass 44
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1 20619U 90045A 96025.01722855 -.00000060 00000-0 10000-3 0 2655
2 20619 65.2318 328.8856 0026577 204.6094 155.2712 2.13102382 44235
Glonass 45
1 20620U 90045B 96024.19738023 -.00000057 00000-0 10000-3 0 2633
2 20620 65.2231 328.9090 0007967 44.8202 315.2510 2.13102480 44254
Glonass 46
1 20621U 90045C 96022.85682061 -.00000055 00000-0 10000-3 0 8527
2 20621 65.2462 329.0101 0012859 198.5265 161.4392 2.13101743 44225
Kristall
1 20635U 90048A 96025.96996638 .00027931 00000-0 37372-3 0 2849
2 20635 51.6461 121.6174 0005391 258.8784 101.1684 15.57781687321634
ROSAT
1 20638U 90049A 96024.83014422 -.00000269 00000-0 13435-5 0 5272
2 20638 52.9927 229.1239 0013974 57.3568 302.8766 15.07343280310549
Meteor 2-19
1 20670U 90057A 96025.19645950 -.00000129 00000-0 -12859-3 0 9539
2 20670 82.5467 102.2472 0015087 305.0996 54.8745 13.84149667281823
CRRES
1 20712U 90065A 96024.85321814 -.00000031 00000-0 73218-4 0 2101
2 20712 18.1076 309.6132 7180688 269.4479 15.7978 2.35654600 39718
GPS BII-08
1 20724U 90068A 96025.40872758 -.00000030 00000-0 00000+0 0 9938
2 20724 54.9166 114.4491 0123677 178.8357 181.2208 2.00564885 38569
Feng Yun1-2
1 20788U 90081A 96025.22969656 .00000269 00000-0 20603-3 0 7090
2 20788 98.8112 35.6528 0013930 175.4799 184.6494 14.01389319275934
Meteor 2-20
1 20826U 90086A 96025.51301476 .00000067 00000-0 47277-4 0 9646
2 20826 82.5219 38.6567 0012173 196.3414 163.7354 13.83624204268978
GPS BII-09
1 20830U 90088A 96025.46094275 -.00000062 00000-0 10000-3 0 9989
2 20830 55.8420 56.9283 0064365 98.7995 261.9825 2.00560008 39201
GPS BIIA-10
1 20959U 90103A 96025.36214818 -.00000027 00000-0 10000-3 0 9616
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Prognoz-M2
1 23632U 95039A 96024.29486720 -.00000187 00000-0 00000+0 0 280
2 23632 66.8830 254.1060 8805281 318.3830 323.4750 0.26340300 467
SICH-1
1 23657U 95046A 96024.89290206 .00000068 00000-0 69504-5 0 516
2 23657 82.5357 333.3658 0027908 154.8595 205.3975 14.73447399 21587
Soyuz TM-22
1 23665U 95047A 96025.96996638 .00027931 00000-0 37372-3 0 1354
2 23665 51.6461 121.6174 0005391 258.8784 101.1684 15.57781687 22559
RADARSAT
1 23710U 95059A 96025.47937793 -.00000044 00000-0 00000+0 0 935
2 23710 98.5810 34.2042 0002494 123.5930 236.5491 14.29986490 11704
ISO
1 23715U 95062A 96021.98962391 -.00000085 00000-0 10000-3 0 253
2 23715 4.7435 308.2762 8226319 123.9536 340.9785 1.00206560 669
Glonass 77
1 23734U 95068A 96026.20585856 .00000080 00000-0 00000+0 0 492
```

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2 23734 64.8340 208.6889 0018222 328.7649 31.1350 2.13101768 924
Glonass 78
1 23735U 95068B 96024.08811334 .00000062 00000-0 00000+0 0 445
2 23735 64.8354 208.7522 0005510 204.0932 155.8893 2.13124952 872
Glonass 79
1 23736U 95068C 96024.09408058 .00000062 00000-0 00000+0 0 363
2 23736 64.8241 208.7663 0006573 184.8982 175.1023 2.13102021 877
Progress M-30
1 23744U 95070A 96025.96996638 .00027931 00000-0 37372-3 0 380
2 23744 51.6461 121.6174 0005391 258.8784 101.1684 15.57781687 5996
1995072A
1 23751U 95072A 96025.75478973 -.00000044 00000-0 00000+0 0 295
2 23751 98.7113 101.9104 0001218 79.7221 280.4094 14.21627145 4054
1995072B
1 23752U 95072B 96026.19208188 -.00000020 00000-0 10000-4 0 205
2 23752 98.5647 102.0659 0006569 58.5635 301.6185 14.24887328 4129
1995072C
1 23753U 95072C 96023.24074488 -.00000043 00000-0 00000+0 0 145
2 23753 98.5986 99.2977 0004740 68.0802 292.0882 14.24998930 3709
1995073A
1 23754U 95073A 96004.57710820 .00000000 00000-0 99999-4 0 84
2 23754 003.0690 275.4727 1712668 182.7578 176.1115 01.30272711000101
1995073B
1 23755U 95073B 96006.40177083 .10450431 -86684-5 24062-3 0 429
2 23755 27.9817 209.1767 0007856 259.0232 101.1203 16.46201404 1455
1995073C
1 23756U 95073C 96025.58496654 .00005186 00000-0 77961-3 0 147
2 23756 24.2704 267.7882 7251876 197.3940 110.2914 2.33269187 664
1995074A
1 23757U 95074A 96024.87538818 .00000523 00000-0 14879-4 0 172
2 23757 22.9854 314.0610 0013418 132.2549 227.9077 14.97592087 3801
1995074B
1 23758U 95074B 96022.90674514 .07794242 -13544-4 25449-3 0 765
2 23758 24.9357 302.9931 0048820 205.5850 154.5275 16.38008764 3703
1995074D
1 23760U 95074D 96001.35514413 .00000797 00000-0 10000-4 0 107
2 23760 22.8741 110.9500 0210834 346.8899 52.1215 15.05915113 642
1996002A
1 23764U 96002A 96021.93454153 -.00000280 00000-0 00000+0 0 206
2 23764 0.0298 343.1401 0026115 345.2674 86.5761 1.00310488 36
1996002B
1 23765U 96002B 96022.45212322 -.00000238 00000-0 00000+0 0 152
2 23765 0.1846 265.9903 0006231 115.8465 353.5828 1.00166642 77
1996002C
1 23766U 96002C 96024.52847222 .00006007 00000-0 18351-2 0 77
2 23766 6.9307 273.7598 7344667 186.4502 152.3086 2.20156323 251
1996002D
1 23767U 96002D 96022.80641848 .00041409 00000-0 62842-2 0 83
2 23767 6.9597 273.2016 7287180 185.9325 157.4414 2.28777924 228
1996003A
```

```
1 23768U 96003A 96024.27389041 -.00000336 00000-0 00000+0 0 150
2 23768 0.2319 275.7800 0073326 277.3720 167.5050 0.99405129 105
1996003B
1 23769U 96003B 96022.55396468 .00002446 00000-0 14585-3 0 50
2 23769 25.3254 50.9985 0741565 336.9874 19.8973 13.90765602 1113
1996003C
1 23770U 96003C 96025.43716038 -.00000189 00000-0 10000-3 0 85
2 23770 21.0331 100.5722 6898043 4.4721 359.4909 2.19755115 245
Cosmos 2327
1 23773U 96004A 96025.59323773 .00000024 00000-0 10000-4 0 73
2 23773 82.9811 10.4682 0046733 256.7063 102.8878 13.73743305 1221
1996004B
1 23774U 96004B 96026.23616737 .00004174 00000-0 42900-2 0 118
2 23774 82.9746 9.9716 0041022 248.3508 111.3251 13.75587899 1313
1996005A
1 23775U 96005A 96026.07262929 -.00000049 00000-0 10000-3 0 27
2 23775 1.4986 285.8622 0016685 103.3838 206.4483 0.97454079 01
1996005B
1 23776U 96005B 96026.14161350 .01200146 12168-4 22280-3 0 61
2 23776 51.6346 278.5042 0005567 323.7344 36.3327 16.31406957 128
1996005C
1 23777U 96005C 96026.14116828 .13925704 12407-4 11512-2 0 59
2 23777 51.6295 278.5026 0004191 56.6687 303.5124 16.38908937 124
1996005D
1 23778U 96005D 96025.19048813 -.00000070 00000-0 10000-3 0 19
2 23778 1.5072 286.2334 0024578 152.5386 208.0170 0.97177710 05
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

203. ARLS002 STS-75 launch date

Newsgroup: rec.radio.amateur.space
Date: 1996-01-26 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls002.1996@arrl.org>
Source record: 23166
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB SPACE @ ARL $ARLS002
ARLS002 STS-75 launch date

ZCZC AS10
QST de W1AW
Space Bulletin 002 ARLS002
From ARRL Headquarters
Newington, CT January 26, 1996
To all radio amateurs

SB SPACE ARL ARLS002
ARLS002 STS-75 launch date

The next scheduled Space Shuttle mission is STS-75. Launch is
planned for February 22, 1996 at 2018 UTC.

The STS-75 Nominal Mission Orbit Profile and State Vectors have been
uploaded to the AMSAT FTP site:

ftp.amsat.org /amsat/keps/sts-75v.zip

This data is available for immediate download. The AMSAT WWW State
Vector Tutorial page will be updated soon to link this and thus make
it available for download via the World-Wide Web.

Thanks to Ken Ernandes, N2WWD, for providing this information.
NNNN
/EX
```

204. Re: Looking for University Cal. Irvine police freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: jlundgre@delta1.deltanet.com
Message-ID: <4ec5kg$ej1@news2.deltanet.com>
Source record: 23071
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

Adrian Palazuelos (bigpoppa@taurus.oac.uci.edu) penned:
: Hey if anyone of you out their can let me know the frequencies, thank you.
: Bigpoppa

Try the FCC database.

http://radio.aiss.uiuc.edu/~rrb/fccdb.html

BTW, please do not post to newsgroups that are not appropriate.

--
#======P=G=P==k=e=y==a=v=a=i=l=a=b=l=e==u=p=o=n==r=e=q=u=e=s=t======#
John Lundgren - Elec Tech - Info Tech Svcs.	jlundgre@delta1
Rancho Santiago Community College District	.deltanet.com
17th St at Bristol \ Santa Ana, CA 92706	http://rsc.rancho
My opinions are my own, and not my employer's.	.cc.ca.us
I have gone out to look for myself.. If I should
return before I get back, hold me until I get here.
"You can flame your brains out -- it won't take long."
#===T=u=z=l=a==C=o=m=p=a=n=y=.=.===t=h=r=e=e='=s==L=e==C=r=o=w=d=!==#

205. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: Henry Brugsch <henry@g0gku.demon.co.uk>
Message-ID: <01271996113205um@g0gku.demon.co.uk>
Source record: 23072
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

Only one comment to make about this thread, what a waste of time!
(g>)

Henry Brugsch
aka hbj elsewhere, CIS: 75366.317@compuserve.com, hbj@bix.com
Give me an alias long enough and I'll mail the world

206. Re: Band width

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960127114056.27809G-100000@qni.com>
Source record: 23073

Jim,

Nope is like you need a bigger PIPE
more bits to flow thru it in the same amount of given time
Geneerally the higher the transmission rate the more bandwidth /space/ the
signal will occupy
That is about as complicated as I can get :->
I'm sure other will do better

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 26 Jan 1996, James Beckley wrote:

> Ok,
> I know all you brainiacs out there will laugh at this question,
> but...What exactly is bandwidth? I read about it all the time in relation
> to communications, but how does it affect the transmission of data?
> I always hear, "Need more bandwidth!" Is this the equivalent of "Need
> a bigger hammer!"? The more complicated the answer the better.
>
> Thanks alot,
> Jim
>
>

207. ARLK004 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk004.1996@arrl.org>
Source record: 23074
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK004
ARLK004 Keplerian data

ZCZC SK04
QST de W1AW
Keplerian Bulletin 4 ARLK004
From ARRL Headquarters
Newington, CT January 27, 1996
To all radio amateurs

SB KEP ARL ARLK004
ARLK004 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96026.48319262 .00002456 00000-0 39088-4 0 3951
2 16609 51.6471 119.0447 0005277 261.4335 98.6091 15.57749813567763
AO-10
1 14129U 83058B 96025.67771955 -.00000231 00000-0 10000-3 0 04008
2 14129 26.3997 227.1522 5982348 345.5889 2.9498 2.05882518066910
RS-10/11
1 18129U 87054A 96026.15116730 .00000051 00000-0 39314-4 0 1657
2 18129 82.9248 254.2548 0010731 185.7021 174.4015 13.72361692430551
UO-11
1 14781U 84021B 96025.99865048 .00000131 00000-0 29954-4 0 08624
2 14781 97.7895 23.1779 0011524 183.3259 176.7867 14.69421567636621
RS-12/13
1 21089U 91007A 96026.09965093 .00000020 00000-0 50962-5 0 08753
2 21089 82.9224 295.4557 0027596 273.0155 86.7830 13.74064775249380
AO-13
1 19216U 88051B 96024.25856841 -.00000268 00000-0 -10079-5 0 01409
2 19216 57.3647 139.2719 7372551 29.6701 356.6943 2.09728902026799
UO-14
1 20437U 90005B 96026.16269618 .00000025 00000-0 26466-4 0 01630
2 20437 98.5557 111.8105 0010355 266.6035 93.3961 14.29910558313615
RS-15
1 23439U 94085A 96026.12399166 -.00000039 00000-0 10000-3 0 01288
2 23439 64.8210 254.4477 0164468 224.0333 134.7396 11.27523785044656
```

```
AO-16
1 20439U 90005D 96026.19593838 .00000006 00000-0 19275-4 0 09737
2 20439 98.5684 113.8317 0010539 265.8550 94.1446 14.29964869313635
DO-17
1 20440U 90005E 96026.23234165 -.00000030 00000-0 53484-5 0 9558
2 20440 98.5701 114.4320 0010639 264.7539 95.2430 14.30105959313661
WO-18
1 20441U 90005F 96026.14920873 -.00000008 00000-0 13850-4 0 09688
2 20441 98.5685 114.3007 0011299 265.4830 94.5070 14.30076514313654
LO-19
1 20442U 90005G 96026.15578160 .00000039 00000-0 31923-4 0 09749
2 20442 98.5710 114.7437 0011500 266.2943 93.6924 14.30183254313674
FO-20
1 20480U 90013C 96026.16117865 -.00000055 00000-0 -60672-4 0 08575
2 20480 99.0481 78.0996 0541316 88.5989 277.7036 12.83231860279546
AO-21
1 21087U 91006A 96026.11969854 .00000093 00000-0 82657-4 0 06845
2 21087 82.9400 67.6026 0033799 245.4489 114.3142 13.74564368250355
UO-22
1 21575U 91050B 96026.10243744 .00000016 00000-0 19857-4 0 06643
2 21575 98.3712 96.6254 0008328 341.4107 18.6773 14.37009392237513
KO-23
1 22077U 92052B 96025.72444921 -.00000037 00000-0 10000-3 0 05576
2 22077 66.0792 129.8324 0006479 337.2425 22.8298 12.86295611162350
KO-25
1 22828U 93061F 96026.12891439 .00000029 00000-0 29091-4 0 04419
2 22828 98.5919 104.3617 0009912 282.1147 77.8921 14.28128057089697
IO-26
1 22826U 93061D 96026.11411773 .00000020 00000-0 25865-4 0 04534
2 22826 98.5973 104.3002 0009167 298.9411 61.0873 14.27793670121588
AO-27
1 22825U 93061C 96026.17705269 -.00000000 00000-0 17514-4 0 04536
2 22825 98.5981 104.2258 0008031 293.8365 66.1989 14.27685399121581
PO-28
1 22829U 93061G 96026.14360402 .00000048 00000-0 36809-4 0 04565
2 22829 98.5940 104.4262 0009522 281.0220 78.9889 14.28109060121613

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
January 30, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

208. Help Macintosh and Satelites

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: r.serna@eworld.com
Message-ID: <4eec1n$9aa@hp5.online.apple.com>
Source record: 23075

Dears friens:

I am interested in some software similar to PB/PG or Wisp for
Apple Macintosh Computer,please send me information
mi E,mail is: R.Serna@eworl.com

thank`s EA3CFC

209. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: jeffg@ptp.hp.com
Message-ID: <4ec4pg$bnb@hpscit.sc.hp.com>
Source record: 23076
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

Henry Spencer (henry@zoo.toronto.edu) wrote:
> In article <DLKDML.DCn@eskimo.com> mindseye@eskimo.com (Rose Haupt) writes:
> >Sorry, the "military" specs relate primarly to the temperature range that
> >the device is rated to perform over, nothing to do with radiation
> >resistance.
> >
> >In nearly all cases, the only difference between the commercial and
> >military parts is the level of testing...
>
> Well, the other difference is the packaging: the military parts use
> expensive hermetically-sealed ceramic packages, while the commercial
> parts use plastic packages, because of the different temperature ranges
> envisioned for their use. The plastic packages can't hold a hermetic
> seal if they are temperature-cycled too drastically.

If the part is spec'ed only to LEO radiation levels and if there is an equivalent commercial from the same manufacturer then, yes, all parts are from the same production line. (While I worked at Intel "we" (the people I worked for) created a new part rating called Express, which happened to be parts that passed commercial screens, but failed the more extreme military screens. Because it was "better" than commercial, they could charge more. :-))

If the part is spec'ed for higher orbits and/or higher levels it's likely different from the ground up. You have to use a different process and different design rules. Fortunately (?), modern CMOS (submicron) processes have begun to see the same types of damage (though through different mechanisms) during manufacturing that total dose radiation causes, which indirectly is, in addition to geometry shrinks, driving processes to be harder.

Jeff (used to nuke parts)
--

210. Re: ***Ham WEB page For all people to use! Give it a TRY***

Newsgroup: rec.radio.amateur.space
Date: 1996-01-27 00:00:00 UTC
From: konus@mbox.vol.it
Message-ID: <4eeasu$hpu@everest.vol.it>
Source record: 23077
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

rong@computer.net (Ron Goldstein) wrote:

>Try our web page:

>www.computer.net/nwara/wb2ixr.html

Please see my home page too.

http://www.geocities.com/Athens/2309/
Greetings from Raffaello Di Martino

PacketAddress: IW7CHV@IW7CHV.IPUG.ITA.EU
E-mailAddress: konus@mbox.vol.it -o- iw7chv@amsat.org
WWW: http://www.geocities.com/Athens/2309/
FidoAddress : 2:335/723 A.C.T.A.I. BBS ++39-80-5538562/5538402/5538405

211. Re: Kepler Elements Help Please

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: wa2txv@eclipse.net
Message-ID: <4ef5i4$73k@lunar.eclipse.net>
Source record: 23078

try http://www.amsat.org/amsat/ftp/keps/current/nasa.all
harts@argonet.co.uk wrote:

>I hope someone can help.

>We are experimenting in weather sats at school. (Science Dept). We have the
>basic equipment to receive and reproduce these images on our 386. We have STS+
>to help predict when the best times are to have a go. BUT does anyone know of a
>FTP site that we can dial up to get the latest KEPLER TLE's.

>If you can help please E-Mail us at harts@argonet.co.uk

>
>--
> --. --. --. --. : : --- --- .---.
> |_| |_| | _ | | | | |_ | |Internet provider for all Acorn RISC machines|
> | | |\ | | | | |\| | | '---'
> | | | \ |_| |_| | | |__ | harts@argonet.co.uk

212. Shuttle Radio Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: dsheehan@sallie.wellesley.edu
Message-ID: <28JAN96.12294544@sallie.wellesley.ed>
Source record: 23079

I am looking for info regarding shuttle communications in order to monitor. If anyone has or knows where I may find freq info, I would greatly appreciate it.

Thanks

Danny

213. Re: Looking for University Cal.

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: Ford Prefect <remailer@bi-node.zerberus.de>
Message-ID: <m0tgWYc-00027xC@bi-node.zerberus.de>
Source record: 23080
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

*** Answering a msg posted in area TALK.POLITICS.GUNS (usenet).

jlundgre@delta1.deltanet.com wrote to All:

j> BTW, please do not post to newsgroups that are not appropriate.

Jeeze, you _are_ a dreamer, aren't you? 8-)
-----//--
Please note: This message has been anonymized on request of its sender.
If you would prefer not to receive anonymous mails from this machine,
please contact postmaster@bi-node.zerberus.de and say so.
For further information regarding this service, please send mail
to remailer@bi-node.zerberus.de with subject 'remailer-help'.

214. Re: Kepler Elements Help Please

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2801960740010001@jake-4o.ip.realtime.net>
Source record: 23081

In article <4ef5i4$73k@lunar.eclipse.net>, wa2txv@eclipse.net (Pete Smith)
wrote:

> try http://www.amsat.org/amsat/ftp/keps/current/nasa.all
> harts@argonet.co.uk wrote:
>
> >I hope someone can help.
>
> >We are experimenting in weather sats at school. (Science Dept). We have the
> >basic equipment to receive and reproduce these images on our 386. We
have STS+
> >to help predict when the best times are to have a go. BUT does anyone
know of a
> >FTP site that we can dial up to get the latest KEPLER TLE's.
>
> >If you can help please E-Mail us at harts@argonet.co.uk
>

Also ftp://archive.afit.af.mil/pub/space/tle.new

Ron W5RKN

--
Ron W5RKN

215. Parks open in February

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: metcan@telalink.net
Message-ID: <4egk06$mfk@adam.telalink.net>
Source record: 23082
Cross-posted to: rec.radio.amateur.space,rec.roller-coaster

Hi:

My name is Ruth and I am down here in Nashville from Ontario Canada. I am on a five month roller coaster tour of America, hoping to ride as many as I can! I would like to go to Six Flags over Georgia, as well as Paramount`s Carowinds in North Carolina and Ghost Town In The Sky in North Carolina. Can anyone help me by letting me know when they are open ie. February. Much appreciated!

P.S. If anyone is planning to go to Paramounts Wonderland in Maple, Ontario, Canada, The BAT is well worth the visit!!!

Please E-Mail me at Metcan@Nashville.Net

216. Special Events Station!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: cmlong@mtu.edu
Message-ID: <4egrsu$rmm@techsrv1.tech>
Source record: 23083
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,rec.radio.amateur.digital.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.antenna

Thank-you for reading this. My name is Michael Long (KB8WPE) and I am the Public Relations Manager for the Husky Amateur Radio Club (HARC) whose callsign is W8YY. The club is located on the Michigan Technological University campus.

Starting on February 1, 6am EST, and continuing on until February 3, 6am EST, W8YY will be running a Special Events station for Michigan Tech's Winter Carnival '96. The frequencies listed below are the most likely place we will be operating. For this Special Events station we have 8"x11" certificates that would look great on anyones' wall! All you have to do is contact us and then send a QSL with a self addressed stamped envelope to receive the certificate.

Here are the frequencies:

Band Frequency Mode Time
160m 1.90 MHz LSB 8pm-8am
75m 3.90 MHz LSB 10pm-8am
40m 7.25 MHz LSB 7pm-10pm
20m 14.250 MHz USB majority of the day (8am-7pm)
17m 18.150 MHz USB if open 8am-7pm
15m 21.350 MHz USB if open 8am-7pm
10m 28.40 MHz USB if open 8am-7pm
2m 144.2 MHz USB All the time
146.58 MHz FM All the time
70cm 432.100 MHz USB All the time

Again, thank-you for reading this message and all of us here hope to here from you during the Special Events station!

For any more info. email me at cmlong@mtu.edu or the Club President, Dave Gillahan, at dmgillah@mtu.edu

You can also check out our homepage at
http://techsrv1.tech.mtu.edu:8080/harc.html
Though it is just beginning it does have a little information on it.

Sincerely,
Mike Long -KB8WPE-

--
/\
\ Michael Long || Public Relations Manager /
/ Callsign: KB8WPE || for HARC (W8YY) \
\ Email: cmlong@mtu.edu || Email: harc-l@mtu.edu /

/ Phone: (906)487-5664 || Majors: EET and EMT \
\/

217. Question about frequencie from parabol to reciever. Ghz to ??? Mhz?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4eh1v8$8u8@ping1.ping.be>
Source record: 23084

Hello,

I have a question to you all the expers!

I have a satellite reciever, and I wana now witch frequencie must I have in Ghz on my screen to recieve the frequencie 1258 Mhz.

I want to recieve ATV with my normal satellite reciever but on my screen I can only see the frequenties in Ghz, like this 10.662 Mhz.

I want to schut off the parabol antenna and connect an 23cm ATV antenna, but I want to recieve the frequentie 1.258 Mhz.

My satellite reciever can recieve between 950 - 1750 Mhz.
Normaly it must work!

Can anybody help me on this ?

ALL INFORMATION IS WELKOM.

218. WANTED: METEOSAT transmitting frequencies!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4eh234$8u8@ping1.ping.be>
Source record: 23085

Can someone tell me the transmitting frequenties from the METEOSAT who
is loking over EUROPE.

All information is welkom!

Geert Pirens,ONL2057

219. * SpaceNews 29-Jan-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4ehcnq$h2o@pilot.njin.net>
Source record: 23086
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 29-Jan-96 *
Date: 28 Jan 1996 21:51:38 -0500
Organization: Rutgers University
Message-ID: <4ehcnq$h2o@pilot.njin.net>

SB NEWS @ AMSAT $SPC0129
* SpaceNews 29-Jan-96 *

BID: $SPC0129

=========
SpaceNews
=========

MONDAY JANUARY 29, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited free distribution.

* SAREX TO FLY ON STS-76 *
==========
The Shuttle Amateur Radio EXperiment, or SAREX will fly again on Shuttle Mission STS-76 set for launch March 21, 1996 at 0834 UTC (3:34 AM EST) from the Kennedy Space Center, Cape Canaveral, Florida. Landing is scheduled for March 30, 1995 at 1707 UTC (12:07 AM EST) at the Kennedy Space Center, Florida. STS-76 will be a 9 day mission.

Among those in the crew who hold amateur licenses are, Astronaut Richard A. Searfoss, KC5CKM, who will serve as the Shuttle's Pilot, Mission Specialist Linda M. Godwin, N5RAX, and Ronald M. Sega, KC5ETH. The remaining crew members include Commander Kevin P. Chilton, and Mission Specialists Shannon W. Lucid (who is expected to have his amateur license by that time) and Michael R. Clifford.

STS-76 will be Linda Godwin's third shuttle flight. She used ham radio aboard the shuttle Atlantis during STS-37 in April 1991, and from aboard Endeavour during STS-59 in April 1994. Searfoss last operated SAREX from the Space Shuttle Columbia during mission STS-58 in October/November 1993. This will be his second Shuttle flight. Ronald Sega used SAREX from Discovery during the first joint US/Russian shuttle mission, STS-60, in February 1994.

During the mission, the shuttle will rendezvous and dock with the Russian Space Station Mir. Later, the shuttle will return to Earth, leaving Shannon Lucid on Mir for a 5 month stay aboard the Russian complex.

The launch will place the shuttle into Earth orbit at an altitude of 196-245 statute miles (315-394 km) and an inclination of 51.6 degrees.

During SAREX missions, the astronauts will typically make Amateur Radio scheduled contacts with schools, personal contacts with family members and random contacts with the Amateur Radio operators.

Additional STS-76 mission information can be obtained from NASA:
* NASA Spacelink computer information system (look under Spacelink.Hot.Topics)
BBS: (205) 895-0028 [VT-100, 8-N-1]
Telnet, FTP, and Gopher: spacelink.msfc.nasa.gov
World Wide Web: http://spacelink.msfc.nasa.gov
Internet TCP/IP address: 192.149.89.61
* NASA Shuttle World Wide Web Home Page: http://shuttle.nasa.gov

The Shuttle Amateur Radio EXperiment (SAREX) is sponsored by the American Radio Relay League (ARRL), The Radio Amateur Satellite Corporation (AMSAT) and The National Aeronautics and Space Administration (NASA). SAREX is supported by the Federal Communications Commission (FCC).

[Info via The AMSAT News Service]

* MIR NEWS *
============
1996 will be a year filled with interesting activities on the Russian space station MIR. The crew currently on-board MIR (Main Expedition ME 20) will continue the Euromir-95 program and make a third space walk (EVA) on 08-Feb-96. This EVA, originally an EVA to be executed by Russians in the interest of ESA, will now be made in the framework of Euromir-95 and one of the 2 participants will be Thomas Reiter. This became possible due to the 44 day extension of the ME-20/Euromir-95 mission. During the EVA, the Cosmonauts will retrieve the ESEF (European Science Exposure Facility), which had been installed on the outer surface of the MIR-complex by Reiter and Avdeyev on 20-Oct-95. The crew of ME-20 will be relieved by the crew of ME-21, which will include Cosmonauts Onufriyenko and Usachov. They will start with the Soyuz-TM23 on 21-Feb-96 and link up with MIR on 23-Feb-96. The ME-20/Euromir-95 crew will return to Earth in the Soyuz-TM22 on 29-Feb-96.

Other events scheduled for MIR in 1996 will be three docking missions with Space Shuttle Atlantis. Docking will occur on STS missions:

STS-76 (23-Mar-96)
STS-79 (03-Aug-96)
STS-81 (05-Dec-96)

Soyuz-TM ships will bring relief crews to the MIR space station three times in 1996. Foreigners, including a French woman and German man will be involved in two of these missions. Soyuz-TM ships will return to Earth three times with relieved crews.

During 1996, four Progress-M supply ships will link up with MIR. The last big module, Priroda, will be launched to MIR in March 1996. This will be

the fifth and final module for the MIR orbital complex.

A few days after the docking of Priroda and its redocking from the axial to a radial port, the first Atlantis docking mission will begin. During this mission, Astronauts will make an EVA and work outside the huge complex. One of the American astronauts, Shannon Lucid, will be added to the MIR crew and return to Earth by Atlantis during the second docking mission in August.

The crew of MIR-ME-21 (launch 21-Feb-96) will perform five EVAs. The following crew (ME-22), scheduled for launch on 06-Jul-96, will make four EVAs. The most spectacular operation will be during the last Atlantis mission in 1996 (STS-86). In the period in which the Atlantis is docked to the MIR complex, the freighter Progress-M34 will undock and decay in the atmosphere. One day later, the Soyuz-TM 25 with a relief crew will dock to the complex. On the following day, Atlantis will undock and return to Earth.

[Info via Chris v.d. Berg, NL-9165/A-UK3202]

* SpaceNews NEWS *
==========
The SpaceNews World Wide Web "finger" site has received a favorable review and rating by the McKinley Group's Professional Editorial Team. The McKinley Group sponsors "Magellan", a comprehensive Internet directory of over 1.5 million sites and over 40,000 reviews. The SpaceNews "finger" Web site may be accessed on the World Wide Web at the following URL:

http://www.cs.indiana.edu/finger/pilot.njin.net/magliaco/w

A Magellan Web Search may be conducted from:

http://www.njin.net/~magliaco

Entering "SpaceNews" in the form at the bottom of the page will allow access to the McKinley Group's review, as well as the latest copy of SpaceNews.

* FEEDBACK/INPUT WELCOMED *
==========
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College

Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--
John A. Magliacane, KD2BD * /\/\ * Voice : 1-908-224-2948
Advanced Technology Center |/\/\/\| Packet : KD2BD @ KS4HR.NJ.USA.NA
Brookdale Community College |\/\/\/| Internet: magliaco@pilot.njin.net
Lincroft, NJ 07738 * \/\/ * Morse : -.- -.. ..--- -... -..

220. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-28 00:00:00 UTC
From: Henry Spencer <henry@zoo.toronto.edu>
Message-ID: <DLvsHs.E7A%spenford@zoo.toronto.edu>
Source record: 23087
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

In article <4e88ib$scm@nrcnet0.nrc.ca> jordan@tesla.iar.nrc.ca writes:
>What I need to know is if one can run TCP/IP using SLIP or PPP over
>such a link without problems ? Note: the MSAT satellite is geostationary
>and would present a 300 odd msec. propagation delay...

TCP/IP via geostationary comsat has been done quite extensively in the
past, and if you dig a bit in the literature, you should find quite a
bit of detail.

If (rather dim) memory serves, it works tolerably well but you need some
careful attention to tuning parameters -- such a link is very different
from the links most straight-out-of-the-box TCPs are tuned for. There
are some limits on what can be done; the long round-trip time badly hurts
high-level protocols that run in stop-and-wait lockstep, and there are
rather a lot of those.
--
The Earth is our mother. | Henry Spencer
Our nine months are up... | henry@zoo.toronto.edu

221. Re: WEATHER FAX software package

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: wk@muscle.niwa.cri.nz
Message-ID: <tsvilwj8rn.fsf@muscle.niwa.cri.nz>
Source record: 23088

JVFAX and a simple 741 comperator style interface is a good way to get your feet wet. I have been playing with JVFAX V4.1 (which has Herc support), an IC725 for RX, connected to a low dipole, routinely picking up WX pics from AXM in Melbourne (good service :-)

You might be better off listening to AXI in Darwin or ZKLF Auckland as Melbourne may be inside the skip zone... Most these stations transmit on multiple frequencies, you pick the one that gives the best signals.

The advantage of the 741 interface is that, if you get bored with WX fax, you can try out HAMCOM V3.0 and tune in to amateur and commercial RTTY, SITOR/AMTOR etc.

Coming back to the WX fax, (S)VGA is recommended, due to better resolution over Herc MGA. as JVFAX does the signal processing in software, tuning is not critical, it will keep tracking the signal even when moving the signal inside the passband. JVFAX 7.1 comes with circuits for a better, ADC based AM/FM FAX decoder.

Wilbert, ZL2BSJ.
--
Wilbert Knol, Acoustics Group, MAF Marine Research, Wellington, New Zealand.
Usenet:wk@FRC.NIWA.CRI.NZ PACKET:ZL2BSJ@ZL2WA.NZL.OC or @ AO16, LO19

222. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: Jleikhim@nettally.com
Message-ID: <4eh56o$evj@server.cntfl.com>
Source record: 23089
Cross-posted to: rec.radio.amateur.space,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,talk.politics.guns

towarth@ix.netcom.com(Todd Warth) wrote:

>>In <asi.95.00159409@escape.ca> asi@escape.ca writes:
>>
>>The only problem is, you really have to search your building every day
>>to make sure that no bugs are around. I would just leave the bugs in
>>the building >and fill them with dis-information.

>Would be useful if you knew precisely where in the building the little
>suckers are located. Unless you are working in Congress, most federal
>agencies, or the White House (first, and, in particular, the *second*
>floor), it's hard to fill the day with useless and distorted bullshit
>and keep your business afloat.

I thought Washington thrived on useless and distorted bullshit? No
wonder its shut down!

223. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: n3qwe@postoffice.ptd.net
Message-ID: <4ehkm0$hgp@ns2.ptd.net>
Source record: 23090

In article <Pine.SOL.3.91.960119124312.11732A-100000@qni.com>,
gwatts@qni.com says...

>
> Satellite operators frequently ask "what is the attitude of
Oscar-10",
> or "can I have ALON/ALAT values for my computer program." Here's
the
> analysis written by James Miller, G3RUH.
>
>
> ---
>
>[INLINE] References

Gary, do you know where to find this link?? or do you have the rest
of this file? I am interested in why we can't predict alon alat for
ao-10. It's a great bird when its working well...

73

--
Derek and Ann
ARS N3QWE, FN10lw, Union County, Pennsylvania
n3qwe@postoffice.ptd.net "email"
n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"

224. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199601291001.CAA26583@mail.ucsd.edu>
Source record: 23091

```
From smtp Wed Jan 24 09:00 PST 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 24 Jan 96 09:00 PST
Received: by mail.ucsd.edu; id EAA16262
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jan 1996 04:30:31 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA16256
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jan 1996 04:30:29 -0800 for ham-space-ddist
Errors-To: ham-space-relay@UCSD.EDU
Content-Length: 14987
Content-Type: text
Sender: ham-space-relay@UCSD.EDU
Precedence: List
Message-Id: <199601241230.EAA16256@mail.ucsd.edu>
Date: Wed, 24 Jan 96 04:30:29 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #15
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 24 Jan 96 Volume 96 : Issue 15

Today's Topics:
Ceck out nice Space Links
Hamtronics Weather Satellite Receiver
Kepler Elements Help Please
LATEST ORBITALS ELEMENTS from nice...
New Book about TESLA
Space Report January 20, 1996
WANTED: KANSAS CITY TRACKER, INFORMATION WANTED.
WANTED address for ordering a TRAKBOX is a antenna tracking box.
WEATHER FAX software package

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 23 Jan 1996 13:51:21 GMT
From: p@pgy.pp.fi (p. gylfe)
Subject: Ceck out nice Space Links

ckeck out the best space links on the net

http://www.mediaport.org/~phil/indexl.html

Date: 13 Jan 1996 05:35:09 GMT
From: Chuck Freeman <cfreeman@sound.net>
Subject: Hamtronics Weather Satellite Receiver

Has anyone out there tried the Hamtronics Weather Satellite Receiver. If so how well does it work and does it provide better pictures from the NOAA series of satellites comparied to a normal narrow band scanner. Your help would be appreciated.

73's Chuck WD0ASJ

Date: 23 Jan 1996 03:00:14 GMT
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Subject: Kepler Elements Help Please

I know that AMSAT (the Radio Amateur Satellite Corporation) has a web page with the keplerian elements available. I don't have the URL handy right now. Try finding it on Yahoo, and if you can't find it, e-mail me back (hamdan@ix.netcom.com), and I'll get it for you. There is also a way to subscribe to a mailing list for the elements. If you want that, I can dig that up for you as well.

73's de Bernie, KF0QS. Denver, Colorado.

Date: Tue, 23 Jan 1996 11:44:43 +0000
From: CECCHINATO Nicolas <cecchina@miage.unice.fr>
Subject: LATEST ORBITALS ELEMENTS from nice...

Space news :

Ham radio latest ortbitals elements on

http://miage.unice.fr/~cecchina

Date: 22 Jan 1996 13:46:36 GMT
From: aranders@kosepc01.delcoelect.com (Alan Anderson)
Subject: New Book about TESLA

In <96020.132601U60082@uicvm.uic.edu>, <U60082@uicvm.uic.edu> writes:

>We have translated the book: Tesla's Correspondence with Relatives in
>ENGLESH.

If this is indicative of the quality of the translation, I'll pass. :-)

Date: 23 Jan 96 14:25:24 GMT
From: Conrad.Weeseman@inter.NL.NET (Conrad.Weeseman)
Subject: Space Report January 20, 1996

JONATHAN'S SPACE REPORT - LATEST ISSUE

Jonathan's Space Report
No 273 1996 Jan 20 Cambridge, MA

-

Shuttle

Shuttle mission STS-72 has been completed with two satellite retrievals and two spacewalks. Endeavour completed its rendezvous with the Space Flyer Unit satellite on Jan 13. The SFU successfully retracted its solar panels, but failed to latch them, so the decision was made to jettison them. The first panel was ejected at 0935 UTC and the second at 0947 UTC. At 1057 UTC the RMS 303 robot arm was used to grapple SFU, and it was berthed in Endeavour's payload bay at 1139 UTC. SFU carried science and technology experiments for Japan's National Space Development Agency.

Endeavour then lowered its orbit to 302 x 311 km x 28.5 deg. The OAST-Flyer (Spartan 206) satellite was released using the RMS arm at 1132 UTC on Jan 14. OAST-Flyer carries an experiment to measure contamination caused by spacecraft outgassing, and a test of a laser-fired explosive separation device to make sure the device doesn't go off accidentally in sunlight. It also carried an amateur radio experiment.

Astronauts Leroy Chiao and Daniel Barry carried out a spacewalk on Jan 15. The airlock was depressurized at 0525 UTC, and NASA declared the EVA in progress at 0535 UTC. The hatch was opened at 0540 UTC. Chiao and Barry tested out Space Station equipment including a portable work platform and a rigid umbilical truss for carrying electrical cables and fluid lines. The astronauts returned to the airlock at 1130 UTC and closed the hatch 3 minutes later, returning their suits to orbiter power and repressurizing the airlock at 1144 UTC. NASA's official time for the walk was 6h 9m 19s, while I would give it an extra ten minutes (counting from depressurization rather than battery power).

On Jan 15-16 the Shuttle carried out a series of rendezvous burns to approach the OAST-Flyer Spartan, and on Jan 16 at 0947 UTC Wakata grappled the satellite with the RMS arm.

The second spacewalk to test out Space Station tools and equipment was performed by Chiao and Winston Scott. It started a little behind schedule, with depressurization at 0534 UTC on Jan 17, and hatch opening

at 0554. The spacewalk ended at 1234 UTC, for a duration of 7 hours 0 min (depress to repress) or 6h 53m 41s (on-battery-power to repress, the official NASA number). Scott tested out the thermal modifications to the spacesuit by standing in shadow on the Spartan Flight Support Structure while the Orbiter was turned to make the payload bay as cold as possible.

Endeavour closed its payload bay doors early on Jan 20, firing its braking rockets at 0641 UTC and reentered to a nighttime landing on runway 15 at Kennedy Space Center at 0742 UTC on Jan 20.
The next Shuttle mission is STS-75, with orbiter Columbia and the reflight of the 20 km long tethered satellite, which failed on its first flight in 1992.

Errata

I was wrong! Fred Cerkan informs me that STS-72 was not the first flight with no TAL requirement - STS-1, the very first mission, had no TAL requirement or TAL capability.

IRS-1C's panchromatic camera has a resolution of under 6 m, not 10m as I said earlier. Thanks to several readers for the correction.

Request for Info

Know anyone who worked for ABL in the 1960s? I'm trying to find information on the MG-18 rocket, a version of the X-258 Altair II used as an upper stage on Scout and Thor. Any info welcome.

Recent Launches

Ariane V82 was launched on Jan 12 from Kourou. It was an Ariane 44L model with the H-10-III upper stage. V82 carried two communications satellites, PAS 3R and Measat 1. PAS 3R is a Hughes HS-601 comsat with a launch mass of 2918 kg, to provide C and Ku band communications and television broadcasting services for the Atlantic Ocean region. It is due to be stationed at 43 deg W, and carries 16 C-band and 16 Ku-band transponders. PAS 3R replaces PAS 3, lost in a launch accident in 1994. MEASAT 1 (Malaysia/East Asia Satellite) is another Hughes satellite, this time the older HS-376 spin-stabilized model. Measat 1 is owned by Binariang Sdn. Bhd., the Malaysian telecommunications agency, and will provide C and Ku-band telecommunications services over Malaysia and the rest of SE Asia.

Delta 231 was launched on Jan 14 from Cape Canaveral Air Station and successfully rocketed to geostationary transfer orbit of 1357 x 35418 km x 21.0 deg. Payload of Delta 231 was Koreasat 2, a Lockheed Martin Astro Space AS3000 class comsat. Koreasat 1, launched last year, used up half its stationkeeping fuel reaching geostationary orbit after a launch malfunction left it in a lower than normal transfer orbit. The Koreasat

(Mugunghwa) satellites are owned by Korea Telecom. The McDonnell Douglas launch vehicle was a 7925 model.

Kosmos-2327 was launched on Jan 16 from Plesetsk into a 947 x 1020 km x 83.0 deg orbit, characteristic of a navigation satellite in the Parus series. It is in the same plane as the Parus satellite launched in Nov 1993 and named Kosmos-2266. The ground track is consistent with an ontime launch at 1534 UTC. Launch vehicle was a Kosmos-3M from the Polyot organization.

It has now been confirmed that the capsule found in Ghana last year is the reentry vehicle from the German Express microgravity satellite which failed to reach its planned orbit in Jan 1995. Negotiations are underway for its return to Germany.

Table of Recent Launches

Date UT Name Launch Vehicle Site Mission INTL.
DES.

Dec 2 0808 SOHO Atlas IIAS Canaveral LC36B Astronomy 65A
Dec 5 2118 USA 116 Titan 4 Vandenberg SLC4E Recon 66A
Dec 6 2323 Telecom 2C) Ariane 44L Kourou ELA2 Comsat 67A
Insat 2C) Comsat 67B
Dec 14 0610 Kosmos-2323) Navsat 68A
Kosmos-2324) Proton-K/DM2 Baykonur LC200L Navsat 68B
Kosmos-2325) Navsat 68C
Dec 15 0023 Galaxy IIIR Atlas IIA Canaveral LC36A Comsat 69A
Dec 18 1431 Progress M-30 Soyuz-U Baykonur LC1 Cargo ship 70A
Dec 20 0052 Kosmos-2326 Tsiklon-2 Baykonur LC90 Eorsat/Sci 71A
Dec 28 0645 IRS-1C) Molniya-M Baykonur LC31 Rem.sensing 72A
Skipper) Military 72B
Dec 28 1150 Echostar 1 Chang Zheng 2E Xichang Comsat 73A
Dec 30 1348 XTE Delta 7920 Canaveral LC17A Astronomy 74A
Jan 11 0941 Endeavour Shuttle Kennedy LC39 Spaceship 01A
Jan 12 2310 Panamsat 3R) Ariane 44L Kourou ELA2 Comsat 02A
Measat 1) Comsat 02B
Jan 14 1111 Koreasat 2 Delta 7925 Canaveral LC17B Comsat 03A
Jan 14 1132 OAST-Flyer OV105, LEO Science 01B
Jan 16 1534? Kosmos-2327 Kosmos-3M Plesetsk Navsat 04A

Payloads no longer in orbit

Dec 7 Galileo Probe Entered Jovian atmosphere
Dec 11 Kosmos-398 Reentered over Pacific
Dec 18 Kosmos-2305 Deorbited
Jan 20 Endeavour Landed at KSC

Current Shuttle Processing Status

Orbiters Location Mission Launch Due

OV-102 Columbia OPF Bay 2 STS-75 Feb 22
OV-103 Discovery Palmdale OMDP
OV-104 Atlantis OPF Bay 1 STS-76 Mar 21
OV-105 Endeavour KSC RW15 STS-72

ML/SRB/ET/OV stacks

ML1/
ML2/
ML3/RSRM-53 VAB Bay 1 STS-75

.---.
Jonathan McDowell	phone : (617) 495-7176
Harvard-Smithsonian Center for	
Astrophysics	
60 Garden St, MS6	
Cambridge MA 02138	inter : jcm@urania.harvard.edu
USA	jmcdowell@cfa.harvard.edu
JSR: http://hea-www.harvard.edu/QEDT/jcm/space/jsr/jsr.html
ftp://sao-ftp.harvard.edu/pub/jcm/space/news/news.*
'---'

Date: 22 Jan 1996 18:29:35 -0500
From: bmm1@freenet3.scri.fsu.edu (Bruce M. Marshall)
Subject: WANTED: KANSAS CITY TRACKER, INFORMATION WANTED.

L.L.Grace
POB 1345
Voorhees NJ
08043
--
Bruce M. Marshall bmm1@freenet.fsu.edu voice 423 481 0990 fax 423 481 8039

Date: Tue, 23 Jan 96 00:10:37 PST
From: Jack Davis <jedavis@deltanet.com>
Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.

In Article<4dvsee$arg@ping1.ping.be>, <Geert.Pirens@ping.be> write:
> Path: news.deltanet.com!uunet!in1.uu.net!newsfeed.internetmci.com!EU.net!Belgium.EU.net!
ping.be!news
> From: Geert.Pirens@ping.be (Geert Pirens)
> Newsgroups: rec.radio.amateur.space
> Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.
> Date: Mon, 22 Jan 1996 11:29:55 GMT
> Organization: PING Belgium
> Lines: 13
> Message-ID: <4dvsee$arg@ping1.ping.be>
> NNTP-Posting-Host: dialup05.hasselt.eunet.be
> X-Newsreader: Forte Free Agent 1.0.82

>
> Hello
>
> can someone give me the address for to order an TRAKBOX ?
>
> All information is welkom!
>
> Addresses of USA or EUROPE are all welkom!
>
> Thanks in advance.
>
> Geert Pirens, ONL2057
>
>
I can provide the TrakBox kit at this time. I have 3
that are not sold or spoken for. Contact me at:

jedavis@deltanet.com

for additional info.

Jack Davis

Date: 22 Jan 1996 20:19:21 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: WEATHER FAX software package

In article <4dmmu9$g0l@sleipnir.iaccess.com.au>, kelaero@iaccess.com.au (Shiraz
Iskenderian) says:
>
>I would greatly appreciate any information on a software package called
>WEATHER FAX that processes acquired weather data to produce weather maps.
>
>Thanks,
>
>Shiraz Iskenderian
>shiraz@kel.com.au
>Melbourne, Australia
Try JVFAX 7.0 (or 7.1 not much difference, but I think the docs woth 7.0
are better). With a simple uA741 circuit, you can receive hf fax on
SW. I am unfamiliar wiht what fax stations you have "down under".
I routinly receive NAM 8080 on a real bad antenna. You will also need
a fairly stable radio. I have a Kenwood R2000 that works great. I have
an older Panasonic RF2200 that is totally unsuited to any data reception.
You can "grab" JVFAX at the AMSAT web site.
If you are wanting to get wx sat photos JVFAX will also work for that.
I would recomend that you get Dr. Ralph Tagerts Latest WX sat handbook.
I do not know how things work in Australia, but assume that if it came
to the worst case, you could order it from the ARRL. JVFAX supports
a real simple voc that goes between you VHF receiver and the uA741 hf

fax demod. This is a cheap, fun way to get into wx sat fax. A "real"
wx demodulator will work circles around this cheap methode.
Good luck and happy faxing.

End of Ham-Space Digest V96 #15
****

225. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199601290956.BAA26155@mail.ucsd.edu>
Source record: 23092

```
From smtp Tue Jan 23 09:54 PST 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 23 Jan 96 09:54 PST
Received: by mail.ucsd.edu; id EAA04245
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:39 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA04239
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Jan 1996 04:30:38 -0800 for ham-space-ddist
Errors-To: ham-space-relay@ucsd.edu
Content-Length: 7263
Content-Type: text
Sender: ham-space-relay@ucsd.edu
Precedence: List
Message-Id: <199601231230.EAA04239@mail.ucsd.edu>
Date: Tue, 23 Jan 96 04:30:36 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #14
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 23 Jan 96 Volume 96 : Issue 14

Today's Topics:
(none) (2 msgs)
African Stations via RS-12/13, etc.
ARLS001 Ham radio power supply aboard Mir fails (fwd)
help with SAREX
sts-72 deorbit
test, please ignor
uplink and downlink freqs. for MIR
WANTED address for ordering a TRAKBOX is a antenna tracking box.

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 22 Jan 96 12:36:14 GMT
From: vrsheb%ebmv12.dnet@gpo.nsc.COM
Subject: (none)

help

Date: 22 Jan 96 12:39:52 GMT
From: vstueb%ebvx04.dnet@gpo.nsc.COM (SUJIT U.)
Subject: (none)

help

Date: 17 Jan 1996 13:57:55 GMT
From: kebsch@pdb.sni.de (Waldemar Kebsch)
Subject: African Stations via RS-12/13, etc.

Hi,

I am looking for African Stations who like to have a sked with me
via the satellite RS-12/13 (maybe RS-10/11 and/or RS-15 if you like?).

If you don't have any experience with RS-12/13 then I would be happy
to give you all instructions you need. All what you need to work via
the satellite RS-12/13 is your normal HF equipment. No special radio
or antennas or training necessary!

BTW: If you are not from Africa and would like to have a sked with me,
don't worry and feel free to drop me an e-mail!

Vy 73 de Waldemar, DK3VN
--
E-Mail: kebsch.pad@sni.de Packet Radio DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [7f]

Date: 22 Jan 96 14:02:17 GMT
From: Conrad.Weeseman@inter.NL.NET (Conrad.Weeseman)
Subject: ARLS001 Ham radio power supply aboard Mir fails (fwd)

---------- Forwarded message ----------
Date: Fri, 19 Jan 1996 16:34:03 EST
From: w1aw@arrl.org
To: QST@arrl.org
Subject: ARLS001 Ham radio power supply aboard Mir fails

SB SPACE @ ARL $ARLS001
ARLS001 Ham radio power supply aboard Mir fails

ZCZC AS09
QST de W1AW
Space Bulletin 001 ARLS001

>From ARRL Headquarters
Newington, CT January 19, 1996
To all radio amateurs

SB SPACE ARL ARLS001
ARLS001 Ham radio power supply aboard Mir fails

German cosmonaut Thomas Reiter, DF4TR/DP0MIR, aboard the Mir orbital complex, reports that a power supply used for some of the spacecraft's ham radio equipment failed on New Year's Eve. The remaining, older power supply is only capable of powering the old Icom 2-meter transceiver and one 1200-baud TNC. The digital voice module also has failed, so there will be no more automatic voice recordings in the near future.

Reiter reports all four fuses in the two connected transceivers have blown and only two spare fuses remain. Last month, Reiter used the digital voice recorder, built by Thomas Kieselbach, DL2MDE, to broadcast holiday messages. The primary transmitting frequency is 145.800 MHz.

Recently, the cosmonauts on Mir unpacked new Amateur Radio equipment delivered by rocket, including a 70-cm FM transceiver and 9600-baud packet gear.

Reiter was philosophical. ''Well, at least we can be reached and still can talk with the world,'' he said in a message to Dave Larsen, N6JLH.
NNNN
/EX

Date: Sun, 21 Jan 1996 20:51:57 -0600
From: XE2MXU/N5UHB <fjorozco@academ07.mty.itesm.mx>
Subject: help with SAREX

Hello all, we would like to get one of the local schools into the SAREX program, and I would like to hear from other hams who have helped out in SAREX school contacts.

Also, I've been asked to speak to a group of high school kids about SAREX, and I would like to hear suggestions from sarex 'veterans' as to what I can focus on so kids who've seldom had any contact with amateur radio can become excited about ham radio, and particularly SAREX. This talk would be either at the end of this week or during the next one.

Thanks in advance!

Luis XE2MXU/N5UHB

"Failure is NOT an option!"
-- G. Kranz

Date: 20 Jan 1996 11:43:01 -0700
From: bkline@primenet.com (bob kline)
Subject: sts-72 deorbit

The deorbit plume was visiable in Phoenix from Horizon to Horizon. A bright red glow followed by an Ion trail.

Keep up those night landings NASA.

Bob Kline

bkline@primenet.com

Date: 22 Jan 1996 04:54:20 GMT
From: Tom Kreyche <tkreyche@well.com>
Subject: test, please ignor

ignore, please

Date: 9 Jan 1996 23:31:16 GMT
From: Jim Devenport <jdevenport@lanl.gov>
Subject: uplink and downlink freqs. for MIR

The MIR space station is much easier to contact via radio than ANY of the USA Shuttle missions but it isn't overly easy either. I don't even bother to use satellite tracking programs for MIR any more, I just put 145.55 simplex into my 2 meter mobile and remote base memories and add it to the scanning lists. Several times a day I'll hear the packet buzzing away and with simple packet equipment I've contacted the MIR system several times but rarely have gotten more than the successful connect or a busy (DM) signal from the MIR TNC. A "busy" signal is actually, to me, a successful 2-way packet contact especially if you compare it to the usual USA SAREX policy of hoping to someday see your callsign in a published "stations heard" list. If you get a busy signal from MIR (very likely) it proves MIR has successfully heard you and you have successfully heard MIR. Full callsign exchanges and all: a legit 2-way contact. But confirming it may be a problem. Voice operation seems to be getting rarer and rarer from MIR but the cosmonauts still pop up on voice unexpectedly from time to time. I have called them repeatedly with high and low power without success but there are at least several local stations in Northern New Mexico who have successfully QSO'ed with MIR using 10 watts or less into omnidirectional outside antennas.
--

|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
My views rarely (if ever) reflect those of my employers

Date: Mon, 22 Jan 1996 11:29:55 GMT
From: Geert.Pirens@ping.be (Geert Pirens)
Subject: WANTED address for ordering a TRAKBOX is a antenna tracking box.

Hello

can someone give me the address for to order an TRAKBOX ?

All information is welkom!

Addresses of USA or EUROPE are all welkom!

Thanks in advance.

Geert Pirens, ONL2057

End of Ham-Space Digest V96 #14
****

226. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960129092211.1957A-100000@qni.com>
Source record: 23093

Check out

http://www.amsat.org

That is where the following onformation came from.
I thought I had included the link in the message but my
brain must had been dribbling bits :->

On Mon, 29 Jan 1996, Derek and Annie wrote:

> In article <Pine.SOL.3.91.960119124312.11732A-100000@qni.com>,
> gwatts@qni.com says...
>
> >
> > Satellite operators frequently ask "what is the attitude of
> Oscar-10",
> > or "can I have ALON/ALAT values for my computer program." Here's
> the
> > analysis written by James Miller, G3RUH.
> >
> >
> > ____
> >
> >[INLINE] References
>
> Gary, do you know where to find this link?? or do you have the rest
> of this file? I am interested in why we can't predict alon alat for
> ao-10. It's a great bird when its working well...
>
> 73
>
> --
> Derek and Ann
> ARS N3QWE, FN10lw, Union County, Pennsylvania
> n3qwe@postoffice.ptd.net "email"
> n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"
>
>

227. Re: Band width

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jan29.165816.14031@ke4zv.atl.ga.us>
Source record: 23094

In article <4ebf5sINN6i3@oasys.dt.navy.mil> beckley@oasys.dt.navy.mil (James Beckley) writes:
>Ok,
> I know all you brainiacs out there will laugh at this question,
>but...What exactly is bandwidth? I read about it all the time in relation
>to communications, but how does it affect the transmission of data?
>I always hear, "Need more bandwidth!" Is this the equivalent of "Need
>a bigger hammer!"? The more complicated the answer the better.

Any modulated signal is a product of the carrier and the modulating waveform (the information or intelligence the signal carries). A plain carrier has a line spectrum, IE it only has energy at one frequency (ideally), but a modulated carrier has a spectrum that is spread around the carrier line spectrum, and it consists of all the products of the carrier and the modulating wave. The finite chunk of spectrum occupied is called the bandwidth of the signal. The more intelligence the modulating waveform contains, the more complex this waveform must be, and the more bandwidth the signal will require.

This is a highly simplified explanation because I don't feel like typing in all the equations using an ASCII editor that won't do them justice. Shannon's information theorem is involved, and the equations describing the various forms of modulation are involved. Consult a good textbook for all that.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | emory!kd4nc!ke4zv!gary
534 Shannon Way | Guaranteed! | gary@ke4zv.atl.ga.us
Lawrenceville, GA 30244 | |

228. Re: PC Track, Where?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960129104710.2325I-100000@qni.com>
Source record: 23095

Paul,
You should check out
http://www.shareware.com
Here is the search results
I hope it is what you are looking for

=20
files retrieved by your search

To choose one of the files below simply click on the highlighted
filename. After choosing a file you will be given a list of the most
reliable places to download the file from.
=20
=20
=20
=20
Files found in garbo-pc archive as of Jan 24,1996:
=20
pctrk31.zip
file size: 656 K (671658 bytes)
file date: May 01,1995
path: ham/
=20
=20
PC-Track 3D Satellite Orbit Visualization Package, T.Johnson
=20
search summary

retrieved: 1 files=20
maximum output: 100 files=20
search time: 15.18 seconds=20

HINTS
=20
If this search did not retrieve the files you want then you may want
to try a new search or or modify your original search below:

=20
=20

Click here to speed test your modem.=20
=20
Menus=20
=20
=20
how to download pctrk31.zip=20

=20
VSL RESULTS=20
=20
To download pctrk31.zip from the garbo-pc archive, or one of its
mirror sites, click on any of the highlighted filenames below. See
below for estimated download times.
=20
RATING GUIDE
=20
Use our "star" reliability rating guide to choose the most reliable
site to download from.
***** =3D 80-100% (most reliable)
**** =3D 60-80%
*** =3D 40-60%
** =3D 20-40%
* =3D 0-20% (least reliable)

Try these sites first
=20
USA

* pctrk31.zip [656 K] from wuarchive.wustl.edu
* pctrk31.zip [656 K] from ftp.cdrom.com

Other sites to try
=20
If you have had no luck downloading from one of the sites above, try
one of these listed below. For quickest downloading choose a site from
a country near your own.
=20
=20

=20
=20
Australia

* pctrk31.zip [656 K] from archie.au

=20
=20
Finland

* pctrk31.zip [656 K] from garbo.uwasa.fi

=20
=20
Italy

* pctrk31.zip [656 K] from cnuce_arch.cnr.it
* pctrk31.zip [656 K] from cnuce-arch.cnr.it

=20
=20

Network

* pctrk31.zip [656 K] from ftp.germany.eu.net

=20
=20
South Africa

* pctrk31.zip [656 K] from ftp.mpd.co.za
* pctrk31.zip [656 K] from Owl.und.ac.za

=20
=20
Taiwan

* pctrk31.zip [656 K] from NCTUCCCA.edu.tw

=20
=20
USA

* pctrk31.zip [656 K] from wuarchive.wustl.edu
* pctrk31.zip [656 K] from ftp.cdrom.com

ESTIMATED DOWNLOAD TIME=20

Your access speed Estimated download time (in minutes)

9.6K modem 12:59
14.4K modem 8:43
28.8K modem 4:26
56K ISDN 2:21

1 Kbyte/sec 11:05
2 Kbyte/sec 5:37
5 Kbyte/sec 2:21
10 Kbyte/sec 1:15

=20
=20
=20
=20
HINTS
=20
Reliability Ratings
=20
The reliability ratings are based on our test program's success rate
at trying to connect to the given sites. A low reliability rating
could be due to a busy site, a network error, or invalid directory
information.
=20
Keep trying
=20
Almost all files returned by VSL searches (except those without file

size or file date information) should be available for downloading
from one of the archive mirror sites. VSL cannot guarantee their
availability, however. So keep trying to download from these sites
above until you succeed.
=20
Return to the list of sites to download from.
=20
=20
=20
copyright =A9 1996 c|net inc.
all rights reserved

On 26 Jan 1996, Paul "Jimbo" Duncan GW7KES wrote:

> Hi,
>=20
> A couple of years ago I remember seeing a very friendly satellite trackin=
g=20
> program for DOS called PC-Track. I know it has been distributed on CD-ROM=
in
> the past, but don't know which one.
>=20
> Does anyone know if it is available on the net, and if so where? And if i=
t's
> not available does anyone have any recomendations on what to use instead?
>=20
> Its for tracking Mir, just in case you're interested.
>=20
> Thanks for any help,
>=20
> Paul
> ~~~~
>=20
>=20
>=20

229. Re: Band width

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: aranders@kosepc01.delcoelect.com
Message-ID: <4eiv90$eio@kocrsv08.delcoelect.com>
Source record: 23096

In <4ebf5sINN6i3@oasys.dt.navy.mil>,
beckley@oasys.dt.navy.mil (James Beckley) writes:

>...What exactly is bandwidth?

Literally, bandwidth is the amount of electromagnetic spectrum occupied by a signal. It is directly related to the rate of information being carried by that signal. An unmodulated signal carries no information, and occupies (theoretically) zero bandwidth. A frequency-shift modulation signal with 1000 bits per second of data occupies (theoretically) 1000 Hz of bandwidth. NTSC broadcast TV signals are 6 MHz "wide".

"More bandwidth" means faster information transfer. Each bit still takes the same amount of time to get from "here" to "there", but you can fit more bits in, either simultaneously or closer together. It's like a wider road; each car still travels at (theoretically) 60 MPH, but more cars can go by each second.

= === === === = = = === === === === = = === = = = === = = === =
Alan Anderson # Ignorance can be fixed, but stupidity is permanent.
(I do not speak for Delco Electronics, and DE does not speak for me.)

230. Re: WANTED: METEOSAT transmitting frequencies!

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: eareckso@netcom.com
Message-ID: <earecksoDLyuzu.787@netcom.com>
Source record: 23097

Geert Pirens (Geert.Pirens@ping.be) wrote:

: Can someone tell me the transmitting frequenties from the METEOSAT who
: is loking over EUROPE.

: All information is welkom!

: Geert Pirens,ONL2057

1691 & 1694mhz.

231. Re: Question about frequencie from parabol to reciever. Ghz to ??? Mhz?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: n7ryw@teleport.com
Message-ID: <4ejpud$g2o@maureen.teleport.com>
Source record: 23098

In article <4eh1v8$8u8@ping1.ping.be>, Geert.Pirens@ping.be said...

>I want to schut off the parabol antenna and connect an 23cm ATV
>antenna, but I want to recieve the frequentie 1.258 Mhz.
>
>My satellite reciever can recieve between 950 - 1750 Mhz.
>Normaly it must work!

Not really. Although the frequencies seem the same, the modulation is completely different. The TV satellites use FM, with a bandwidth of 36 mHz. ATV uses VSB, with a bandwidth of about 6 mHz. The two systems are, therefore, incompatible unless the ATV users are trying out FM, which is not popular due to the bandwidth.

You are far better off getting a separate system for your ATV.

--
From Bill, n7ryw@teleport.com
Amsat NA Life Member #2109

232. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: hdsteven@sun-valley.Stanford.EDU
Message-ID: <4eisub$8g0@nntp.Stanford.EDU>
Source record: 23099
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

In article <4e88ib$scm@nrcnet0.nrc.ca>, jordan@tesla.iar.nrc.ca (Jim Jordan) writes:
|> Greetings,
|>
|> We are considering the purchase of an aeronautical mobile satellite
|> phone terminal for use with AMSC/MSAT. This terminal provides an RS-232C
|> data port operating at 4800 bps and the literature claims it can be used
|> with any data communications software.
|>
|> What I need to know is if one can run TCP/IP using SLIP or PPP over
|> such a link without problems ? Note: the MSAT satellite is geostationary
|> and would present a 300 odd msec. propagation delay It is connected
|> to the terrestial phone system through a gateway.
|>

As I understand it, this is not a problem. The internet can have a variety
delays as the information progresses from one node to another. The only
concern I have is dropouts. If the phone were to drop out, the SLIP connection
is lost and you have to go through the initialization process again.

-- H.D.

H.D. Stevens
Stanford University
Aerospace Robotics Laboratory
hdsteven@sun-valley.stanford.edu
---

233. Re: Parks open in February

Newsgroup: rec.radio.amateur.space
Date: 1996-01-29 00:00:00 UTC
From: pklein@news.seattleu.edu
Message-ID: <4ejtsm$rgd@handel.seattleu.edu>
Source record: 23100
Cross-posted to: rec.radio.amateur.space,rec.roller-coaster

In article <4egk06$mfk@adam.telalink.net>, Metcan <metcan@telalink.net> wrote:

>My name is Ruth and I am down here in Nashville from Ontario Canada. I
>am on a five month roller coaster tour of America, hoping to ride as many
>as I can! I would like to go to Six Flags over Georgia, as well as
[list deleted]

Hmmm. Maybe she could gather data for SEDSAT?

--
Peter A. Klein (pklein@seattleu.edu) : -------==3== --- ---
Information Services, 5569 : | | | | | | | |
Seattle University : @| @| @| @| @| @| @| @|

234. Re: Mir 9600 Packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4ejr32$ni0@over.mhv.net>
Source record: 23101

In article <4eadrn$ea@kwuz.nerc-keyworth.ac.uk>,
Paul \"Jimbo\" Duncan GW7KES <pdu> wrote:
>Someone said that there was 9600 baud packet equipment operating on 70cms
>aboard
>the Mir space station, they also said it was down at the mo, due to a
failed
>power supply. Does anyone know when a new power supply will be sent up?
>
>Also, do they give QSL cards out for Mir? If so, where do I send the
card, and
>how many dollars is the going rate?
>
>Thanks,
>
>Paul
>~~~~
>

I don't know when the 70cm packet station will be up and running. In
the U.S. for a card send your card and info to:

N6JLH
Dave Larsen
P.O.Box 1501
Pine Grove, Ca
95665

There's a list of other QSL addresses but I don't have it on me.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

235. Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4ek07i$qpi@news.mcn.net>
Source record: 23102
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Amsat is debating having a yearly contest on the satellites, something besides Field Day.

Should there be one?

73 de KB7ADL

236. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: Hank Blackstock <wa5jrh@ionet.net>
Message-ID: <4ekvvs$koe@ionews.ionet.net>
Source record: 23103
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

My vote would be NO! I can not stand contests except for Field
Day, which serves a greater purpose than just feeding egos.

73 Hank

237. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: sco@mindspring.com
Message-ID: <sco.596.0026E1A7@mindspring.com>
Source record: 23104
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4ek07i$qpi@news.mcn.net> vfiscus@mcn.net (Vince Fiscus, KB7ADL) writes:
>From: vfiscus@mcn.net (Vince Fiscus, KB7ADL)
>Subject: Amsat Satelllite Contest, Should we have one?
>Date: Tue, 30 Jan 96 02:36:08 GMT

>Amsat is debating having a yearly contest on the satellites, something besides
>Field Day.

>Should there be one?

>73 de KB7ADL

I would say YES. At least one every quarter. For us beginners (no code TECHS)
it would be a great way to work some DX and other countries. The bands would
be full with contesters looking to make a CQ.

KE4IKT

238. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: little@pecan.enet.dec.com
Message-ID: <4elb3a$1e9@usenet.pa.dec.com>
Source record: 23105
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4ek07i$qpi@news.mcn.net>
vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:

>
> Amsat is debating having a yearly contest on the satellites, something besides
> Field Day.

Absolutely not. Basically the person with the strongest uplink
wins at the expense of everyone else. Although the transponders
may be 100-200 kHz wide, they have a fixed power budget and
operate in a linear fashion. As a result several strong signals
would dominate the transponder and push everyone else's signals
into the mud. Aren't there enough contests already?

73,
Todd
N9MWB

239. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960130110541.1753L-100000@qni.com>
Source record: 23106
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

I also say NO to contest on any of the birds

Todd,
You are right about the downlink power budget
I have heard may stations on ao-13 who were several DB LOUDER than the beacon
I have also seen the effects of a strong signal on other weaker signals..
Last year I and others tried to work a station who we could just barely hear
I listened to others who attempted to work that staion with little
luck. That station could not hear them . Their signals on the downlink
side were 4-4 and right up there with
the beacon. that station could not hear then. I doubt if he could even
copy his own dowlink signal
Another station came up I'll bet he was at leat 8 - 12 db stronger
than the beacon since he was about 3 s-units more than the beacon was

He made his contact and then that was all he could do was brag to
the other station about how good he was :->
needles to say I then let him know about his bad operating practice !

What can we do about that ??

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 30 Jan 1996, Todd Little wrote:

> In article <4ek07i$qpi@news.mcn.net>
> vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:
>
> >
> > Amsat is debating having a yearly contest on the satellites, something besides
> > Field Day.
>
> Absolutely not. Basically the person with the strongest uplink
> wins at the expense of everyone else. Although the transponders
> may be 100-200 kHz wide, they have a fixed power budget and
> operate in a linear fashion. As a result several strong signals
> would dominate the transponder and push everyone else's signals
> into the mud. Aren't there enough contests already?
>
> 73,
> Todd
> N9MWB
>

>
>

240. DSP-12 software development

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: bmm1@freenet3.scri.fsu.edu
Message-ID: <4elpme$75l@freenet3.scri.fsu.edu>
Source record: 23107
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space

I am looking for anyone who may have done any development of software
for the L.L.Grace DSP-12 data controller.

Thanks,
Bruce
N4USH
--
Bruce M. Marshall bmm1@freenet.fsu.edu voice 423 481 0990 fax 423 481 8039

241. ARLK005 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk005.1996@arrl.org>
Source record: 23108
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK005
ARLK005 Keplerian data

ZCZC SK05
QST de W1AW
Keplerian Bulletin 5 ARLK005
From ARRL Headquarters
Newington, CT January 30, 1996
To all radio amateurs

SB KEP ARL ARLK005
ARLK005 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96029.56249214 .00002632 00000-0 41380-4 0 3967
2 16609 51.6466 103.6067 0005265 272.3864 87.6524 15.57769481568245
HST
1 20580U 90037B 96029.15427929 .00031923 00000-0 31279-2 0 7674
2 20580 28.4696 38.6494 0005949 144.3893 215.7034 14.91032984117669
AO-10
1 14129U 83058B 96025.67771955 -.00000231 00000-0 10000-3 0 04008
2 14129 26.3997 227.1522 5982348 345.5889 2.9498 2.05882518066910
RS-10/11
1 18129U 87054A 96029.57785025 .00000038 00000-0 25529-4 0 1686
2 18129 82.9248 251.7218 0010980 175.3853 184.7408 13.72361764431024
UO-11
1 14781U 84021B 96025.99865048 .00000131 00000-0 29954-4 0 08624
2 14781 97.7895 23.1779 0011524 183.3259 176.7867 14.69421567636621
RS-12/13
1 21089U 91007A 96026.09965093 .00000020 00000-0 50962-5 0 08753
2 21089 82.9224 295.4557 0027596 273.0155 86.7830 13.74064775249380
AO-13
1 19216U 88051B 96024.25856841 -.00000268 00000-0 -10079-5 0 01409
2 19216 57.3647 139.2719 7372551 29.6701 356.6943 2.09728902026799
UO-14
1 20437U 90005B 96029.24157176 .00000007 00000-0 19577-4 0 1575
2 20437 98.5553 114.8348 0010208 256.2807 103.7240 14.29910672314054
```

```
RS-15
1 23439U 94085A 96026.12399166 -.00000039 00000-0 10000-3 0 01288
2 23439 64.8210 254.4477 0164468 224.0333 134.7396 11.27523785044656
AO-16
1 20439U 90005D 96026.19593838 .00000006 00000-0 19275-4 0 09737
2 20439 98.5684 113.8317 0010539 265.8550 94.1446 14.29964869313635
DO-17
1 20440U 90005E 96026.23234165 -.00000030 00000-0 53484-5 0 9558
2 20440 98.5701 114.4320 0010639 264.7539 95.2430 14.30105959313661
WO-18
1 20441U 90005F 96026.14920873 -.00000008 00000-0 13850-4 0 09688
2 20441 98.5685 114.3007 0011299 265.4830 94.5070 14.30076514313654
LO-19
1 20442U 90005G 96026.22574268 .00000025 00000-0 26501-4 0 9552
2 20442 98.5711 114.8132 0011456 265.4862 94.5001 14.30183081313684
FO-20
1 20480U 90013C 96029.12388275 -.00000027 00000-0 40069-5 0 8521
2 20480 99.0474 80.5035 0541331 81.8759 284.3347 12.83232256279929
AO-21
1 21087U 91006A 96026.11969854 .00000093 00000-0 82657-4 0 06845
2 21087 82.9400 67.6026 0033799 245.4489 114.3142 13.74564368250355
UO-22
1 21575U 91050B 96026.10243744 .00000016 00000-0 19857-4 0 06643
2 21575 98.3712 96.6254 0008328 341.4107 18.6773 14.37009392237513
KO-23
1 22077U 92052B 96025.72444921 -.00000037 00000-0 10000-3 0 05576
2 22077 66.0792 129.8324 0006479 337.2425 22.8298 12.86295611162350
KO-25
1 22828U 93061F 96026.19897607 .00000020 00000-0 25403-4 0 4266
2 22828 98.5921 104.4312 0009883 281.8973 78.1087 14.28127945 89707
IO-26
1 22826U 93061D 96029.19755092 -.00000042 00000-0 70600-6 0 4488
2 22826 98.5968 107.3327 0008912 289.2874 70.7341 14.27793353122023
AO-27
1 22825U 93061C 96026.17705269 -.00000000 00000-0 17514-4 0 04536
2 22825 98.5981 104.2258 0008031 293.8365 66.1989 14.27685399121581
PO-28
1 22829U 93061G 96026.14360402 .00000048 00000-0 36809-4 0 04565
2 22829 98.5940 104.4262 0009522 281.0220 78.9889 14.28109060121613

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
February 3, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

242. Amsat Satelllite Contest, DX stations ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960130123834.8607A-100000@qni.com>
Source record: 23109

DX.. What is DX on the BIRD .. ARE we all not DX.. or not DX

Hummm we are all about the sam distance from the bird + or - a few
thousand miles ?
Gary Watts de N0OXV

On Tue, 30 Jan 1996 sco@mindspring.com wrote:

> In article <4ek07i$qpi@news.mcn.net> vfiscus@mcn.net (Vince Fiscus, KB7ADL) writes:
> >From: vfiscus@mcn.net (Vince Fiscus, KB7ADL)
> >Subject: Amsat Satelllite Contest, Should we have one?
> >Date: Tue, 30 Jan 96 02:36:08 GMT
>
>
> >Amsat is debating having a yearly contest on the satellites, something besides
> >Field Day.
>
> >Should there be one?
>
> >73 de KB7ADL
>
> I would say YES. At least one every quarter. For us beginners (no code TECHS)
> it would be a great way to work some DX and other countries. The bands would
> be full with contesters looking to make a CQ.
>
> KE4IKT
>
>
>
>

243. Re: Shuttle Radio Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4em8l5$ots@usenet6.interramp.com>
Source record: 23110

Check out my Community, Air & Space Report (CASR) home page between. Look
under Frequency List.
--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

244. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: dale@cybercom.net
Message-ID: <4ejvrc$ljc@orion.cybercom.net>
Source record: 23111
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

Jim Jordan (jordan@tesla.iar.nrc.ca) wrote:
: Greetings,

: We are considering the purchase of an aeronautical mobile satellite
: phone terminal for use with AMSC/MSAT. This terminal provides an RS-232C
: data port operating at 4800 bps and the literature claims it can be used
: with any data communications software.

: What I need to know is if one can run TCP/IP using SLIP or PPP over
: such a link without problems ? Note: the MSAT satellite is geostationary
: and would present a 300 odd msec. propagation delay It is connected
: to the terrestial phone system through a gateway.

Since when TCP/IP was invented a 300 baud modem was screamingly
fast, and most people who owned or leased modems had 75 or 120 baud
because 300s were too damn expensive. TCP/IP will run just fine, albeit
rather slowly. No web browsers on that link. :-)
You may have to tweak your software a bit to adapt to the
propagation delay, but it is a common tweak, RTFM or call tech support.

--Dale

--
Everything I said is subject to debate and correction. This is a
personal account, so I don't have to stick in something about covering my
employers ass. Unless of course it is billable, in which case they will
be glad to claim responsibility.

245. Re: Help Macintosh and Satelites

Newsgroup: rec.radio.amateur.space
Date: 1996-01-30 00:00:00 UTC
From: mackall@clark.net
Message-ID: <mackall-3001961729530001@mackall.clark.net>
Source record: 23112

Visit my home page and download a copy of MACPB it is in beta. If you would like to more about what I am doing drop me a line.

gil....

URL: http://www.clark.net/pub/mackall/home.html

In article <4eec1n$9aa@hp5.online.apple.com>, r.serna@eworld.com (R.Serna) wrote:

> Dears friens:
>
> I am interested in some software similar to PB/PG or Wisp for
> Apple Macintosh Computer,please send me information
> mi E,mail is: R.Serna@eworl.com
>
> thank`s EA3CFC

246. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: "Dana H. Myers" <Dana.Myers@west.sun.com>
Message-ID: <4eoa85$bfo@abyss.West.Sun.COM>
Source record: 23017
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

Henry Spencer <henry@zoo.toronto.edu> wrote:
>In article <4e88ib$scm@nrcnet0.nrc.ca> jordan@tesla.iar.nrc.ca writes:
>>What I need to know is if one can run TCP/IP using SLIP or PPP over
>>such a link without problems ? Note: the MSAT satellite is geostationary
>>and would present a 300 odd msec. propagation delay...
>
>TCP/IP via geostationary comsat has been done quite extensively in the
>past, and if you dig a bit in the literature, you should find quite a
>bit of detail.
>
>If (rather dim) memory serves, it works tolerably well but you need some
>careful attention to tuning parameters -- such a link is very different
>from the links most straight-out-of-the-box TCPs are tuned for. There
>are some limits on what can be done; the long round-trip time badly hurts
>high-level protocols that run in stop-and-wait lockstep, and there are
>rather a lot of those.

While this is true, it is also worth pointing out that TCP over SLIP/PPP,
even via terrestrial links, already encounters fairly long round trip
times, in some cases comparable to the RTT via a geosync bird. I suspect
the tuning required is quite similar in both cases.

--
* Dana H. Myers KK6JQ, DoD#: j | Views expressed here are *
* (310) 348-6043 | mine and do not necessarily *
* Dana.Myers@West.Sun.Com | reflect those of my employer *

247. Re: Question about frequencie from parabol to reciever. Ghz to ??? Mhz?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: fsperber@aol.com
Message-ID: <4eo1bn$oqs@newsbf02.news.aol.com>
Source record: 23018

Dear Geert,

over here in Europe FM-ATV seems to be much more common than in the US.
So having a try using the sat-receiver for 23 cm FM-receiption could be
successfull.
Due to the different used bandwidths (36 MHz commercial, 12 MHz ham-radio)
the results will be worse than with special ham-radio equipment. But some
receivers
have an option of adjusting the bandwidth. Additionally the sensitivity of
sat-receivers
is very low. So you'll need a low-noise, high-gain pre-amp (> 40 dB gain)
for the
amateur-radio band. Concerning frequencies and material support I'm
unfortunately
not able to give any hint, because I'm satellite-operator and no ATV-ham.

73, Frank
FSperber@aol.com

248. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4eof4j$i2@superb.csc.ti.com>
Source record: 23019
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

little@pecan.enet.dec.com (Todd Little) wrote:

>In article <4ek07i$qpi@news.mcn.net>
>vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:

>>
>> Amsat is debating having a yearly contest on the satellites, something besides
>> Field Day.

>Absolutely not. Basically the person with the strongest uplink
>wins at the expense of everyone else. Although the transponders
>may be 100-200 kHz wide, they have a fixed power budget and
>operate in a linear fashion. As a result several strong signals
>would dominate the transponder and push everyone else's signals
>into the mud. Aren't there enough contests already?
~~~~~~
Todd, you are absolutely right in as far as the type of contest that
you have in mind, but I believe what is beling proposed is more in
the line of the technical competition that is done regularly on AO-13.
The object of the contest is to see who can copy the weakest of
an ever decreasing string of CW uplinks.
If they are considering a contest like we hear on the HF bands we
will all suffer the results of transponder overload.

Ken Durham K5MBV
~~~~~~

249. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: rfm@urth.eng.sun.com
Message-ID: <RFM.96Jan31132638@urth.eng.sun.com>
Source record: 23020
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4elb3a$1e9@usenet.pa.dec.com> little@pecan.enet.dec.com (Todd Little) writes:

>In article <4ek07i$qpi@news.mcn.net>
>vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:
>
>>
>> Amsat is debating having a yearly contest on the satellites, something besides
>> Field Day.
>
>Absolutely not. Basically the person with the strongest uplink
>wins at the expense of everyone else.

One doesn't win contests by making it impossible to hear the other
stations.

--
Rich McAllister (rfm@eng.sun.com)

250. KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: "Michael.Hoehn" <Michael.Hoehn@frankfurt.netsurf.de>
Message-ID: <310FDFBE.32F0@frankfurt.netsurf.de>
Source record: 23021
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space

Hi !

I use a KR5600 rotor with instanttrack.

What can i do to track planets or stars with the control software instanttrack ?

thanks mike

251. Taggart's "Satellite Zapper"

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: pasek001@maroon.tc.umn.edu
Message-ID: <68477.pasek001@maroon.tc.umn.edu>
Source record: 23022

I'm looking for a diagram of Dr.Ralph Taggart's "Satellite Zapper"
turnstile antenna for the polar orbiting satellites. Years ago I picked
up a file that someone had Ziped up and posted to one of the BBS's with a
drawing of it, but at some point when I was "Cleaning House" I tossed it.

If you have it, or can reference me to a magazine,month,year that has it
I'ed really appreciate it.

I know..... one should never "Clean House" :-(

de George
WD0AKZ

-------- --------
George T. Pasek Jr. pasek001@maroon.tc.umn.edu
Facilities Management
Elevator Department What Goes UP
University of Minnesota Must Come DOWN
Minneapolis Minnesota 55455 Unless It STICKS
-------- ________

252. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: pn30@columbia.edu
Message-ID: <4eofsk$kfn@apakabar.cc.columbia.edu>
Source record: 23023
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

Matt Peterson <mpeterson@novell.com> wrote:

>As I understand it, IC's are giving a "industrial" or "military" rating
>at production time depending on their performance in a hostile
>environment. Digikey, Mouser, etc. all carry industrial-grade ic's -
>you'll probably have to contact the manufacturer to find sources for
>military-grade.

What are the requirements for industrial & military grade chips, as
opposed to normal chips? i.e. What do they have to survive?

Pierce

253. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: gfoley@freenet.columbus.oh.us
Message-ID: <4envut$bbb@acme.freenet.columbus.oh.us>
Source record: 23113
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Vince Fiscus, KB7ADL (vfiscus@mcn.net) wrote:

: Amsat is debating having a yearly contest on the satellites, something besides
: Field Day.

: Should there be one?

: 73 de KB7ADL

No. The comments of others about satellite hogging should prevail. There
are stations that have set up on packet to connect to MIR through the whole
pass, every pass! Very unfortunate, but all we can do is minimize the
temptations.
Gerry K8EF

254. Re: Shuttle Radio Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4eo8e5$jpf@over.mhv.net>
Source record: 23114

In article <28JAN96.12294544@sallie.wellesley.ed>,
dsheehan@sallie.wellesley.edu (Z)) wrote:
>
> I am looking for info regarding shuttle communications in order to
monitor. If
>anyone has or knows where I may find freq info, I would greatly
appreciate it.
>
> Thanks
>
> Danny

Danny,
On shortwave WA3NAN broadcasts the missions on Single side band. Freqs
are:

3.860
7.185
14.285
14.295
21.390
21.395
28.650

In N.Y. I pick them up best on the first 2 freqs.
During Sarex missions listen in on 145.550 and on the Mir docking missions
listen on 145.840 when the craft is overhead of your area.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

255. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: Mike Gathergood <Mike@g4kfk.demon.co.uk>
Message-ID: <823092425snz@g4kfk.demon.co.uk>
Source record: 23115
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

In article <jmatk-1901962353000001@jmatk.tiac.net>
jmatk@tscm.com "James M. Atkinson, Communications Engineer" writes:

> 1.100 - 1.400 ghz PAL Video Bugs *Very Hot in
> England/France/etc*
> 2.400 - 2.500 ghz PAL Video Bugs *Very Hot in
> England/France/etc*
> 3.500 - 4.500 ghz PAL Video Bugs *Very Hot in
> England/France/etc*

I didn't know France had switched to PAL. When did this happen?

73
Mike * QRV around 0800 and 1800 most weekdays on GB3HL *
G4KFK * (Hillingdon 433.075/434.675) and also 51.83 MHz *

256. Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-01-31 00:00:00 UTC
From: pasek001@maroon.tc.umn.edu
Message-ID: <67284.pasek001@maroon.tc.umn.edu>
Source record: 23116

I am thinking about putting together a system to view the WX pic's from the Low-Pass NOAA & METEOR Satellite's. I down-loaded the current weather.tle yesterday and fired up STSPLUS to listen to the signal on the scanner, but it sounded quiet out there. Years ago I could hear the audio on a close pass with just the rubber duck in the back yard. I'm not sure how current my Freqency list is, and for that matter how many of these sat's that are listed in the TLE are still transmiting pictures.

Could someone please "Fill in the Blanks or correct" and either E-Mail it back to me or post it here in case others might want the info also?

Thanks
p.s. I did check rtfm.mit.edu for a FAQ but didn't find any.

Satellite Frequency Still transmiting Pictures?

NOAA 9 137.62 I heard that this one is dead
10 137.50
11 137.62
12 137.50
14

METEOR 2-16 137.40
2-17 137.30
2-18
2-19
2-20 137.85
2-21
3-2
3-3
3-4 137.30
3-6

Thanks Again

George

-------- --------
George T. Pasek Jr. pasek001@maroon.tc.umn.edu
Facilities Management
Elevator Department What Goes UP
University of Minnesota Must Come DOWN
Minneapolis Minnesota 55455 Unless It STICKS
-------- ________

257. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4ep4m7$i6a@vivaldi.telepac.pt>
Source record: 23024
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:
>
>Amsat is debating having a yearly contest on the satellites, something besides
>Field Day.
>
>Should there be one?
>
>73 de KB7ADL
>
>
>
If you're thinking in "HF style contest" on the birds, i say "That's
totaly non sence!
It come to my mind a couple questions:
1- for what purpouse?
2- in whitch bird(s)?
3- what about the others who don't have visibility?
4- QRP only?
and i'm sure you're thinking in lot more...
I think all the answers go to the same word: NO

But, if you think in a ZRO test, or any other kind, but always thinking
that a satellite has a limited power budget and the winner is not the
"top power", but the "big ears", than i say YES.

73's F.Costa CT1EAT

258. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: dstock@hpqmdla.sqf.hp.com
Message-ID: <DM39vv.2JE@hpqmoea.sqf.hp.com>
Source record: 23025
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

Mike Gathergood (Mike@g4kfk.demon.co.uk) wrote:

: I didn't know France had switched to PAL. When did this happen?

There's rather a lot of PAL tv in France.

SECAM uses FM on a subcarrier to convey the chroma, so if you try
fading and mixing between sources, the capture effect switches the chroma
more abruptly than a smooth fade of luminance. French studios usually are
PAL and the signal only gets converted to SECAM as it's shipped out for
broadcast. If you think of France as a PAL country that just happens to
have SECAM domestic TV receivers...

Cheers
David GM4ZNX

259. [ANN] New version of MacGPS released

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: lwjames@ix.netcom.com
Message-ID: <4eqlad$849@ixnews4.ix.netcom.com>
Source record: 23026

A new release of MacGPS is now available. MacGPS is free software which allows transfer of waypoint, routes and track logs between a Garmin GPS receiver and a Macintosh computer. New features include a rendered topographic world globe showing your current location. There are also some bug fixes, so everyone who uses MacGPS should get this new version. Download it from:

ftp://mirrors.aol.com/pub/info-mac/sci/larrys-mac-gps-04b8.hqx

or the info-mac mirror site which is closest to you. After you download the file, drop it on StuffIt expander to extract the application.

Larry James
James Associates

260. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: little@pecan.enet.dec.com
Message-ID: <4eqq56$6g3@usenet.pa.dec.com>
Source record: 23027
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <RFM.96Jan31132638@urth.eng.sun.com>
rfm@urth.eng.sun.com (Rich McAllister) wrote:

> In article <4elb3a$1e9@usenet.pa.dec.com> little@pecan.enet.dec.com (Todd Little)
writes:
>
>>In article <4ek07i$qpi@news.mcn.net>
>>vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:
>>
>>>
>>> Amsat is debating having a yearly contest on the satellites, something besides
>>> Field Day.
>>
>>Absolutely not. Basically the person with the strongest uplink
>>wins at the expense of everyone else.
>
> One doesn't win contests by making it impossible to hear the other
> stations.

Say what? I didn't say it would be impossible for the power station
to hear others. His uplink power in no way affects his ability to
hear. In fact, if the power is due to using something like an EME
class antenna array, he'll be able to hear anything that makes it
above the elevated noise floor of the transponder. While transmitting,
his signal will cause the AGC circuit in the transponder to drop
everyone *else's* signal to below the average user's noise floor.
You can win contests by making contacts or preventing others from
making more contacts that you. This topic has been beaten to death
on the VHF reflector for VHF+ contests and on the satellites it
is no longer a local issue but a global one.

Simply listen on AO-13 when someone is using an uplink power that
results in a downlink signal significantly higher than the beacon.
Their QSO continues without a hitch, but everyone else's QSOs
suffers big time.

On Field Day, this is generally not as big a problem as few Field Day
stations are strong enough to dominate the transponder, certainly
not for the few additional points one gets after getting the satellite
bonus.

What benefit will a satellite based contest serve? There is already
a "contest" to measure your stations receive capabilities, which
is where people's effort should be placed as better receive capabilities
benefit everyone.

73,
Todd
N9MWB

261. Email to JMA

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: gerheim@sonalysts.com
Message-ID: <4eqg7p$co9@hatch.sonalysts.com>
Source record: 23028
Cross-posted to: rec.radio.amateur.space,sci.space

Does anyone out there know the address of the Japan Meteorological
Agency? We need specific technical documents about GMS-5.

--
****
Dr. Al Gerheim, N4QN | I cried because I had | Sonalysts Inc. POB 280
gerheim@sonalysts.com | no shoes till I met a | 215 Parkway North
Work: (203)442-4355 | man who had no class. | Waterford CT 06385
****

262. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: fdebruin@wm.estec.esa.nl
Message-ID: <4eq4b7$mfu@info.estec.esa.nl>
Source record: 23029
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

"Dana H. Myers" <Dana.Myers@west.sun.com> writes:
>While this is true, it is also worth pointing out that TCP over SLIP/PPP,
>even via terrestrial links, already encounters fairly long round trip
>times, in some cases comparable to the RTT via a geosync bird. I suspect
>the tuning required is quite similar in both cases.

For completeness:
On satellite links, there is the additional problems of errors. Common
TCP implementations think errors indicate congestion and those implementations
will, besides resending the complete window, invoke all kind of congestion
control mechanisms like window decreasing and slow start.

However, given a data rate of 4800bps, I don't think this will be a major
problem, if at all noticeable. But if you go to higher rates like 64Kbps,
384Kbps, 2Mbps..., this will become rather serious.

Also note, that tuning some TCP parameters can not be done per session.
So, if you have a station that connect to both a satellite network and
a LAN, you might not be able to tune your TCP to be optimal for both
cases.

Frank de Bruin
--
--
-- ir. F.J. de Bruin (fdebruin@wm.estec.esa.nl)
-- European Space Research and Technology Centre (ESA/ESTEC)

263. P3D/RUDAK/digital

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: Dave_Covert@msn.com
Message-ID: <00001ff1+000007ce@msn.com>
Source record: 23030

Can someone please explain what the RUDAK on P3D is for?

I am trying to understand the issues involved with running 56Kb TCP/IP on 1.2GHz up and 2.4GHz down. The first thing I don't understand about running digital across P3D is the RUDAK...

Dave Covert, KB5GOG
http://www.outreach.com/webridge/davec

264. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: tom_boza@ccm.ch.intel.com
Message-ID: <4eqq78$1fga@chnews.ch.intel.com>
Source record: 23031
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

FACT: AMSAT already supports satellite contesting, for AMSAT promotes and sanctions the ARRL Field Day "contest" on satellites. Don't believe me? Check out the AMSAT WEB homepage.

Some may argue that the ARRL Field Day event is not a contest, but call it whatever you want, for under the cover of the words ARRL Field Day "event", its a CONTEST!

So since AMSAT "supports" satellite contesting, why woun't AMSAT support other satellite contest?

Some say they don't want satellite contesting to ocure because they don't want all the "BIG GUNS" to hog all the satellite battery power. So what! AO-13 is going to crash anyways!!! Until then, the solar pannels will recharge the batteries. Lets get the most use out of the the bird before it burns up!

I think its more of a "religious" and "political" issue. AMSAT needs to be in political alignment with ARRL, so they allow the ARRL Field Day contest to occure. However, those powers to be don't personally like contesting, so they don't support satellite contesting!

Kind of two faced double standard if you tell me!!!

Tom...

265. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960201200227.5617A-100000@qni.com>
Source record: 23032
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Tom,

On 1 Feb 1996, WB7ASR wrote:

> FACT: AMSAT already supports satellite contesting, for AMSAT promotes
> and sanctions the ARRL Field Day "contest" on satellites. Don't
> believe me? Check out the AMSAT WEB homepage.
<Deleted>
> Some say they don't want satellite contesting to ocure because they don't
> want all the "BIG GUNS" to hog all the satellite battery power. So what!
> AO-13 is going to crash anyways!!! Until then, the solar pannels will
> recharge the batteries. Lets get the most use out of the the bird before
> it burns up!

It is not a matter of the BIG GUNS accessing the bird... but of PROPER
and respected operating procedure.. Like not operating stronger than the
downlink beacon !

It does not taked a BIG GUN to trash the transponder

I have even heard FM signals on the thing !

It is either a lack of knowledge or RESPECT and proper operating procedures.

The BIG GUN was indead a problem on AO-21 but that is another story.

TTYL

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

266. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DM3Exs.GF0@pe1chl.ampr.org>
Source record: 23033
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <Pine.SOL.3.91.960130110541.1753L-100000@qni.com> Gary Watts <gwatts@qni.com> writes:

>I also say NO to contest on any of the birds

>Todd,
>You are right about the downlink power budget
>I have heard may stations on ao-13 who were several DB LOUDER than the beacon
>I have also seen the effects of a strong signal on other weaker signals..

How is contesting related to using too much uplink power?
I would say a contest is the ideal way to educate users about uplink
power. When many stations are active, a few strong ones will surely
attract attention and can be asked to lower their power.
On a sat like ao-13, it is easy to arrange for a few monitoring stations
that just blacklist those stations that run too much power and don't
reduce it when asked.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

267. Re: TSCM Counter Surveillance & Technical Security Page

Newsgroup: rec.radio.amateur.space
Date: 1996-02-01 00:00:00 UTC
From: Dave Liquorice <allsorts@nexus.demon.co.uk>
Message-ID: <823135218snz129.os2.7@nexus.demon.co.uk>
Source record: 23034
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur,alt.radio.digital,alt.radio.scanner,alt.radio.pirate,alt.radio.scanner.uk,alt.radio.uk,talk.politics.guns,alt.hacker,comp.security.firewalls

In article <823092425snz@g4kfk.demon.co.uk>
Mike@g4kfk.demon.co.uk "Mike Gathergood" writes:

> I didn't know France had switched to PAL. When did this happen?

France has used PAL for production and distribution for years. It's only the transmission that is SECAM. Anyway the list is for video BUGs not broadcast TV.

Cheers
Dave.

268. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: rfm@urth.eng.sun.com
Message-ID: <RFM.96Feb1172813@urth.eng.sun.com>
Source record: 23035

In article <4eqq56$6g3@usenet.pa.dec.com> little@pecan.enet.dec.com (Todd Little) writes:

>>>Absolutely not. Basically the person with the strongest uplink
>>>wins at the expense of everyone else.
>>
>> One doesn't win contests by making it impossible to hear the other
>> stations.
>
>Say what? I didn't say it would be impossible for the power station
>to hear others. [... Good summary of how too much uplink power
>disrupts the rest of the passband deleted ...]
>You can win contests by making contacts or preventing others from
>making more contacts that you.

Multiop stations are often scanning the band on receive while calling CQ.
(Some of the hotshot HF contesters do this singleop.) Somebody who's *real*
obnoxious about it will soon find nobody wants to work him. The
satellite's not visible to everybody at once, when the big bad guy's
out of sight everybody else can run stations like crazy. I think (sure,
just my guess, but then your opinion is just your guess) that, with the
right set of rules, it would be counterproductive to seize the transponder.

Phase 3D's supposed to have a auto-notchout gizmo to prevent this,
BTW. We can have the same argument again after it goes up. Assuming
current schedules, couldn't get a contest organized and publicized
much before it goes up anyway.

>What benefit will a satellite based contest serve?

Same as terrestrial contests. Gets a bunch of people on at once for
intense activity, gives people a deadline to work toward -- I had
a 220 MHz beam in the garage for several months; for some reason
it actually got on the roof the week before the January VHF Sweepstakes.

Rich

--
Rich McAllister (rfm@eng.sun.com)

269. Looking for homebrew 2m/70cm lna's

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: Danie Brynard <danie.brynard@pixie.co.za>
Message-ID: <4esjr5$bqa@hawk.pix.za>
Source record: 23036

I am looking for references etc to a good and easy to build 2m and
70cm LNA for satellite use. I recently build a 2m LNA with relays
with a BF982. The relays caused the NF to be very high. Did other
hams experience this as well ? is the general tendency to go
without relays for lowest loss ? which relays are best and cheap ?

73 danie zs6awk

Danie Brynard (ZS6AWK)
PO BOX 15133
Centurion
0140
South Africa
Email at home: danie.brynard@pixie.co.za
Email at work: BRYD@KIDD.CO.ZA
Tel/Fax: 2712-6640330
QRV: 160m to 23cm.
----

270. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: little@pecan.enet.dec.com
Message-ID: <4erpui$b85@usenet.pa.dec.com>
Source record: 23037
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4eof4j$i2@superb.csc.ti.com>
mbv@ti.com (Ken Durham) wrote:

> Todd, you are absolutely right in as far as the type of contest that
> you have in mind, but I believe what is beling proposed is more in
> the line of the technical competition that is done regularly on AO-13.
> The object of the contest is to see who can copy the weakest of
> an ever decreasing string of CW uplinks.

This "contest" already exists. It is called the ZRO test and measures
how far below the beacon you can copy a CW signal. This is why I assumed
an HF style contest.

> If they are considering a contest like we hear on the HF bands we
> will all suffer the results of transponder overload.

Amen.

73,
Todd
N9MWB

271. WTB/Trade: Schematics/Pods for K102D Logic Analyzer:Biomation/Gould

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: "Walt W.", dfheli@gramercy.ios.com
Message-ID: <4esq1s$qlf@news.ios.com>
Source record: 23038

Hello

I need schematics and Pods/probes for a
K102D Gould/Biomation Logic Analyzer.

If you have schematics and can
not 'bear to part with' them, then perhaps
you could photocopy them and send them to me
via UPS/COD for the cost of the service and shipping?

I also need (4) pods/probes, I would like to pay $0,
but otherwise if the cost is reasonable, I am sure
we could work something out?!

Many Thanks,
Walt W., 96.02.01
dfheli@gramercy.ios.com
(818) 700-8915

272. PK232 to 9600bd Interfacing

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: Danie Brynard <danie.brynard@pixie.co.za>
Message-ID: <4esjjm$bqa@hawk.pix.za>
Source record: 23039

I would like to hear from other hams who have interfaced their
PK232's to a 9600 buad modem. I have a PK232 and a G3RUH 9600
modem.

Main points are:
- which I/F was used ?
- which PC s/w goes with that ?
- how well does it work ?
- which 96 modem was used ?

Also on the new AEA DSP modem: is it possible to DOWNLOAD from the
PC new modem s/w ? Can one write your own and download ?

73 Danie zs6awk

Danie Brynard (ZS6AWK)
PO BOX 15133
Centurion
0140
South Africa
Email at home: danie.brynard@pixie.co.za
Email at work: BRYD@KIDD.CO.ZA
Tel/Fax: 2712-6640330
QRV: 160m to 23cm.
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273. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4eu34u$sku@blackbird.afit.af.mil>
Source record: 23040

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
(Letters, blanks, periods, plus signs = 0; minus signs = 1)
```

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

274. NORAD Two-Line Orbital Element Sets (TLE748)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4eu396$sl9@blackbird.afit.af.mil>
Source record: 23041

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

```
- Current Two-Line Element Sets #748 -
Alouette 1
1 00424U 62049A 96029.14985886 .00000022 00000-0 15767-4 0 1701
2 00424 80.4546 61.9223 0024631 35.5673 324.7100 13.67860330663196
ATS 1
1 02608U 66110A 96025.41069411 -.00000221 00000-0 10000-3 0 9538
2 02608 14.6379 354.3618 0009314 79.8619 280.2548 1.00399699 23421
ATS 3
1 03029U 67111A 96029.22461433 -.00000119 00000-0 10000-3 0 4486
2 03029 14.8917 1.2862 0010220 267.8621 194.0030 1.00272398103364
Starlette
1 07646U 75010A 96029.28533523 -.00000160 00000-0 -12281-4 0 9451
2 07646 49.8279 340.7874 0206109 128.5232 233.4338 13.82189718 59613
LAGEOS
1 08820U 76039A 96032.36974128 -.00000013 00000-0 10000-3 0 1680
2 08820 109.8623 339.1328 0044319 158.9059 201.3245 6.38664807205097
ETS-2
1 09852U 77014A 96020.31218175 -.00000161 00000-0 10000-3 0 587
2 09852 13.0451 34.6431 0003762 135.8892 224.1925 1.00024685 16159
GOES 2
1 10061U 77048A 96028.56933657 .00000044 00000-0 10000-3 0 6352
2 10061 12.1637 38.7481 0010627 143.5688 333.9575 1.00260081 13032
IUE
1 10637U 78012A 96029.07124550 -.00000269 00000-0 10000-3 0 2259
2 10637 35.5525 85.3592 1348549 53.2812 342.7203 1.00271167 18534
GPS BI-01
1 10684U 78020A 96028.93962412 -.00000027 00000-0 10000-3 0 4222
2 10684 64.9373 28.0386 0059418 162.9597 197.2618 1.98069462116632
GPS BI-02
1 10893U 78047A 96024.97845125 -.00000006 00000-0 10000-3 0 2117
2 10893 63.2262 265.6097 0228612 15.1934 345.5127 2.01626491129902
```

```
GOES 3
1 10953U 78062A 96033.22727720 -.00000124 00000-0 10000-3 0 6079
2 10953 11.1557 41.5014 0001662 272.4808 156.8490 1.00278545 17699
SeaSat 1
1 10967U 78064A 96031.56556873 -.00000052 00000-0 27470-4 0 4618
2 10967 108.0013 250.0224 0002920 254.4817 105.6019 14.38083976921662
GPS BI-03
1 11054U 78093A 96025.82624531 -.00000006 00000-0 10000-3 0 3783
2 11054 62.9383 264.3838 0045810 179.8499 180.2113 1.93505289125885
Nimbus 7
1 11080U 78098A 96026.17807051 -.00000085 00000-0 -39041-4 0 5604
2 11080 98.9702 255.2065 0009476 358.0368 2.0750 13.83697112871394
GPS BI-04
1 11141U 78112A 96030.91439222 -.00000020 00000-0 10000-3 0 243
2 11141 64.9391 30.1745 0049180 28.6976 331.5983 1.92894715 15219
GPS BI-05
1 11690U 80011A 96029.24757145 -.00000023 00000-0 10000-3 0 9864
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1 11783U 80032A 96028.78253357 .00000029 00000-0 10000-3 0 1265
2 11783 62.3609 258.3748 0224223 29.7372 331.5890 2.03456519115977
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2 12472 7.9324 51.7078 0005105 45.4744 314.6023 1.00206826 11691
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2 13301 82.9292 233.9617 0026070 257.5004 102.3232 13.68071452678697
LandSat 4
1 13367U 82072A 96033.20646388 .00000001 00000-0 10065-4 0 8397
2 13367 98.0976 88.1140 0005984 195.0851 165.0160 14.57168897720732
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1 13736U 82118A 96032.52160222 -.00000009 00000-0 14373-4 0 9420
2 13736 98.6259 223.0892 0009420 68.3942 291.8240 14.25768820681592
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2 13777 98.9625 220.8992 0013508 116.3089 243.9477 13.99238769334253
Cosmos 1447
1 13916U 83021A 96029.21850159 .00000029 00000-0 14885-4 0 5640
2 13916 82.9476 294.5654 0037362 179.8216 180.2960 13.74334945644517
TDRS 1
1 13969U 83026B 96029.25918787 -.00000092 00000-0 00000+0 0 5379
2 13969 8.7538 45.0452 0003426 260.6163 163.5548 1.00434890 19988
GOES 6
1 14050U 83041A 96029.21042263 -.00000258 00000-0 10000-3 0 4829
2 14050 6.7651 54.9712 0003008 8.7145 61.4908 1.00296560104799
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2 14129 26.3997 227.1522 5982348 345.5889 2.9498 2.05882518 66910
LandSat 5
1 14780U 84021A 96027.20537687 .00000029 00000-0 16728-4 0 4193
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UoSat 2
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2 14781 97.7895 22.7233 0011595 184.7796 175.3299 14.69421225636557
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2 15039 64.5942 24.5028 0082142 18.2859 342.0257 1.92302255 84780
Cosmos 1574
1 15055U 84062A 96025.90160525 .00000027 00000-0 12127-4 0 7642
2 15055 82.9540 351.6109 0028909 22.7546 337.4872 13.73631281581312
GPS BI-10
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2 15271 62.0574 258.8693 0158472 356.9794 2.9976 2.00608730 82451
Cosmos 1602
1 15331U 84105A 96030.01859608 .00000107 00000-0 97395-5 0 4492
2 15331 82.5337 243.4058 0022094 50.1201 310.1950 14.84716997612324
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2 15427 98.9676 97.4994 0014984 343.3489 16.7187 14.13758258574356
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1 16129U 85093A 96031.99350268 -.00000023 00000-0 10000-3 0 7038
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2 16609 51.6454 92.3559 0005234 284.0300 76.0101 15.57787454568594
SPOT 1
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Cosmos 1766
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EGP
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2 16908 50.0110 60.2657 0011204 22.9282 337.2049 12.44413777 99266
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2 16969 98.5168 33.8571 0014108 35.1157 325.0944 14.24971721487186
MOS-1
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2 17527 98.9659 96.1024 0017410 351.6625 8.4250 14.00432980455670
GOES 7
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Kvant-1
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2 17845 51.6458 86.2523 0004984 290.6154 69.4404 15.57810669502893
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2 18123 98.7736 225.0374 0013597 287.4802 72.4886 14.15430347445163
RS-10/11
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2 18129 82.9248 249.8359 0011233 167.8927 192.2500 13.72361616431379
Meteor 2-16
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2 18312 82.5561 101.1616 0010670 247.7912 112.2117 13.84071202427158
Meteor 2-17
1 18820U 88005A 96033.20059953 .00000052 00000-0 33051-4 0 8435
2 18820 82.5426 155.2809 0015943 313.8861 46.0990 13.84750427404704
DMSP B5D2-4
1 18822U 88006A 96032.09064117 -.00000022 00000-0 84147-5 0 1751
2 18822 98.3892 230.6321 0006917 49.9234 310.2549 14.23178986415073
Glonass 34
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2 19163 65.1950 90.9298 0007711 158.8231 201.2646 2.13102483 59020
Glonass 36
1 19165U 88043C 96029.27440784 -.00000040 00000-0 10000-3 0 4575
2 19165 65.1875 90.5152 0001896 329.4561 30.5933 2.13102079 59879
METEOSAT 3
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2 19215 2.9871 68.3784 0003709 148.3856 211.7046 0.96948848 15853
AO-13
1 19216U 88051B 96032.36432074 -.00000587 00000-0 18282-5 0 1438
2 19216 57.3537 137.6895 7371583 30.6402 356.6008 2.09731382 26965
OKEAN 1
1 19274U 88056A 96032.03479278 .00000189 00000-0 20553-4 0 651
2 19274 82.5120 39.9731 0018327 211.4382 148.5748 14.82441767409056
Meteor 3-2
1 19336U 88064A 96033.09829083 .00000051 00000-0 10000-3 0 4566
2 19336 82.5400 262.7183 0015820 213.0495 146.9623 13.16976142361564
Glonass 39
1 19503U 88085C 96026.95736694 -.00000070 00000-0 10000-3 0 3467
2 19503 65.6317 329.5174 0006723 167.1410 192.8746 2.13101826 57314
NOAA 11
1 19531U 88089A 96032.86056107 .00000033 00000-0 42831-4 0 3784
2 19531 99.1933 47.3797 0011106 265.2985 94.6916 14.13080411379195
TDRS 2
1 19548U 88091B 96026.76719742 -.00000204 00000-0 10000-3 0 1778
2 19548 2.2176 73.0653 0006730 177.9980 235.8748 1.00274395 14102
Glonass 40
1 19749U 89001A 96030.28023100 -.00000031 00000-0 10000-3 0 5649
2 19749 65.1523 90.0642 0007105 255.8203 104.1643 2.13101278 54893
Glonass 41
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2 19750 65.1737 90.1154 0006465 214.6672 145.3726 2.13101824 54911
GPS BII-01
1 19802U 89013A 96028.54760939 -.00000059 00000-0 10000-3 0 1800
2 19802 55.2731 116.2611 0023580 187.2261 172.7618 2.00565051 50896
Akebono
1 19822U 89016A 96031.83481582 .00008517 00000-0 44950-3 0 6537
2 19822 75.0995 203.4046 3758227 209.6898 122.5075 7.89798513155835
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MOP-1
1 19876U 89020B 96032.52827238 -.00000097 00000-0 10000-3 0 1776
2 19876 1.7047 71.3937 0019253 277.3291 82.5067 0.97109281 5294
TDRS 3
1 19883U 89021B 96030.59043506 -.00000273 00000-0 00000+0 0 1746
2 19883 0.0516 111.4228 0003256 175.7857 13.4238 1.00272327197718
GPS BII-02
1 20061U 89044A 96027.88860659 -.00000067 00000-0 10000-3 0 1819
2 20061 54.2853 292.2317 0149230 217.0920 141.9336 2.00562678 48627
Nadezhda 1
1 20103U 89050A 96032.80393293 .00000013 00000-0 -25025-5 0 6592
2 20103 82.9591 209.2453 0038947 73.4510 287.0918 13.73862247329954
GPS BII-03
1 20185U 89064A 96032.21461624 -.00000047 00000-0 10000-3 0 1953
2 20185 55.0802 116.6121 0030252 319.6534 40.1573 2.00557176 47283
GMS 4
1 20217U 89070A 96033.12417824 -.00000371 00000-0 10000-3 0 3019
2 20217 1.5179 75.7733 0001045 89.5885 131.2254 1.00273818 24051
INTERCOSMOS 24
1 20261U 89080A 96026.06714873 .00000088 00000-0 21963-4 0 4711
2 20261 82.5906 2.1357 1243015 7.1526 354.5582 12.47314693288064
GPS BII-04
1 20302U 89085A 96025.77082221 .00000033 00000-0 10000-3 0 1855
2 20302 53.2933 232.2112 0015447 145.9582 214.2401 2.00561994 45955
Meteor 3-3
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2 20305 82.5489 219.0160 0005443 273.7777 86.2735 13.04426892300398
COBE
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2 20322 98.9486 48.0980 0009773 63.0932 297.1232 14.03453226317482
Kvant-2
1 20335U 89093A 96033.02665592 .00018795 00000-0 25368-3 0 4990
2 20335 51.6458 86.2523 0004984 290.6154 69.4404 15.57810669351905
GPS BII-05
1 20361U 89097A 96029.27204170 -.00000048 00000-0 10000-3 0 273
2 20361 55.9088 58.8140 0085701 131.4445 229.3499 2.00563113 35500
COSMOS 2054 (Altair-1)
1 20391U 89101A 96032.25172666 -.00000140 00000-0 00000+0 0 2852
2 20391 3.5785 64.3680 0001057 242.9372 257.9258 1.00272999 22623
SPOT 2
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UO-14
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2 20442 98.5707 119.6353 0011476 249.3868 110.6084 14.30183355314389
GPS BII-06
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2 20479 99.0493 83.9573 0541121 72.1807 293.7549 12.83336935280453
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MOS-1B R/B
1 20491U 90013D 96032.15502612 .00000006 00000-0 82316-4 0 2129
2 20491 99.0708 143.6168 0469110 255.3097 99.5590 13.02973536284013
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2 20496 43.1030 267.1700 0010848 250.6382 109.3310 15.35312683332714
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2 20508 82.9558 343.7643 0045502 26.4972 333.8495 13.73504201297177
OKEAN 2
1 20510U 90018A 96029.83680096 .00000197 00000-0 23708-4 0 4730
2 20510 82.5218 355.2764 0021024 55.4713 304.8508 14.78570014319088
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1 20533U 90025A 96029.07083438 -.00000063 00000-0 10000-3 0 1646
2 20533 54.6597 292.8617 0050637 75.9809 284.6371 2.00577131 42772
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1 20546U 90028A 96033.18167049 .00005028 00000-0 96202-4 0 8934
2 20546 94.1241 274.9945 0061521 168.4931 191.7750 15.46076372323983
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2 20580 28.4709 12.4039 0006140 190.1880 169.8581 14.91007658118272
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1 20608U 90043B 96031.36814949 .00000151 00000-0 23104-4 0 1572
2 20608 89.9286 174.5571 0104991 176.5256 183.6724 14.64896100306117
Glonass 44
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Glonass 46
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2 20621 65.2447 328.8336 0012751 198.7632 161.2002 2.13101750 44332
Kristall
1 20635U 90048A 96033.02665592 .00018795 00000-0 25368-3 0 2915
2 20635 51.6458 86.2523 0004984 290.6154 69.4404 15.57810669322737
ROSAT
1 20638U 90049A 96032.52150923 -.00000251 00000-0 25671-5 0 5292
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2 20670 82.5465 99.0324 0014796 293.1891 66.7707 13.84148030282382
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1 20712U 90065A 96030.79252427 .00000045 00000-0 50120-4 0 2127
2 20712 18.0838 307.2624 7180916 273.8062 14.4060 2.35654554 39855
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Feng Yun1-2
1 20788U 90081A 96032.86920009 .00000173 00000-0 14248-3 0 7156
2 20788 98.8129 43.0331 0014177 153.2087 206.9798 14.01391898277005
Meteor 2-20
1 20826U 90086A 96029.99653034 .00000014 00000-0 -41905-6 0 9650
2 20826 82.5217 35.0874 0012606 182.4121 177.6977 13.83623827269594
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1 20830U 90088A 96025.46094275 -.00000062 00000-0 10000-3 0 9989
2 20830 55.8420 56.9283 0064365 98.7995 261.9825 2.00560008 39201
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2 20959 55.1113 116.2450 0103075 233.2744 125.7985 2.00565376 37914
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1 20978U 90105A 96032.76842576 .00000093 00000-0 49063-4 0 5002
2 20978 98.6156 104.9158 0078514 212.3834 147.2512 14.32620604270187
Glonass 47
1 21006U 90110A 96030.38938960 -.00000029 00000-0 10000-3 0 8270
2 21006 65.1336 89.3890 0058786 187.0216 172.9612 2.13102666 40055
Glonass 48
1 21007U 90110B 96030.11029942 -.00000032 00000-0 10000-3 0 9548
2 21007 65.1603 89.4953 0033443 181.3437 178.7140 2.13101191 40039
Glonass 49
1 21008U 90110C 96033.28826933 .00000005 00000-0 00000+0 0 1822
2 21008 65.1420 89.3253 0010952 270.5514 89.3944 2.13098704 40096
AO-21
1 21087U 91006A 96031.50626854 .00000094 00000-0 82657-4 0 6733
2 21087 82.9398 63.6140 0033857 229.8560 129.9629 13.74564905251096
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RS-12/13
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MOP-2
1 21140U 91015B 96029.17105324 -.00000015 00000-0 00000+0 0 1362
2 21140 0.2619 63.8552 0001568 231.5792 253.8500 1.00271740 20205
Nadezhda 3
1 21152U 91019A 96032.72091012 .00000025 00000-0 10365-4 0 3498
2 21152 82.9239 246.8601 0042545 3.9313 356.2168 13.73528852245019
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1 21216U 91025A 96030.87751647 -.00000082 00000-0 10000-3 0 4767
2 21216 64.9711 328.2819 0008851 212.2826 147.7260 2.13102819 37576
Glonass 51
1 21217U 91025B 96030.00897105 -.00000082 00000-0 10000-3 0 8824
2 21217 64.9717 328.3183 0008178 233.6514 126.2797 2.13101634 37549
Glonass 52
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2 21218 64.9627 328.3574 0003495 299.3542 60.5782 2.13102500 37504
GRO
1 21225U 91027B 96032.98522737 .00002093 00000-0 39351-4 0 3335
2 21225 28.4609 54.3306 0003341 115.6211 244.4751 15.43612468148866
Meteor 3-4
1 21232U 91030A 96029.30556849 .00000051 00000-0 10000-3 0 8651
2 21232 82.5421 111.6977 0013368 144.0869 216.1147 13.16470449229137
NOAA 12
1 21263U 91032A 96032.69228165 .00000040 00000-0 37012-4 0 8044
2 21263 98.5688 55.6463 0012478 315.2901 44.7265 14.22594185245057
OKEAN 3
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2 21397 82.5246 267.3833 0023914 120.2457 240.1113 14.76448562251077
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ERS-1
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2 21575 98.3708 100.5529 0008188 330.3364 29.7369 14.37010063238099
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1 21576U 91050C 96031.71499939 .00000006 00000-0 16410-4 0 7570
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2 21577 98.3666 100.1555 0006792 332.6425 27.4403 14.36507855238151
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1 21578U 91050E 96032.20706403 .00000231 00000-0 88452-4 0 8570
2 21578 98.3946 108.2464 0004828 324.9274 35.1606 14.39138045238633
TDRS 4
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Meteor 3-5
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2 21655 82.5521 59.0872 0013469 153.4354 206.7460 13.16844810214292
UARS
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Glonass 53
1 21853U 92005A 96031.27030764 -.00000019 00000-0 10000-3 0 663
2 21853 65.0862 89.0332 0006841 198.7745 161.2682 2.13102304 31188
Glonass 54
1 21854U 92005B 96032.96617258 .00000002 00000-0 10000-3 0 2461
2 21854 65.0870 88.9683 0014999 14.0270 346.1262 2.13104269 31204
Glonass 55
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2 21855 65.0851 89.0574 0008400 211.5293 148.4876 2.13101966 31142
JERS-1
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2 21867 97.6990 112.3488 0001477 54.7130 305.4234 14.98722240217495
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2 22014 54.8490 174.2459 0104434 322.5450 36.7407 2.00559369 19567
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275. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <DM6AA5.MBH@icon.rose.hp.com>
Source record: 23042
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

sco@mindspring.com wrote:
: I would say YES. At least one every quarter. For us beginners (no code TECHS)
: it would be a great way to work some DX and other countries. The bands would
: be full with contesters looking to make a CQ.
:
: KE4IKT
:
:
In general there are enough listeners out there on any particular satellite pass that calling CQ will get you a contact. The birds are congested enough that finding a quiet spot on the more popular ones (e.g. RS-10/11) is hard to do. Adding extra traffic with a satellite-focused contest would overload them such that you'd probably have *less* chance of making a contact.

On top of all that, add in the temptation that contests bring to bump your power level and elbow your way onto the bird, and you'll end up with what I heard a few years ago during Field Day. Someone with a very strong signal kept calling CQ CQ CQ and his call sign 3-4 times, over and over, waiting a bare fraction of a second between each call. Since this was on AO-21, an FM bird (one QSO at a time), all he did was monopolize the entire pass with his calling. He never did make a contact, nor did anyone else.

A Satellite-focused contest would be an interesting experiment to see how our Amateur satellite fleet handles extreme overload, power management, battery failures, and other such things, but I'm not sure it'd be worth it.

If you want to have some long distance chats with a Tech license, satellite communication is the way to go, but you don't need or want a contest to "help".

I vote NO.

Greg KO6TH

276. IC 820 ACCY pinouts

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: Bob Smith <rsmith@internetmci.com>
Message-ID: <3112B6D4.78B@internetmci.com>
Source record: 23043
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

Picked up an Icom 820H today but had to take the demo. COuld someone
please send me the pinouts on the ACCY connector - they aren't the same
(as I found out) as their other HF rigs!

Thanks and 73 de Bob
N3FTU

277. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: Tom Clark <clark@tomcat.gsfc.nasa.gov>
Message-ID: <4es915$4q6@post.gsfc.nasa.gov>
Source record: 23044
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

mbv@ti.com (Ken Durham) wrote:
>little@pecan.enet.dec.com (Todd Little) wrote:
>
>>In article <4ek07i$qpi@news.mcn.net>
>>vfiscus@mcn.net (Vince Fiscus, KB7ADL) wrote:

snip snip

> If they are considering a contest like we hear on the HF bands we
>will all suffer the results of transponder overload.
>
>Ken Durham K5MBV

Hey -- don't blame AMSAT!! A thread developed on the amsat-bb@amsat.org mail exploder asking the question, and it generated a lot of replies.

If by "they" you mean the AMSAT Board/Officers, this is >>NOT<< a topic of discussion in those circles.

Tom Clark, W3IWI
AMSAT Director & President Emeritus

278. KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: amcleod@anjo.hi.net
Message-ID: <414.63.39@anjo.hi.net>
Source record: 23045

```
MI| What can i do to track planets or stars with the control software
| instanttrack ?

I don't believe that IT can track planets or stars.sferry, Scot!
////////////////////////////////////////////////////////////
The ANJO BBS - amcleod@anjo.hi.net <Angus Mcleod>
```

279. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: jataylor@ll.mit.edu
Message-ID: <jataylor.227.000E28EA@ll.mit.edu>
Source record: 23046

>Matt Peterson <mpeterson@novell.com> wrote:

>>As I understand it, IC's are giving a "industrial" or "military" rating
>>at production time depending on their performance in a hostile
>>environment. Digikey, Mouser, etc. all carry industrial-grade ic's -
>>you'll probably have to contact the manufacturer to find sources for
>>military-grade.

> What are the requirements for industrial & military grade chips, as
>opposed to normal chips? i.e. What do they have to survive?

> Pierce

The extra steps for military chips and components are somewhat varied, depending on exact component and application category. One screening is higher rates of finished lot inspection and testing. Another is more thorough inspection and testing at each step of the fab process. Then there are specific environmental tests, depending on the application. These can include operation over a wide temperature range, immunity to radiation, tolerance for shock and vibration, etc. Some of the highest grade components, e.g., components which protect human life in a space environment, would certainly receive 100% inspection all the way back to the silicon foundry. This type of reliability is not generally achieved with only post-manufacture testing. It has to be planned from the beginning.

John A. Taylor, V73JT
Kwajalein Atoll

280. Re: Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4esqsh$ccq@bbcnews.rd.bbc.co.uk>
Source record: 23047

Still active are Noaa 12 on 137.5 Noaa 14 on 137.62 Meteor3-5 on 137.85 (cuurent off due to darkness) Okean1-7 and Sich-1 on 137.4, but only over eastern Europe and western Russia.

Regards John B

281. Re: P3D/RUDAK/digital

Newsgroup: rec.radio.amateur.space
Date: 1996-02-02 00:00:00 UTC
From: Tom Clark <clark@tomcat.gsfc.nasa.gov>
Message-ID: <4es9i7$4q6@post.gsfc.nasa.gov>
Source record: 23048

Dave_Covert@msn.com (David Covert) wrote:
>
>Can someone please explain what the RUDAK on P3D is for?
>
>I am trying to understand the issues involved with running 56Kb TCP/IP on
>1.2GHz up and 2.4GHz down. The first thing I don't understand about running
>digital across P3D is the RUDAK...
>
>Dave Covert, KB5GOG

Dave -- RUDAK is intended to be a general purpose digital package. Take a wideband uplink, carve out an IF range. Put a bunch of DEMs (tailend of a modem) on that IF, some discrete, and some DSP. Then allow the digital bits to be piped into some MOs (the other half of a modem) either directly or via an onboard computer, and stick the MO'd signals on a wideband downlink. Allow the "crossbar" switch that connects any MO to any DEM to be programmable from the ground. And use some of the MOs for special signals generated onboard (like pictures from the cameras, raw data from the GPS receiver, spacecraft telemetry, etc). That's RUDAK. In short, it's whatever people want it to be (providing somebody writes the software!).

73 de Tom, W3IWI

282. Re: Is Oscar 10 dead?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: n3qwe@postoffice.ptd.net
Message-ID: <4eu9ut$hfc@ns2.ptd.net>
Source record: 23049

>http://www.amsat.org
>
>That is where the following onformation came from.
>I thought I had included the link in the message but my
>brain must had been dribbling bits :->

Thanks, another kind person dropped me the rest of that file..

Oscar 10 is suprisingly well behaved "when it is working"
I am hoping to add another klm 22c (stack with the klm I have now)
sometime in spring, to help me with the mode b downlinks and a little
more punch on terrestrial ssb.. So I really will be looking forward
to old ao-10 hanging in there for years to come.. hopefully can put
the dead battery time to catch up on the qsling..hi

Do you operate any other modes and sats?

>> Derek and Ann
>> ARS N3QWE, FN10lw, Union County, Pennsylvania
>> n3qwe@postoffice.ptd.net "email"
>> n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"
>>
>>

--
Derek and Ann
ARS N3QWE, FN10lw, Union County, Pennsylvania
n3qwe@postoffice.ptd.net "email"
n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"

283. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: n3qwe@postoffice.ptd.net
Message-ID: <4eub22$hfc@ns2.ptd.net>
Source record: 23050
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

>Todd,
>You are right about the downlink power budget
>I have heard may stations on ao-13 who were several DB LOUDER than the
beacon
>I have also seen the effects of a strong signal on other weaker
signals..
>Last year I and others tried to work a station who we could just
barely hear
>I listened to others who attempted to work that staion with little
>luck. That station could not hear them . Their signals on the downlink
>side were 4-4 and right up there with
>the beacon. that station could not hear then. I doubt if he could even
>copy his own dowlink signal

Friends,
Please correct me on any bad newsgroup etiquette, I am not sure
when its appropriate to express myself..

As to the alligators on the sats, I have only been working the birds
for a year and I must say overall most of the operators show a great
deal of class.. However one of the first things I discovered is the
great need to have the best recieve as you possibly can. I do the
best I can, but occasionally the station I am working will give me
a 5-7 or so signal report even the my downlink sounds like its in the
mud.. I learned to cut back at that point realizing that I have no
way of knowing how much metal is pointing at the sky on their end.
I agree about the beacon also on 13.. but judgement on 10 should be
used..

I enjoy fo-20 work as well, and that that is where your point really
is driven home.. I have heard cw operators just killing the downlink
to the point that you can hear the chop chop in the rest of the qso's
on the bird.. I experimented with a little cw on both fo-20 and ao-10
and was quite amazed at how little power produced a decent downlink..
5watts produced an echo on ao-10 when it was all I could do to hear
my downlink with 90watts ssb..

73, Derek

--
Derek and Ann
ARS N3QWE, FN10lw, Union County, Pennsylvania
n3qwe@postoffice.ptd.net "email"
n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"

284. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: n3qwe@postoffice.ptd.net
Message-ID: <4eub6r$hfc@ns2.ptd.net>
Source record: 23051
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

OH, and I vote no on satellite contest.. although I get a kick out
of vhf sweepstakes!

73 Derek

--
Derek and Ann
ARS N3QWE, FN10lw, Union County, Pennsylvania
n3qwe@postoffice.ptd.net "email"
n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"

285. Re: KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: n3qwe@postoffice.ptd.net
Message-ID: <4eubos$hfc@ns2.ptd.net>
Source record: 23052
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space

>I use a KR5600 rotor with instanttrack.
>
>What can i do to track planets or stars with the control software
>instanttrack ?
>
>thanks mike

Mike you may want to take a look at quiktrak.. I saw an old copy of
that program and I understood it "at the time" that it was to be
continued to be developed to point your rotor at cellestial objects
as well.. the version I a saw had it on the menu, but it did not work,
I think it was either to be developed or was available as an add on..

I know quiktrak has works well with the kct tsr for tracking...

73 Derek

--
Derek and Ann
ARS N3QWE, FN10lw, Union County, Pennsylvania
n3qwe@postoffice.ptd.net "email"
n3qwe@nr3u.#ncpa.pa.usa "ax25" // KO 23, 25 "pb/pg"

286. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: Hank Blackstock <wa5jrh@ionet.net>
Message-ID: <4eui4d$75p@ionews.ionet.net>
Source record: 23053
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

tom_boza@ccm.ch.intel.com (WB7ASR) wrote:

>
>I think its more of a "religious" and "political" issue. AMSAT needs to
>be in political alignment with ARRL, so they allow the ARRL Field Day
>contest to occure. However, those powers to be don't personally like
>contesting, so they don't support satellite contesting!
>

The main reason I see for allowing satellite contests for field day is that field day is generally a club activity and having a satellite station exposes satellite operation to hams that do not use the mode.

As far as I'm concerned we have way to many contests already. Field day is the only contest that I support, since it involves so much more than just firing up you multakilowatt station and seeing who you can step on. But I guess different strokes for different folks.

73 Hank WA5JRH

287. Blown Powersupply in Tek Scope, Yuk!

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: "Walt W.", dfheli@gramercy.ios.com
Message-ID: <4euf8h$t0t@news.ios.com>
Source record: 23054

Hello,

My Tek-465-B, sputtered and choked the other day,
and now all is quiet.

What I need this week is the Tek-465-B Service Manual, I did
buy a Tek-465 Service Manual this week but it just is not
similar enough to fix the powersupply.

If anyone out there has a Tek-465-B Service Manual they
would like to trade for an excellant condition Tek-465
Service Manual, that would be great.

How about sending me a photocopy of the Powersupply
schematic? or a scanned pwrsply.gif file?, via mime attachment.

I would really appreciate any effort extended to me.

The powersupply is sagging on all the outputs and more...

I think the +55 vdc full wave bridge rectifier has a shorted
diode in it. Since this supply is also sagging and it is the
reference voltage for the lower voltages.

Thanks for the help,

Walt W.
dfheli@gramercy.ios.com

288. Re: KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@biggulp.callamer.com>
Message-ID: <Pine.OSF.3.91.960203164807.9210G-100000@biggulp.callamer.com>
Source record: 23055

Angus and others bring up a good point, although I am sure that Instantrack was never meant to do other than track earth satellites! Shortly, the need will surface in which we need to track planets, such as Mars and Venus. At the time of the comet collision, I wished I had something to track Jupiter! Shortly there will be emissions on 438.1 MHz from a Mars probe. Tracking programs for planets are NOT trivial but I too would like to locate something similar. Cliff Buttschardt W6HDO

On Fri, 2 Feb 1996, Angus Mcleod wrote:

> MI| What can i do to track planets or stars with the control software
> | instanttrack ?
>
> I don't believe that IT can track planets or stars.sferry, Scot!
> //
> The ANJO BBS - amcleod@anjo.hi.net <Angus Mcleod>
>
>

289. ARLK006 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk006.1996@arrl.org>
Source record: 23056
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK006
ARLK006 Keplerian data

ZCZC SK06
QST de W1AW
Keplerian Bulletin 6 ARLK006
From ARRL Headquarters
Newington, CT February 3, 1996
To all radio amateurs

SB KEP ARL ARLK006
ARLK006 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96033.21910641 .00002990 00000-0 46057-4 0 04495
2 16609 51.6453 85.2816 0005305 292.0288 68.0135 15.57796760568816
AO-10
1 14129U 83058B 96033.44864898 .00000152 00000-0 10000-3 0 4013
2 14129 26.3945 225.9582 5981568 347.6646 2.4618 2.05878400 67074
RS-10/11
1 18129U 87054A 96033.58779848 .00000028 00000-0 14353-4 0 1714
2 18129 82.9248 248.7580 0011313 163.7149 196.4376 13.72361712431579
UO-11
1 14781U 84021B 96033.01246136 .00000078 00000-0 20954-4 0 08741
2 14781 97.7899 29.8698 0011926 160.8262 199.3388 14.69422958637656
RS-12/13
1 21089U 91007A 96033.16297280 .00000016 00000-0 17025-5 0 08685
2 21089 82.9230 290.2198 0027377 251.9783 107.8387 13.74065280250353
AO-13
1 19216U 88051B 96033.31789778 -.00000669 00000-0 23141-5 0 1442
2 19216 57.3544 137.5065 7371708 30.7483 356.5805 2.09732142 26981
UO-14
1 20437U 90005B 96033.23011509 .00000010 00000-0 20699-4 0 01793
2 20437 98.5551 118.7533 0010169 243.9981 116.0168 14.29911004314622
RS-15
1 23439U 94085A 96033.04212474 -.00000039 00000-0 10000-3 0 01193
2 23439 64.8200 243.2602 0164243 222.8453 135.9577 11.27523849045433
```

```
AO-16
1 20439U 90005D 96033.19311380 .00000007 00000-0 19557-4 0 09683
2 20439 98.5679 120.7165 0010499 244.5666 115.4428 14.29965489314631
DO-17
1 20440U 90005E 96033.22882539 -.00000010 00000-0 12975-4 0 09725
2 20440 98.5695 121.3188 0010559 242.7767 117.2338 14.30106812314664
WO-18
1 20441U 90005F 96033.21580478 -.00000017 00000-0 10218-4 0 9615
2 20441 98.5682 121.2563 0011291 242.5713 117.4326 14.30076979314669
LO-19
1 20442U 90005G 96033.08193036 -.00000018 00000-0 98036-5 0 09684
2 20442 98.5708 121.5645 0011419 242.5501 117.4526 14.30183310314660
FO-20
1 20480U 90013C 96033.17808273 -.00000016 00000-0 28711-4 0 8534
2 20480 99.0477 83.7953 0541449 72.7048 293.2531 12.83232276280441
AO-21
1 21087U 91006A 96033.10768185 .00000094 00000-0 82657-4 0 06881
2 21087 82.9398 62.4285 0033839 225.3024 134.5372 13.74565053251316
UO-22
1 21575U 91050B 96033.13498123 -.00000001 00000-0 13893-4 0 06758
2 21575 98.3707 103.4644 0007990 321.4089 38.6526 14.37010052238523
KO-23
1 22077U 92052B 96033.18848905 -.00000037 00000-0 10000-3 0 05722
2 22077 66.0791 114.2042 0006773 334.8221 25.2460 12.86295839163315
KO-25
1 22828U 93061F 96033.13507975 -.00000024 00000-0 77871-5 0 04367
2 22828 98.5920 111.2557 0009573 259.1259 100.8846 14.28128068090697
IO-26
1 22826U 93061D 96033.19199795 -.00000005 00000-0 15637-4 0 04616
2 22826 98.5954 111.2614 0008811 275.4465 84.5709 14.27793894122595
AO-27
1 22825U 93061C 96033.18538481 -.00000025 00000-0 75189-5 0 04647
2 22825 98.5975 111.1196 0007915 272.4757 87.5517 14.27685721122584
PO-28
1 22829U 93061G 96033.21992529 -.00000018 00000-0 10239-4 0 04468
2 22829 98.5936 111.3890 0009276 258.5574 101.4567 14.28109153122629

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
February 6, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

290. Re: TCP/IP over Mobile SatPhone ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-03 00:00:00 UTC
From: wb8foz@netcom.com
Message-ID: <wb8fozDM7vLt.64B@netcom.com>
Source record: 23057
Cross-posted to: comp.dcom.telecom.tech,comp.protocols.tcp-ip,comp.protocols.ppp,sci.space.tech,rec.radio.amateur.space

```
Clarinet just had a press release about BT-Intelsat offering IP
connections.

--
A host is a host from coast to coast.................wb8foz@nrk.com
& no one will talk to a host that's close...........(v)301 56 LINUX
Unless the host (that isn't close).........................pob 1433
```

291. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: little@pecan.enet.dec.com
Message-ID: <4f1j22$vtg@usenet.pa.dec.com>
Source record: 23058
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4eqq78$1fga@chnews.ch.intel.com>
tom_boza@ccm.ch.intel.com (WB7ASR) wrote:

> FACT: AMSAT already supports satellite contesting, for AMSAT promotes
> and sanctions the ARRL Field Day "contest" on satellites. Don't
> believe me? Check out the AMSAT WEB homepage.
>
> Some may argue that the ARRL Field Day event is not a contest,
> but call it whatever you want, for under the cover of the words
> ARRL Field Day "event", its a CONTEST!

The vast majority of stations that participate in Field Day do
so under less than ideal conditions. They erect stations in
under 24 hours that are not permanent stations, but using
available means to support, rotate, and power their radios.
As a result, few EME class stations are erected for Field Day.
Someone has probably done it and will prove the rule. ;-)

> So since AMSAT "supports" satellite contesting, why woun't AMSAT support
> other satellite contest?

The ARRL has long maintained that Field Day is not a contest.
You can choose to disagree with that view, but that hardly
makes AMSAT a supporter of satellite contests.

> Some say they don't want satellite contesting to ocure because they don't
> want all the "BIG GUNS" to hog all the satellite battery power. So what!
> AO-13 is going to crash anyways!!! Until then, the solar pannels will
> recharge the batteries. Lets get the most use out of the the bird before
> it burns up!

It has little to do with battery power and much more to do with
a fixed power budget. The transponder of *any* satellite whether it
is AO-13 or any other bird, has a fixed power limit. The transponders
are linear in operation. As a result, the strongest uplink
signals yield the strongest downlink signals. If the uplink signals
combined exceed a certain maximum, the AGC circuitry of the
satellite reduces *all* the signals. So whether the batteries are
in great or poor condition, the same result occurs, once the
AGC has been triggered, the loudest uplink dominates the downlink.

> I think its more of a "religious" and "political" issue. AMSAT needs to
> be in political alignment with ARRL, so they allow the ARRL Field Day
> contest to occure. However, those powers to be don't personally like
> contesting, so they don't support satellite contesting!

I don't know where you concocted this idea, but I doubt it has
little basis in reality. Read *any* text on amateur satellites
and they'll explain why traditional HF style contests are a
bad idea on the birds. Would you care to name names as to
who personally doesn't like satellite contesting? This is an
engineering issue not a personal preference issue.

> Kind of two faced double standard if you tell me!!!

Please explain. What double standard and in what way is
it two faced?

73,
Todd
N9MWB

292. Re: Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: eareckso@netcom.com
Message-ID: <eareckso DM9B89.3BG@netcom.com>
Source record: 23059

pasek001@maroon.tc.umn.edu wrote:
: I am thinking about putting together a system to view the WX pic's from the
: Low-Pass NOAA & METEOR Satellite's. I down-loaded the current weather.tle
: yesterday and fired up STSPLUS to listen to the signal on the scanner, but
: it sounded quiet out there. Years ago I could hear the audio on a close
: pass with just the rubber duck in the back yard. I'm not sure how current
: my Freqency list is, and for that matter how many of these sat's that are
: listed in the TLE are still transmiting pictures.

: Could someone please "Fill in the Blanks or correct" and either E-Mail it
: back to me or post it here in case others might want the info also?

NOAA 12 & 14 are the only active US orbiters; most of the Russian Meteor 2 series have been quiet for years, except Meteor 2-21, Meteor 3-5 is off and on.

You may wish to subscribe to this weather satellite listserv for info:

wxsat-l@ssg.com

SUBSCRIBE

Hopefully additional launches will bring the orbiter program back up to par but who knows with all the congressional game playing.

Bill Eareckson
eareckso@netcom.com

293. Satellite systems

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: horrit.ayla@mail.telepac.pt
Message-ID: <4f3csu$a8o@vivaldi.telepac.pt>
Source record: 23060
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.antenna

Can any body tell me where can i get some information about mobile
satellite systems. I need some information about Iridium, GlobalStar
and Inmarsat-P. The only place whitch i now is
http://www.ee.surrey.ac.uk/Personal/L.Wood/iridium.html.
If any body nows something about Iridium antennas i would apreciate.

Thaks.
Write by Carlos Gusatvo Pereira Ribeiro
horrit.ayla@mail.telepac.pt

294. Radio Meteor Obs. Bull. Jan 1996 Quadrantids

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.52.3114CFCF@vvs.innet.be>
Source record: 23061

Radio Meteor Observation Bulletin No. 30 Feb 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA, Bratislava
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

January 1996
Quadrantids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Jan	UT												
1996	20h	21	22	23	00	01	02	03	04	05	06	07	08	09
1- 2	-	-	-	-	-	-	-	-	-	-	-	-		
2- 3	13	20	35	54	52	74	68	76	55	71	92	67	78	82
3- 4	59	94	158	134	163	208*	250*	270*	190*	98*	94*	134*	100	113
4- 5	174	97	60	73	74	70	74	59	53	47	52	56		
5- 6	26	45	46	38	59	61	68	87	72	65	63	67		
6- 7	28	28	64	52	48	82	79	78	75	89	73	78		
7- 8	29	44	43	61	47	91	76	84	93	77	72	65		
8- 9	74	52	58	51	66	71	100	82	72	65	72	65		

```
9-10 | 42 40 48 55 68 54 77 78 85 66 61 67
10-11 | 31 54 55 64 66 66 70 78 89 67 72 82
11-12 | 34 33 48 47 53 77 77 62 64 69 70 76
12-13 | 62 43 111 61 82 74 67 62 58 65 68 77
13-14 | 27 41 71 68 70 76 82 73 69 72 67 90
14-15 | 30 31 46 64 64 56 59 64 64 55 61 73
15-16 | 13 30 48 68 73 62 71 73 91 68 83 79
16-17 | 31 29 37 66 51 58 67 68 60 63 71 69
17-18 | 33 45 58 82 81 85 75 63 80 68 79 68
18-19 | - - - - - - - - - - - -
19-20 | 13 17 32 42 42 67 67 53 72 54 52 61
20-21 | 18 36 32 43 64 52 44 54 65 78 51 69
21-22 | 24 40 65 68 55 61 74 72 59 68 94 72
22-23 | 23 81 32 46 48 48 60 68 67 52 79 93
23-24 | 26 30 29 36 50 40 48 62 62 60 71 59
24-25 | 26 39 37 28 49 48 46 76 63 54 66 49
25-26 | 11 13 26 21 34 45 47 51 34 33 39 38
26-27 | 8 28 33 28 22 25 25 28 32 27 45 48
27-28 | 16 33 31 30 41 29 40 45 59 43 68 57
28-29 | - - - - - - - - - - - -
29-30 | 17 17 28 40 32 41 37 49 57 51 59 49
30-31 | 20 47 52 49 48 57 52 63 62 64 67 57
31-01 | 41 83 40 46 48 40 52 86 63 53 51 55
------|------------------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06 07
Jan | UT
```

Notes:

. * maximum Quadrantid activity on the morning of Jan 4.
Best forward scatter conditions for this setup between 2h and 8h UT.

Maurice De Meyere / Chris Steyaert

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector, direction east.
Frequency 1: 59.250 MHz, SSB mode, 150 kW TV video carrier
in Bucaresti, distance 950 km, east.
Frequency 2: 48.246 Mhz, SSB mode, 100 kW TV video carrier
Location Germany, distance 550 km, northwest.
Dipole used alternating with frequency 1.
Receivers: Several, incl. homemade converter. AGC enabled. No preamplifiers.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP program from AF9Y) on the PC where 640 channels of 2Hz width
are recorded and stored continuously. Every meteor reflection produces
a distinct whistle, which is recorded easily by the real time FFT
program.
From the saved .GIF images the total length of the meteor reflections
if calculated automatically.

The following figures give information about the total length of the
meteor reflections during one hour, expressed in percentage of time.

Hourly reflection duration percentage on receiver # 1:

```
Jan UT
1996 5h, 6h, 7h, 8h, 9h,10h,11h,12h,13h,14h,15h,16h,17h,18h,19h,20h,21h
-------------------------------------------------------------------------
1, 0, 0, 0, 13, 0, 10, 6, 11, 5, 5, 3, 3, 5, 5, 7, 6, 13
2, 0, 0, 13, 14, 0, 10, 8, 7, 5, 5, 4, 4, 5, 7, 5, 0, 5
3, 7, 10, 14, 18, 20, 19, 17, 9, 11, 12, 11, 7, 12, 8, 6, 7, 14
4, 20, 26, 42, 43, 50, 40, 29, 10, 18, 13, 11, 7, 4, 6, 5, 10, 7
5, 0, 9, 17, 17, 16, 13, 12, 10, 7, 8, 8, 9, 4, 0, 0, 0, 0
```

Hourly reflection duration percentage on receiver # 2:

```
Jan UT
1996 0h, 1h, 2h, 3h, 4h, 5h, 6h, 7h, 8h, 9h,10h,11h,12h,13h,14h,15h,16h
-------------------------------------------------------------------------
1, 0, 0, 0, 0, 0, 0, 0, 0, 5, 0, 8, 7, 7, 4, 4, 3, 3
2, 6, 6, 7, 7, 8, 9, 7, 7, 8, 11, 9, 5, 5, 5, 3, 4, 0
3, 6, 0, 8, 10, 9, 8, 8, 10, 13, 12, 13, 10, 10, 6, 7, 6, 4
4, 9, 12, 14, 17, 25, 30, 26, 25, 37, 32, 24, 19, 14, 14, 12, 10, 0
5, 4, 5, 7, 6, 8, 5, 6, 11, 10, 9, 9, 9, 7, 6, 6, 0, 2
```

Notes:

. 0 (zero) means no data available.

. the complete figures for Oct, Nov and Dec 95 including summary GIF files
are available via anonymous ftp at:
ftp://charlie.luc.ac.be/pub/icaros/werfried
or at the radio pages of the International Meteor Organisation on WWW.

. local time conversion: one hour ahead of UT (06h00 UT is 07h00 local).

. remarkably enough, no dip in counts is visible when the Quadrantid
radiant has a high elevation (between 5h and 8h UT), and for the given
transmitter data. Anyone has an explanation?

. Correction for the Dec. 1995 RMOB: The figures shown are also "total
length of the meteor reflections during one hour shown as percentage".

Werfried Kuneth

```
Observer: Ingo Reimann
Location: Luebeck, Germany (10 51'01" E, 53 57'21" N, 13 m above sea level)
Antenna: 6 element Yagi
Frequency: 88.40 MHz (three or more stations)
Antennae: 6 element Yagi, geographical azimuth 340 o, elevation 53 o
Receiver: Technics ST-Z55 with SU-V505
Observing method: listening (tape-recordings)
```

Raw counts of reflections during one hour interval starting at UT:

```
Dec |
1995 | 01h 02 03 04 05 06 07 08 09 10 11 12
-------------------------------------------------------------------
21 | - - 02 - - 03 - - 04 - - 02
22 | - - - - - - - - - - - -
23 | 7 4 3 3 3 10 9 6 - 12 - -

Dec |
1995 | 13h 14 15 16 17 18 19 20 21 22 23 24
-------------------------------------------------------------------
21 | - - 3 - - - - - - - - -
22 | - - 5 2 0 1 3 1 2 2 4 5
23 | - - - 0 - - 3 - - - - -
```

Ingo Reimann / via Jeroen Van Wassenhove

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location: Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 18 inch/hour + occasionally listening.

Bootids 1996

Observations were made from 2 January 19h UT until 5 January 22h UT. In total 75h of observations were recorded on paper running with a speed of 18 inch/hour, resulting in about 34 meter length of recording paper. This has not been fully analysed yet. At the peak of activity there are many echoes of long duration which block the weaker signals. A simple tallying of echoes will not give a correct indication of the activity of the Bootids. During maximum the activity was comparable to that of the Alpha-Monocerotids 1995, although the Bootids have a much higher percentage of long echoes.

Bootid activity started on 3 January at about 13h UT and ended around midnight at the end of 4 January. After corrections for the obser-vability (Hines) a maximum was found on 4.33 January, solar longitude 283.29 degrees (J2000). A small extra peak was found on 3.54 January.

Below follows the preliminary result of the observations, only using relatively strong signals of 0.5 microvolt or more. Uncorrected counts of these signals during one hour intervals starting at:

```
Time UT | 2 Jan 3 Jan 4 Jan 5 Jan |
--------+---------------------------+
0 | - 15 52 11 |
1 | - 15 66 9 |
```

```
2 | - 15 66 5 |
3 | - 18 65 8 |
4 | - 16 41 5 |
5 | - 16 31 3 |
6 | - 17 25 3 |
7 | - 21 21 9 |
8 | - 18 25 7 |
9 | - 10 33 10 |
10 | - 16 36 18 |
11 | - 12 31 10 |
12 | - 17 39 15 |
13 | - 37 28 13 |
14 | - 26 33 6 |
15 | - 23 18 7 |
16 | - 17 17 9 |
17 | - - 24 10 |
18 | - 25 15 16 |
19 | - 20 26 10 |
20 | 11 33 27 17 |
21 | 10 47 21 - |
22 | 12 46 18 - |
23 | 14 43 14 - |
--------+----------------------------+
Time UT | 2 Jan 3 Jan 4 Jan 5 Jan |
```

Ton Schoenmaker

```
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: narrow band FM, detected signal level >-122dBm.
Antenna: 2 element Yagi with 4dBd gain to SW.
Antenna Azimuth: 45 o (SW)
Computer: T-1000SE
Data sampling system: threshold crossing detection is fed in binary
form (1 bit) from the receiver to the computer.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
```

Data stored in the Compact MS-Soft format. Software for viewing available from FTP.FUNET.FI pub/ham/vhf-work/mssoft42.zip

Counts in one hour intervals starting at:

Quadrantids 1996

```
UT |02 Jan 03 Jan 04 Jan 05 Jan
-------------------------------------
0 | 278 261 442 141
1 | 287 288 600 155
```

2 | 235 254 726 238
3 | 290 273 1048* 214
4 | 292 283 1031* 179
5 | 298 260 705* 173
6 | 225 350 316 259
7 | 232 243 348* 155
8 | 238 185 365* 136
9 | 250 293 753* 132
10 | 254 417 914* 206
11 | 247 495 834* 202
12 | 245 381 730* 185
13 | 230 412 458 145
14 | 179 311 313 113
15 | 136 338 181 99
16 | 116 277 178 62
17 | 175 220 129 64
18 | 188 197 153 89
19 | 144 220 112 85
20 | 203 317 143 138
21 | 297 418 231 147
22 | 286 457 147 159
23 | 244 429 182 227

UT |02 Jan 03 Jan 04 Jan 05 Jan

. * Quadrantid maximum during the morning hours of Jan 4.

Ilkka Yrlola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (53 degr 19' N, 6 degr 51' E)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 135 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 25 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: listening

Ursids, Bootids (Quadrantids) and sporadic meteors

Dead time corrected counts of reflections during one hour intervals
starting at:

| December 1995 | January 1996
UT | 22 23 24 25 | 04 10 11 12
---+-----------------+-------------------
00 | 81 67 |
01 | 53 64 |
02 | | 140 73
03 | | 153 69

```
04 | | 154 79
05 | | 98 83
06 | | 115 74
07 | | 97 70
| |
22 | 73 52 |
23 | 78 64 |
---+-----------------+-------------------
UT | 22 23 24 25 | 04 10 11 12
| December 1995 | January 1996
```

Wim Zanstra / via Ton Schoenmaker

2. CONFERENCE

ACM 96 - the sixth international Conference on Asteroids, Comets, Meteors - will be held in Versailles, France, from 8 July to 12 July. It will include all aspects of studies of asteroids, comets, meteors and their interrelations. The format will feature plenary sessions devoted to the various fields of research and problems, together with parallel sessions devoted to smaller workshops, and to poster presentations.

Registration preferably before 15 May. To receive the second and the third announcement, please contact: ACM, Aeronomie CNRS, BP 3, F-91371 Verrieres, France (fax: +33 1 64 47 43 48).

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

3. CONTRIBUTORS / USEFUL ADDRESSES

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--
Christian Steyaert (RMOB9601) 4 Feb 1996

- -

295. FS G500A Elevation Rotor

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: wave@mindspring.com
Message-ID: <4f2lup$74e@brickbat.mindspring.com>
Source record: 23062

I have a G500A Elevation rotor in very good condition. It is $200 including shipping. It has very little up time.

Please e-mail if interested to:

wave@mindspring.com
AC4OP

296. ?:Rotor position feedback

Newsgroup: rec.radio.amateur.space
Date: 1996-02-04 00:00:00 UTC
From: s40402@abel.richland.cc.il.us
Message-ID: <4f356n$1f8@abel.richland.cc.il.us>
Source record: 23063

How do the rotor controls (az. or el.) know where the rotor is? I am looking for the different types of informational feedback. (i.e. pots., optical/absolute encoders, electrical contacts, etc.). Any info would be helpful.

Thanks,
Joe Utter, N9ZJL
e-mail: joeu@seq250.rollingpls.lib.il.us

297. Contacts for WAS needed

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <3116F405.5977@primenet.com>
Source record: 22967

Hi,

If you live in Montana, North Dakota, Oklahoma, Arkansas, South Carolina, Kentucky, or Delaware and would like to schedule a contact with me (I live in Idaho) please drop me a note. I work both P3 and the LEO birds.

Thanks to the gentlemen from Indiana and North Carolina that provided me with nice contacts this last weekend. I hope to hear from you again.

73,

Stephanie KC7DBA

298. IC820 and Pacsats

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <3116385D.2EBB@msn.com>
Source record: 22968

Can anyone give me a list of tips on working the pacsats with the
IC820H?

I understand there may be some tips in terms of tuning and so forth.

thanks and 73
de Bob, N3FTU

299. Preamps for IC820

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <311638AB.1D61@msn.com>
Source record: 22969

Any ideas on a 440 preamp for the IC820? Should have TX bypass and work off of the 10 v provided up the coax for this purpose.

I'll be also in te market for one if you know of one.

Thanks ever so much.

Bob Smith
bsmith@msn.com

300. G0URW partial shack clearance

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DMBo0L.7r3@cix.compulink.co.uk>
Source record: 22970

G0URW partial shack clearance
Toni has asked me to post these items on his behalf, please reply ONLY TO HIM, on 0973-601252.

Item one

Yaesu FT290R1 excellent condition, complete with 30watt 2m linear amp, with built-in pre-amp. £295ukp ovno.

Item two

SommerKamp (Also known as Yaesu) FT102 HF base station, again in excellent condition, complete with AM and FM option boards, and NARROW CW AND NARROW SSB filters. £595ukp ovno.

Collection from East London.

301. * SpaceNews 05-Feb-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4f64qp$s6k@pilot.njin.net>
Source record: 22971
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 05-Feb-96 *
Date: 5 Feb 1996 18:45:29 -0500
Organization: Rutgers University
Message-ID: <4f64qp$s6k@pilot.njin.net>

SB NEWS @ AMSAT $SPC0205
* SpaceNews 05-Feb-96 *

BID: $SPC0205

=========
SpaceNews
=========

MONDAY FEBRUARY 5, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* AMSAT-UK CALL FOR PAPERS *
============================
The 11th AMSAT-UK Colloquium will be held at Surrey University, Guildford,
Surrey, U.K., from Thursday 25th to Sunday 28th July 1996. Current intentions
are to devote the Thursday to international/IARU matters and to structure
other subjects across the following three days.

AMSAT-UK invite authors to submit papers, about amateur radio space and
associated activities, for this event; we normally prefer authors to present
the papers themselves rather than having someone else read them in the
authors' absence.

Abstracts of Papers for presentation should be submitted as soon as possible;
the date for full submissions will be announced in a future bulletin. It is
likely that the final date will be about one month prior to the event in order
that the "Proceedings" document be available to participants.

Submissions should be sent to: Chris Jackson, G7UPN via Internet at:
G7UPN@amsat.org or direct on UO-22.

AMSAT-UK also invite anyone with requests for Program Topics to submit them
as soon as possible to G7UPN as above or to G3RWL or G6ZRU (both available
@amsat.org and on digital satellites). Invitations for papers on specific
subjects will be included in the future bulletin (about end-February).

An address for postal mail, plus information about UoS Colloquium Web pages,
will also be included in the future bulletin.

NOTE: SEND ALL OTHER INQUIRIES ABOUT COLLOQUIUM '96 TO THE AMSAT-UK OFFICE:

AMSAT-UK
LONDON E12 5EQ

[Info via G3RWL]

* OSCAR STATUS REPORT *
======================
PACSAT AO-16: Normal BBS.

DOVE DO-17: In MBL mode on 2 meters. MBL frames being sent at random intervals.

WEBERSAT WO-18: Not monitored this week

LUSAT LO-19: Not monitored this week

ITAMSAT IO-26: Not monitored this week

WX Sats APT 137 MHz only:
NOAA 12, 14: ON
Meteor 2/21: ON
Meteor 3/5 : OFF

[Info via Graham, VK7ZO]

* OOPS! *
=========
In last week's issue of SpaceNews, U.S. Astronaut Shannon W. Lucid was mistakenly referred to as a male. Sorry for the error, and my apologies to Shannon.

* DOVE NEWS *
=============
DOVE is in MBL (Microsat Boot Loader) mode while controllers sort out what's wrong with the satellite. The packets being seen in the 145.825 MHz downlink are short telemetry frames sent from 'DOVE' to 'MBLCTL', which is MBL Control. They are sent at more or less random intervals from a few seconds to several minutes. The primary purpose of this mode is to allow software to be loaded. This telemetry is in a binary format that may have been published several years ago but is of little interest because testing has shown it's not especially accurate and the Microsats are seldom in this mode for very long. As controllers continue the process of troubleshooting the satellite, other "strange" downlink packets will continue.

[Info via Jim White, WD0E, of the DOVE Team]

* GOES-9 NEWS *
===============
GOES-9, one of a new generation of U.S. weather satellites, is now on the job over the Pacific Ocean. The satellite has been positioned in orbit 22,300 miles above the equator at 135 degrees west longitude, enabling its cameras to view the western United States, Hawaii, Alaska and much of the Pacific Ocean, according to the National Oceanic and Atmospheric

Administration.

GOES-9 was launched May 23 and was positioned over the Gulf of Mexico for testing. Starting in December, the satellite was slowly moved 3,130 miles westward to its present location. The new satellite teams with GOES-8 to give full weather-camera coverage of the United States and adjacent waters.

Louis Uccellini, director of the NOAA office of meteorology, said the advanced instruments on GOES-9 will provide digital imagery of clouds, temperatures and moisture, all of which will improve short-term weather forecasts. Both GOES-8 and GOES-9 also measure solar activity and the Earth's magnetic field. Additionally, the satellites can aid in rescue services by relaying distress signals from people, ships and airplanes.

GOES-8 was launched April 13, 1994, and is now positioned at 75 degrees west, overlooking the east coasts of North and South America and well into the Atlantic Ocean. GOES-7, which had been in service for eight years, is being replaced by GOES-9. The older satellite remains in orbit and will be maintained on a standby status.

[Info via the Associated Press]

* W6OLO SK *
============
Jim Woods, KC7FG reports of the passing of Nick Marshall, W6OLO. Nick died on 25-Jan-96 in his sleep at the age of 81. Nick had been an Amateur Radio operator since the 1930s, was one of the founders of Project OSCAR, and one of the principals behind the early OSCAR satellites. He was active with Lockheed Martin at their Palo Alto Research Laboratory as a staff scientist up until his death. He was a charter member of the LERA (Lockheed) Amateur Radio Club in 1957.

Nick always looked to the future and welcomed great challenges. He actively promoted a repeater on the moon and a mission to Mars. He will be truly missed.

[Info via Jim Woods, KC7FG]

* FEEDBACK/INPUT WELCOMED *
============================
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center

Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--
John A. Magliacane, KD2BD * /\/\ * Voice : 1-908-224-2948
Advanced Technology Center |/\/\/\| Packet : KD2BD @ KS4HR.NJ.USA.NA
Brookdale Community College |\/\/\/| Internet: magliaco@pilot.njin.net
Lincroft, NJ 07738 * \/\/ * Morse : -.- -.. ..--- -... -..

302. Re: Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: kevin@TerraCom.Net
Message-ID: <4f3pe7$63g@homer.alpha.net>
Source record: 23064

In article <earecksoDM9B89.3BG@netcom.com>,
eareckso@netcom.com (William A. Eareckson) wrote:

>You may wish to subscribe to this weather satellite listserv for info:
>
>wxsat-l@ssg.com
>
>SUBSCRIBE
>

The wxsat list is NOT subscribed to as mentioned in the previous post.

Please write to Rick and asked to be added to the list. You can reach him at:
wxsat-request@ssg.com

It seems there are many different ways to subscribe to lists but the above
common way only floods all of us with the request which needs to go to Rick.

Good Luck with the weather sats.

Kevin

****
* Kevin G. Shea N9JKP *
* 4460 Dahmen Pass *
* Cross Plains, WI 53528 USA *
* 608.789.4326,voice; 608.798.1747,fax *
****

303. Re: Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: peter.henne@gmd.de
Message-ID: <peter.henne-050296100454@oskar.gmd.de>
Source record: 23065

In article <67284.pasek001@maroon.tc.umn.edu>, <pasek001@maroon.tc.umn.edu>
wrote:

> .... stuff deleted
>
> Could someone please "Fill in the Blanks or correct" and either E-Mail it
> back to me or post it here in case others might want the info also?
>
> Thanks
> p.s. I did check rtfm.mit.edu for a FAQ but didn't find any.
>

Satellite Frequency Still transmiting Pictures?

NOAA 9 137.62 I heard that this one is dead (YES!)
10 137.50 Safestate, NO APT
11 137.62 AVHRR damaged, NO APT
12 137.50 * operational morning descender, APT OK
14 137.62 * operational noon ascender, APT OK

METEOR 2-16 137.40 NO APT since LONG, down
2-17 137.30 NO APT since LONG, down
2-18 NO APT since LONG, down
2-19 NO APT since LONG, down
2-20 137.85 NO APT since LONG, down
2-21 137.85 * operational, weak (antenna not depl.)
3-2 NO APT since LONG, down
3-3 NO APT since LONG, down
3-4 137.30 NO APT since LONG, down
3-5 137.85 * operational, now in darkness (off)
3-6 NO APT since LONG time

I marked the operational birds with an asterix. Forget the other ones,
they reached their op.lifetime and will NEVER come back. The only secret
is MET 3-6 - transmitted APT shortly when just put in orbit, nothing since
then. Met 2-21 is VERY weak, the antenna-boom failed to deploy.

Hope that helps

Peter Henne (henne@gmd.de)

304. Re: Active Low-Pass WX Sat's?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-05 00:00:00 UTC
From: Rolf Mathison <rolf_mathison@hp-usa-om13.om.hp.com>
Message-ID: <31162357.322@hp-usa-om13.om.hp.com>
Source record: 23066

pasek001@maroon.tc.umn.edu wrote:
>
> I am thinking about putting together a system to view the WX pic's from the
> Low-Pass NOAA & METEOR Satellite's. I down-loaded the current weather.tle
.....
>
> Thanks Again
>
> George
>
> -------- --------
> George T. Pasek Jr. pasek001@maroon.tc.umn.edu
> Facilities Management
> Elevator Department What Goes UP
> University of Minnesota Must Come DOWN
> Minneapolis Minnesota 55455 Unless It STICKS
> -------- ________Active WX sats as of January:

NOAA12 137.50
NOAA14 137.62
METEOR 3-5 137.85
OKEAN 4 137.40 *
SICH 1 137.40 *

* Don't hold out much hope picking these up in US. They turn
the transmitters off, until there over CIS.

Regatds,
Rolf

P.S. Make sure you allow for your offset from UTC, I forgot
to change to EST from DST :-(

305. Re: Amsat Satelllite Contest, DX stations ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4f6cl9$4ga@news.mcn.net>
Source record: 22972

In article <Pine.SOL.3.91.960130123834.8607A-100000@qni.com>,
Gary Watts <gwatts@qni.com> wrote:
>
>DX.. What is DX on the BIRD .. ARE we all not DX.. or not DX
>
>Hummm we are all about the sam distance from the bird + or - a few
>thousand miles ?
> Gary Watts de N0OXV
All stations anywhere and everywhere can participate.

73 de KB7ADL

306. Re: Amsat Satelllite Contest, Should we have one?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4f6j2v$4ga@news.mcn.net>
Source record: 22973
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <4es915$4q6@post.gsfc.nasa.gov>,
Tom Clark <clark@tomcat.gsfc.nasa.gov> wrote:

>
>> If they are considering a contest like we hear on the HF bands we
>>will all suffer the results of transponder overload.
>>
>>Ken Durham K5MBV
>
>Hey -- don't blame AMSAT!! A thread developed on the amsat-bb@amsat.org mail
>exploder asking the question, and it generated a lot of replies.
>
>If by "they" you mean the AMSAT Board/Officers, this is >>NOT<< a topic of
>discussion in those circles.
>
>Tom Clark, W3IWI
>AMSAT Director & President Emeritus
>
>

All I want and NEED is one satellite contest. It should be international in scope and sponsored by AMSAT. It will take place during Field Day.

WHY?, Because field day is the best opportunity to show-off our part of the hobby to other hams. The first priority of the contest would be the display and use of an OSCAR station to others(Portable operations most likely required). Second priority, make QSO's & have FUN!

That's ALL I want. One 24 hour long contest and to recuit more hams into AMSAT. One little 24 hour contest shouldn't tax our satellites batteries too much.

And who knows, maybe they'll like satellite operation so much, that they'll make a Phase 3D donation right on the spot. ;-)

73 de KB7ADL

1996 Countdown to Phase 3D !

307. SUNSAT Status?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: bkobb@newsignals.com
Message-ID: <bkobb-0602961004270001@bkobb.ppp.nova.org>
Source record: 22974

Anybody know if SUNSAT was launched successfully last month
as originally scheduled?

Benn Kobb KC5CW

308. Re: Preamps for IC820

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <31179B48.227@msn.com>
Source record: 22975

Well It looks like I'll be relagated to the Icom pre amp. Any
experience with that one Gary?

Thanks for the reply and 73
Bob Smith
|

309. Macintosh antenna design software

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: swaincw@aol.com
Message-ID: <4f8gjd$l12@newsbf02.news.aol.com>
Source record: 22976

Can anyone suggest suitable software for analysis of multielement quad antennas?

310. Antennas for satellites, advice

Newsgroup: rec.radio.amateur.space
Date: 1996-02-06 00:00:00 UTC
From: Jim Fellows <jimf>
Message-ID: <4f8kqc$sde@murrow.corp.sgi.com>
Source record: 22977

Hi all,

I'm interested in working satellites using primarily SSB voice and secondarily packet. I've got my rig and tracker/predicter progrtam fired up and have listened in on FO-20 and some of the other birds. Just yesterday I got up the gumption to call up an antenna manufacturer and place an order. The call ended up being more of an advice line than an order line. I'm happy that I did not get just a salesman that was willing to take my money, but now I'm more confused.

All that I have read so far in the "Satellite Experimenters HandBook" and other publications recommend *switchable sense* circular polarity antennas. Well the advice I got was to use either fixed sense, that being RHCP, or linearly polarized antennas with more gain. The reasoning being for the former is that almost all the non-LEO birds are RHCP and that *should* be sufficient. The reasoning for the latter is that the approximate 3 dB loss between circular and linear polarizations can be made up by higher gain arrays (stacked) and this also would then work better for the weak signal terrestrial SSB work that I do.

Since I'm new to satellite work I would appreciate the wisdom of experience for advice.

Thanks,

Jim KF6AGJ

311. Re: Shuttle Radio Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-02-07 00:00:00 UTC
From: wecare@teleport.com
Message-ID: <4fab6n$pf3@maureen.teleport.com>
Source record: 22978

dsheehan@sallie.wellesley.edu (Z)) wrote:

>
> I am looking for info regarding shuttle communications in order to monitor. If
>anyone has or knows where I may find freq info, I would greatly appreciate it.
>
> Thanks
>
> Danny

Danny, give 145.550 a try. 99% of the time you'll hear packet tones,
but every now and then you'll catch the MIR crew yapping with someone,
sometimes me! Happy listning and 73's.... Why not get your license
and talk to them yourself! It's real easy and not nearly as expensive
as you might think, I chatted with astronaut Norm Thaggard on a setup
that cost me less than $300 total!

John KB7VZL

312. Getting Started

Newsgroup: rec.radio.amateur.space
Date: 1996-02-07 00:00:00 UTC
From: joe.lambert@mail.mei.com
Message-ID: <4fa9rm$nue@news.moneng.mei.com>
Source record: 22979

Hello,

I'm afraid to say it but you have another Amateur radio neophyte on board. :-)

I'm a software engineer and I am very interested in getting involved and learning Amateur radio communications with satellites and SETI. I went to a local ham fest and learned a little. Should I buy the Amateur Radio Handbook? It looked like it had good information. I'm not new to writing code or electronics and computers in general, I've been involved for 10+ years so technology isn't new to me. However, I have no idea what band, frequency, radio, antenna, etc. I need. Where do I get the low down on what all the buzz words mean? It seems there are many different avenues one can follow, I'm looking for satellite linking and SETI information, what equipment and the like will I need?

E-Mail is not only accepted, but encouraged. :-)

Thank you,
Joe Lambert
Software Engineer
Marquette Electronics
Cardiology Equipment

313. "Dying" spy in the sky ???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-07 00:00:00 UTC
From: paul@g6tsf.demon.co.uk
Message-ID: <823804318_OASIS_@g6tsf.demon.co.uk>
Source record: 22980

Hi, Just wondering if any one has any info on the Chinese spy sat
that is now de-orbiting due to loss of control by the ground stn.
Any keps or is it too unstable to track with a tracking prog, I'm
interested to see if the progs prediction coresponds to what really
happens ie re-entry.

73's de Paul G6TSF

--

<<<-->>>
<<< Paul Shayler G6TSF / Member RSGB & AMSAT-UK >>>
<<<-->>>
<<< Email -------------> paul@g6tsf.demon.co.uk >>>
<<< AX.25 ------> g6tsf@g6tsf.gb7wir.#42.gbr.eu >>>
<<<-->>>

314. ?P3D/RUDAK?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-07 00:00:00 UTC
From: tom.alldread@minfox.com
Message-ID: <9602071820464580@minfox.com>
Source record: 22981

Greetings All:

I have heard some exciting rumors about a Russian phase 3D type satellite that is in operation that offers a 2.4 GHz downlink which apparently offers a good SNR with relatively small capture area receiving antennas. I also noticed a recent posting regarding the RUDAK transponder and wonder if it is the one.

I would like to obtain more specific information and wonder if there is a site on the internet where I could find it? I took a look at the AMSAT WWW page and downloaded a description of the Russian amateur satellites but did not see anything on a Russian P3D bird.

---
* QMPro 1.53 * Very Best Regards, tom.alldread@minfox.com

315. Question On Satellite Phones In Canada

Newsgroup: rec.radio.amateur.space
Date: 1996-02-07 00:00:00 UTC
From: dmart@cnj.digex.net
Message-ID: <4faulm$6nu@cnj.digex.net>
Source record: 22982

I heard that a satellite was launched to provide phone service to portable cellphone like devices for use in the 95% of Canada that isn't covered via terrestrial cellular networks. Is this service using Inmarsat on L band? If not I would like to know the technical specifications of this system. Is the satellite in geo orbit? What frequencies are used? What size antennas are used for the portable and mobile stations? What form of modulation is used? Any information would be appreciated.

Dave Marthouse
Internet: dmart@cnj.digex.net

316. RS-12 in Mode KT (up:21m, down 10m/2m)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-08 00:00:00 UTC
From: kebsch@pdb.sni.de
Message-ID: <4fcktc$p86@nervous.pdb.sni.de>
Source record: 22983

Hi RS-12 Sat fans,

yesterday morning I heard an HAM on RS-12 (rx-10m) speaking about the downlink on 2m (mode T). Uuups, what's going on here ..??? I have tuned my transmitter to the uper edge of the transponder (~21.248) and scanned the satellite window on 2m to find my own signal ... yeeaaah .. I heard myself loud and clear (2m/70cm groundplane). :-).

During the next pass over, the sat was covering the east coast of the USA and Western-Europe; I made my first QSO via RS-12 in mode T. It was with an US-HAM. In the past we have worked us several times via RS-12 in mode K and RS-15 in mode A.

BTW: The downlink on 2m is 145.910-950 MHz. If you are scanning for your own signal you have to add upto 6 kHz (Dopler effect).

Now my question? Was this change (mode: K -> KT) planned? Will this mode be available for the next few months/years? What is planned/going on with RS-10? This sat is able to work in A, K, T, KA, KT, like RS-12. Currently we have mode A on RS-10, or does it changed too and "I don't heard the bells"? :->)

Anyhow: Good luck and a lot of QSO's via RS-12, mode T.

73 de Waldemar, DK3VN
--
E-Mail: kebsch.pad@sni.de Packet Radio DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [89h]
Europe Pile-Up-Warning: Don't accept breakers, or the wolfes will get you!

317. Re: P3D/RUDAK/digital

Newsgroup: rec.radio.amateur.space
Date: 1996-02-08 00:00:00 UTC
From: Dave_Covert@msn.com
Message-ID: <00001ff1+00000812@msn.com>
Source record: 22984

So, are the MOs and DEMs on P3D spec'ed out to generate 56kb traffic?

You said that some of the demodulators would be discrete and some
would be DSP.
I imagine that the DSP units will have to have instructions to
clean up the signal. Will 56kb be one of the 'installed' programs? If
not, will I expected to upload the instructions to the DSP whenever
I take control of one of the DSP dems?

73,
Dave Covert
http://www.outreach.com/webridge/davec

318. Re: Shuttle Radio Freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-02-08 00:00:00 UTC
From: Keith Stein <us011192@pop3.interramp.com>
Message-ID: <4fbjta$mhn@usenet6.interramp.com>
Source record: 22985

The space shuttle can be monitored on the following frequencies:

296.800 MHz Voice (AM)
259.700 MHz Voice (AM)
243.000 MHz Voice (AM)
279.000 MHz Voice (AM)
416.500 MHz Data (Narrow FM)

--
Keith Stein
Woodbridge, VA

Community, Air & Space Report Editor:
http://www.newspace.com/publications/casr/home.html

Satellite Times magazine Editoral Staff Member
http://www.grove.net/hmpgst.html

319. Help Icom IC-970/H ,9600 Bd satellite modificatiaon ??

Newsgroup: rec.radio.amateur.space
Date: 1996-02-08 00:00:00 UTC
From: r.serna@eworld.com
Message-ID: <4fes3i$hoc@hp5.online.apple.com>
Source record: 22986

I am interested in the modification of the Icom ic-970/h
please send me information and esquematic diagram of the modification.

My adress is:

Ramon Serna EA3CFC
PO.Box-115
E.08750-Molins de Rei
Barcelona
Spain E.Mail:R.Serna@eworld.com

Thank`s for your Help
R.Serna@eworld.com

320. Re: Getting Started

Newsgroup: rec.radio.amateur.space
Date: 1996-02-09 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4fg44n$n64@superb.csc.ti.com>
Source record: 22987

In article <4fa9rm$nue@news.moneng.mei.com>, joe.lambert@mail.mei.com says...
>
>Hello,
>
> I'm afraid to say it but you have another Amateur radio neophyte on
>board. :-)
>
>>for 10+ years so technology isn't new to me. However, I have no idea what
Where do I get the low down
>on what all the buzz words mean? It seems there are many different
>avenues one can follow, I'm looking for satellite linking and SETI
>information, what equipment and the like will I need?
>
>E-Mail is not only accepted, but encouraged. :-)
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Joe, email to your address listed above bounced. I'm not going into
any detail this time. Try LYCOS search for AMSAT and go to the home page.
Search for the n7ryw asatpage.html too.

Ken Durham K5MBV mbv@ti.com
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

321. Newsgroup Servers....

Newsgroup: rec.radio.amateur.space
Date: 1996-02-09 00:00:00 UTC
From: kleite@carajas.homeshopping.COM.BR
Message-ID: <9602090148.AA23323@carajas>
Source record: 22988

Dear OM,

Thank you for reading my message. I looking for
servers names for newsgroups below:

uk.amateur.radio
rec.radio.shortwave
rec.radio.scanner
rec.radio.noncomm
rec.radio.info
rec.radio.broadcasting
rec.radio.amateur.space
rec.radio.amateur.misc
rec.radio.amateur.equipment
rec.radio.amateur.digital.misc
alt.radio.scanner
alt.radio.pirate

I am using Internet In A Box and that program was pre-
configured with one server, for Internet In A Box newsgroup only.

I would like to thank you for any help in advance!

Vy 73 de PS7KM,

==
Karl M Leite, Natal, RN, Brazil, South America
E-mail:- kleite@br.homeshopping.com.br
==

322. PACSATS (AO-16) and Icom 820

Newsgroup: rec.radio.amateur.space
Date: 1996-02-09 00:00:00 UTC
From: bsmith@msn.com
Message-ID: <4fef88$p1m@news.internetmci.com>
Source record: 22989

Anyone defeat the tuning step on the IC-820 on PACSATS, specifically AO-16.
Trying now to set up for this bird. Using the TAPR DSP-93 as the modem.
Thanks in advance for any help.

Hope to catch you on AO-16 this weekend!

--

Bob Smith, Atlanta, GA N3FTU
mailto: n3ftu@amsat.org
http://wp.com/~bsmith
TAPR 5412 ARRL

323. Re: P3D/RUDAK/digital

Newsgroup: rec.radio.amateur.space
Date: 1996-02-09 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Feb9.200504.13580@ke4zv.atl.ga.us>
Source record: 22990

In article <00001ff1+00000812@msn.com> Dave_Covert@msn.com (David Covert) writes:
>So, are the MOs and DEMs on P3D spec'ed out to generate 56kb traffic?
>
>You said that some of the demodulators would be discrete and some
>would be DSP.
>I imagine that the DSP units will have to have instructions to
>clean up the signal. Will 56kb be one of the 'installed' programs? If
>not, will I expected to upload the instructions to the DSP whenever
>I take control of one of the DSP dems?

Only authorized telecommand stations will be allowed to control items
on the satellite or uplink code. If one of the DSP modems is configured
for 56kb, you'll be able to use it. If it isn't, you won't. It's my
expectation that the system will act as a regenerating repeater, not
a switch node, so whatever you uplink, it'll clean it up and immediately
retransmit it.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | emory!kd4nc!ke4zv!gary
534 Shannon Way | Guaranteed! | gary@ke4zv.atl.ga.us
Lawrenceville, GA 30244 | |

324. RUDAK on AO-21 - was P3D/RUDAK/digital

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fhcmt$kgi@paperboy.ids.net>
Source record: 22991

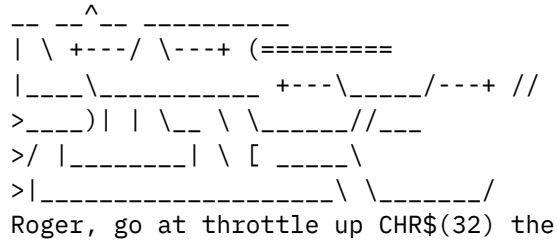
In article <9602071820464580@minfox.com> Tom Alldread,
tom.alldread@minfox.com writes:
>
> I have heard some exciting rumors about a Russian phase 3D type
>satellite that is in operation that offers a 2.4 GHz downlink which
>apparently offers a good SNR with relatively small capture area
>receiving antennas. I also noticed a recent posting regarding the RUDAK
>transponder and wonder if it is the one.
>
> I would like to obtain more specific information and wonder if
>there is a site on the internet where I could find it? I took a look at
>the AMSAT WWW page and downloaded a description of the Russian amateur
>satellites but did not see anything on a Russian P3D bird.

What your describing here appears to be a somewhat garbled interpretation
of the RUDAK experiment on the AO-21 spacecraft.

AO-21 was (past tense) a Russian satellite, with a Russian-built amateur
radio payload as a piggyback payload. In addition it also featured the
German RUDAK experiment. When in operation it was extremely successful,
and gave just a hint of what's possible with a sophisticated piece of
hardware in space, combined with excellent software and innovative hams
on the ground. Even though AO-21 had SSB transponders it was able to
operate as an FM satellite because the FM 'waveforms' were programmed in
to the RUDAK computer.

Unfortunately when the parent satellite finished its mission there
weren't funds to continue its operation and it was shut down, and AO-21
was lost in the process.

Still, it gave hams a tantalizing look at what's possible with RUDAK and
a decent bandwidth connection.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

325. 'tracking' planets Re: KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fhdit$kgi@paperboy.ids.net>
Source record: 22992

In article <Pine.OSF.3.91.960203164807.9210G-100000@biggulp.callamer.com>
Clifford Buttschardt, cbuttsch@biggulp.callamer.com writes:
>Although I am sure that
>Instantrack was never meant to do other than track earth satellites!
>Shortly, the need will surface in which we need to track planets, such
as
>Mars and Venus. At the time of the comet collision, I wished I had
>something to track Jupiter! Shortly there will be emissions on 438.1
MHz
>from a Mars probe. Tracking programs for planets are NOT trivial but I
>too would like to locate something similar.

Instant Track, and other typical satellite tracking programs, are only designed to track satellites which are in orbit around the Earth. Sometimes additional 'special' objects like the Sun are included because they're important for certain types of calculations (e.g. when is the satellite in shadow). In theory the moon can be treated just as another satellite in orbit around Earth. In practice it's so far out that the Sun's gravitational pull is a significant pertubation on its orbit, and the moon's relatively large, so the assumption that satellites are point masses can no longer be considered valid.

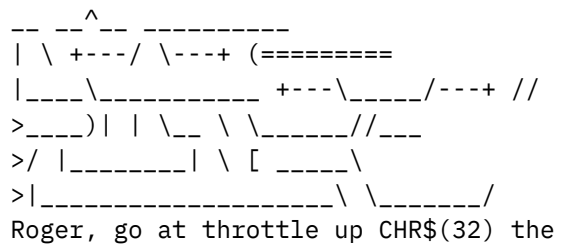
However, there are many *EXCELLENT* ways to track the planets - going back to the ancient Greek and Babylonian astronomers. Mechanical wheels called 'orreys' were extremely popular for predicting the locations of the planets with excellent accuracy. (As a side comment, many of these devices still work - even though they make the initial assumption that the Earth is the unmoving center of the universe. Which only proves that any coordinate system can be made a valid one if you stick with it.)

But we're talking about computers here, not museum pieces. Just get a good star chart / planetarium simulator computer program. I've used 'Dance of the Planets' on the PC and "Voyager" on the Macintosh. Voyager is particularily good for showing where the planets are and similating different scenarios through time. The "Orbittrack" earth-satellite tracking program for the Mac even makes an output file which is compatible with Voyager. I can take a large object (i.e. the shuttle, Hubble, UARS, GRO, some secret military satellites - shhh!) and predict when and where they'll be passing overhead in Orbittrack, and then output the file to Voyager which will show me the constellations it will pass through.

For the Mars beacon using Voyager will be a piece of cake to just input the solar kepleraians for the spacecraft after it's launched, and then the program will show you where to point your beams antenna.

Of course getting good enough gain and an adequate pre-amp is up to you
...

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

326. Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fhdt1$kgi@paperboy.ids.net>
Source record: 22993

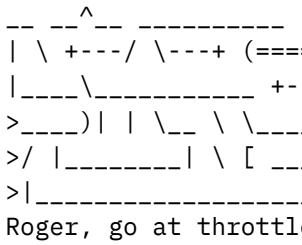
In article <kenhDMEDHr.4H2@netcom.com> Ken Harris, kenh@netcom.com writes:
> I saw an article in National Geographic at indicated that
>members of an expedition to the north pole (if memory serves) used
>some sort of new fangled gadget to send updates via satellite back
>home. They had a photo of some people gathered around a notebook PC,
>and a photo of a simple (dipole?) antenna.
>
> Anyone know how this worked? Commercial or amateur?

Actually it's not even that difficult or unique anymore. At the North Pole you're far enough away from everybody else so you don't have too much competition to use the low altitude satellites. And all of the polar satellites eventually go close to the pole (hence the term polar satellites).

Many years ago one team used a laptop computer and UOSAT (UO-11) to determine their location and status each day. They used a standard hiking ELT (Emergency Location Transmitter) which sent a beacon which was heard on the NOAA and Cosmos satellites which are part of the COPAS/SARASAT program. The ground stations determined their location, and passed that data to the satellite operators which sent packet messages addressed to the expedition with their location.

Naturally something like this should only be done with the consent of all involved - otherwise emergency rescue teams might be sent out by accident, and you might lose your amatuer license for using your transmitter for non-amateur purposes. Your mileage may vary.

Of course today the simpler solution would be to use a GPS receiver, but I'm certain any polar team would want to use some similar method to transmit data back to their home station.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

327. NORAD Two-Line Orbital Element Sets (TLE752)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4fgono$2ed@blackbird.afit.af.mil>
Source record: 22994

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

```
- Current Two-Line Element Sets #752 -
Alouette 1
1 00424U 62049A 96037.56152239 .00000065 00000-0 65726-4 0 1723
2 00424 80.4568 53.6224 0025271 13.9656 346.2188 13.67861305664347
ATS 1
1 02608U 66110A 96025.41069411 -.00000221 00000-0 10000-3 0 9538
2 02608 14.6379 354.3618 0009314 79.8619 280.2548 1.00399699 23421
ATS 3
1 03029U 67111A 96039.54061009 -.00000107 00000-0 10000-3 0 4529
2 03029 14.8935 1.1740 0011524 261.0581 324.8635 1.00272670103465
Starlette
1 07646U 75010A 96038.10586903 -.00000172 00000-0 -22828-4 0 9475
2 07646 49.8278 305.9806 0206283 157.6141 203.3914 13.82189414 60830
LAGEOS
1 08820U 76039A 96036.44111722 -.00000001 00000-0 10000-3 0 1694
2 08820 109.8607 340.5275 0044140 157.8439 202.3968 6.38664761205359
ETS-2
1 09852U 77014A 96039.30677794 -.00000283 00000-0 10000-3 0 611
2 09852 13.0710 34.4343 0003287 131.4435 228.6545 1.00022438 16346
GOES 2
1 10061U 77048A 96039.45441811 .00000056 00000-0 10000-3 0 6395
2 10061 12.1785 38.6184 0010693 144.7401 301.8649 1.00263695 13146
IUE
1 10637U 78012A 96040.09602150 -.00000195 00000-0 10000-3 0 2305
2 10637 35.5612 85.1724 1348530 53.4932 2.3668 1.00269729 18648
GPS BI-01
1 10684U 78020A 96037.01760720 -.00000023 00000-0 10000-3 0 4247
2 10684 64.9414 27.7964 0059296 164.1795 196.0146 1.98069517116795
GPS BI-02
1 10893U 78047A 96039.85753425 .00000048 00000-0 10000-3 0 2138
2 10893 63.2113 265.1383 0229376 15.1278 345.7023 2.01626773130204
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GOES 3
1 10953U 78062A 96039.25313010 -.00000119 00000-0 10000-3 0 6121
2 10953 11.1625 41.4330 0001935 291.0261 153.7761 1.00278833 17752
SeaSat 1
1 10967U 78064A 96036.15656340 -.00000068 00000-0 22059-4 0 4624
2 10967 108.0011 259.5219 0002886 251.4082 108.6734 14.38084541922320
GPS BI-03
1 11054U 78093A 96039.77929200 .00000051 00000-0 10000-3 0 3816
2 11054 62.9233 263.9683 0045898 180.1753 179.8767 1.93505273126159
Nimbus 7
1 11080U 78098A 96039.12140353 -.00000059 00000-0 -15605-4 0 5632
2 11080 98.9698 267.5520 0009160 323.2997 36.7527 13.83697006873189
GPS BI-04
1 11141U 78112A 96038.17223643 -.00000017 00000-0 10000-3 0 265
2 11141 64.9412 29.9704 0049372 27.4624 332.8033 1.92894742 15359
GPS BI-05
1 11690U 80011A 96036.22770545 -.00000021 00000-0 10000-3 0 9889
2 11690 65.2798 29.3325 0150749 193.3878 166.2669 2.00570105131534
GPS BI-06
1 11783U 80032A 96028.78253357 .00000029 00000-0 10000-3 0 1265
2 11783 62.3609 258.3748 0224223 29.7372 331.5890 2.03456519115977
GOES 5
1 12472U 81049A 96035.04360927 -.00000140 00000-0 10000-3 0 9127
2 12472 7.9451 51.6309 0005034 45.5746 314.5796 1.00206181 11759
Cosmos 1383
1 13301U 82066A 96036.58340545 .00000010 00000-0 -53890-5 0 4692
2 13301 82.9296 231.0120 0026034 245.6749 114.1685 13.68071566679244
LandSat 4
1 13367U 82072A 96039.52382670 .00000020 00000-0 14226-4 0 8416
2 13367 98.0971 94.2537 0006361 173.7446 186.3851 14.57169932721654
DMSP B5D2-1
1 13736U 82118A 96039.53934026 .00000022 00000-0 27517-4 0 9472
2 13736 98.6263 229.9960 0009237 49.4665 310.7317 14.25769781682590
IRAS
1 13777U 83004A 96039.50593129 -.00000110 00000-0 -46227-4 0 2230
2 13777 98.9621 227.7551 0013836 98.5327 261.7427 13.99238104335231
Cosmos 1447
1 13916U 83021A 96037.73654316 .00000016 00000-0 32486-6 0 5660
2 13916 82.9473 288.2670 0037860 155.8136 204.4807 13.74334997645685
TDRS 1
1 13969U 83026B 96040.20063263 -.00000122 00000-0 00000+0 0 5427
2 13969 8.7719 44.9365 0003104 279.9690 140.4281 1.00435410 20092
GOES 6
1 14050U 83041A 96040.18268287 -.00000250 00000-0 10000-3 0 4859
2 14050 6.7840 54.8597 0002346 11.3473 60.7271 1.00293596104901
OSCAR 10
1 14129U 83058B 96033.93435660 .00000153 00000-0 10000-3 0 4020
2 14129 26.3781 225.9024 5983982 347.5718 2.5114 2.05882205 67085
LandSat 5
1 14780U 84021A 96039.70382613 -.00000009 00000-0 84308-5 0 4232
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2 14780 98.3524 97.3928 0003014 358.2338 1.8848 14.57039070635077
UoSat 2
1 14781U 84021B 96038.52817046 .00000074 00000-0 20298-4 0 8608
2 14781 97.7901 35.1320 0012410 143.4352 216.7701 14.69424238638464
GPS BI-09
1 15039U 84059A 96035.08838698 -.00000033 00000-0 10000-3 0 3914
2 15039 64.5945 24.4014 0082203 18.6662 341.6511 1.92302256 84858
Cosmos 1574
1 15055U 84062A 96038.35733410 .00000021 00000-0 60536-5 0 7679
2 15055 82.9551 342.4256 0027797 349.5209 10.5362 13.73631381583029
GPS BI-10
1 15271U 84097A 96039.35069073 .00000055 00000-0 10000-3 0 1125
2 15271 62.0537 258.5198 0159183 357.1545 2.8287 2.00609571 82665
Cosmos 1602
1 15331U 84105A 96038.51028203 .00000158 00000-0 15658-4 0 4514
2 15331 82.5332 235.4489 0021566 23.5138 336.7064 14.84719956613581
NOAA 9
1 15427U 84123A 96039.83756330 .00000093 00000-0 73069-4 0 5772
2 15427 98.9664 104.5932 0014319 323.6998 36.3204 14.13760395575357
GPS BI-11
1 16129U 85093A 96035.16193575 -.00000026 00000-0 10000-3 0 7041
2 16129 65.2747 27.8780 0156130 85.3305 276.4731 1.89368088 19386
Mir
1 16609U 86017A 96040.27557317 .00000254 00000-0 10000-4 0 4025
2 16609 51.6446 49.9180 0005422 319.6651 40.3893 15.57837197569915
SPOT 1
1 16613U 86019A 96040.20519161 .00000090 00000-0 62356-4 0 8977
2 16613 98.6262 110.9582 0001084 36.7441 323.3809 14.20090465202009
Cosmos 1766
1 16881U 86055A 96036.73918588 .00000136 00000-0 13405-4 0 3666
2 16881 82.5197 294.8764 0021250 54.3453 305.9727 14.83707065514208
EGP
1 16908U 86061A 96036.17356359 -.00000083 00000-0 10000-3 0 625
2 16908 50.0108 45.9437 0011311 34.9293 325.2282 12.44413802 99842
NOAA 10
1 16969U 86073A 96039.86144490 .00000061 00000-0 44241-4 0 4966
2 16969 98.5165 40.6697 0013943 14.6630 345.4937 14.24973313488180
MOS-1
1 17527U 87018A 96039.19372013 -.00000044 00000-0 00000+0 0 3823
2 17527 98.9655 103.9495 0016966 328.3767 31.6382 14.00433720456799
GOES 7
1 17561U 87022A 96039.54358973 .00000050 00000-0 10000-3 0 7605
2 17561 2.8074 70.6220 0003910 338.1146 155.0080 1.00344743 16001
Kvant-1
1 17845U 87030A 96038.99259108 .00014183 00000-0 19294-3 0 5296
2 17845 51.6447 56.3488 0005053 313.4350 46.6164 15.57842997503822
DMSP B5D2-3
1 18123U 87053A 96039.73353346 -.00000017 00000-0 13703-4 0 3147
2 18123 98.7727 232.1331 0013331 265.1230 94.8418 14.15430920446188
RS-10/11
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1 18129U 87054A 96037.08738811 .00000048 00000-0 35538-4 0 1741
2 18129 82.9245 246.1704 0011842 154.1578 206.0170 13.72362024432054
Meteor 2-16
1 18312U 87068A 96040.20839496 .00000013 00000-0 -13163-5 0 4588
2 18312 82.5551 94.3954 0010701 220.4215 139.6147 13.84070974428336
Meteor 2-17
1 18820U 88005A 96039.77587926 .00000022 00000-0 68146-5 0 8496
2 18820 82.5437 150.0534 0015366 293.3445 66.6098 13.84750487405617
DMSP B5D2-4
1 18822U 88006A 96040.03513525 .00000005 00000-0 20575-4 0 1817
2 18822 98.3889 238.2029 0006694 28.4140 331.7399 14.23179953416200
Glonass 34
1 19163U 88043A 96040.01063173 .00000018 00000-0 10000-3 0 526
2 19163 65.2073 90.2017 0007567 161.0839 199.0203 2.13102381 59488
Glonass 36
1 19165U 88043C 96033.49777536 .00000006 00000-0 10000-3 0 4584
2 19165 65.1891 90.3727 0001895 329.4278 30.6390 2.13102079 59965
METEOSAT 3
1 19215U 88051A 96038.56960450 -.00000051 00000-0 10000-3 0 2388
2 19215 3.0022 68.5120 0003710 148.8882 211.1854 0.96946741 15913
AO-13
1 19216U 88051B 96039.51647137 .00000225 00000-0 34097-4 0 1484
2 19216 57.3470 136.3032 7372087 31.3989 356.6231 2.09724794 27113
OKEAN 1
1 19274U 88056A 96036.48965779 .00000275 00000-0 31321-4 0 662
2 19274 82.5113 35.8009 0018607 196.0920 163.9705 14.82444448409714
Meteor 3-2
1 19336U 88064A 96037.12479381 .00000051 00000-0 10000-3 0 4577
2 19336 82.5421 259.8710 0016306 202.0130 158.0293 13.16975860362096
Glonass 39
1 19503U 88085C 96035.87336748 -.00000050 00000-0 10000-3 0 3484
2 19503 65.6289 329.2149 0006498 161.5000 198.5158 2.13101833 57502
NOAA 11
1 19531U 88089A 96039.87039902 .00000027 00000-0 39722-4 0 3863
2 19531 99.1942 54.5772 0010850 241.0827 118.9254 14.13081555380186
TDRS 2
1 19548U 88091B 96036.25371332 -.00000195 00000-0 10000-3 0 1782
2 19548 2.2330 72.9694 0006379 179.3689 59.1402 1.00272505 14192
Glonass 40
1 19749U 89001A 96039.19616616 .00000020 00000-0 10000-3 0 5689
2 19749 65.1572 89.7663 0002672 258.2695 101.7585 2.13102905 55089
Glonass 41
1 19750U 89001B 96038.31289842 .00000022 00000-0 10000-3 0 4749
2 19750 65.1746 89.8480 0005944 219.1356 140.9062 2.13101769 55089
GPS BII-01
1 19802U 89013A 96039.51628050 .00000005 00000-0 10000-3 0 1839
2 19802 55.2795 115.8190 0023556 187.9648 172.0638 2.00565499 51119
Akebono
1 19822U 89016A 96038.80158547 .00008762 00000-0 45991-3 0 6586
2 19822 75.0853 199.3878 3758007 204.4515 131.9328 7.89887977156388
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Meteor 2-18
1 19851U 89018A 96037.59748491 .00000044 00000-0 25872-4 0 4566
2 19851 82.5168 26.0000 0014670 352.1959 7.8960 13.84405386350624
MOP-1
1 19876U 89020B 96039.73744014 -.00000093 00000-0 10000-3 0 1783
2 19876 1.7186 71.3404 0019243 277.5827 82.6107 0.97109727 5362
TDRS 3
1 19883U 89021B 96039.65594907 -.00000266 00000-0 00000+0 0 1762
2 19883 0.0496 273.0504 0003010 57.4588 2.6661 1.00271077197803
GPS BII-02
1 20061U 89044A 96038.85738758 -.00000014 00000-0 10000-3 0 1847
2 20061 54.2832 291.7762 0150271 216.5044 142.5477 2.00563119 48848
Nadezhda 1
1 20103U 89050A 96039.86828315 .00000022 00000-0 69783-5 0 6669
2 20103 82.9578 204.0339 0038807 54.0108 306.4605 13.73862452330924
GPS BII-03
1 20185U 89064A 96038.19776491 .00000006 00000-0 10000-3 0 2019
2 20185 55.0801 116.3637 0021924 315.2126 44.6654 2.00555863 47400
GMS 4
1 20217U 89070A 96040.21307292 -.00000366 00000-0 10000-3 0 3052
2 20217 1.5271 75.5251 0001035 90.2579 169.7916 1.00269979 24127
INTERCOSMOS 24
1 20261U 89080A 96038.41849013 .00000174 00000-0 51336-4 0 4744
2 20261 82.5924 354.2473 1242157 339.0819 16.3394 12.47320342289605
GPS BII-04
1 20302U 89085A 96039.73061556 .00000062 00000-0 10000-3 0 1913
2 20302 53.2979 231.6314 0015652 189.5791 170.4415 2.00562232 46232
Meteor 3-3
1 20305U 89086A 96039.96201677 .00000044 00000-0 10000-3 0 4948
2 20305 82.5558 213.9357 0005768 257.9137 102.1341 13.04431198301353
COBE
1 20322U 89089A 96039.48414867 -.00000186 00000-0 -90843-4 0 1876
2 20322 98.9481 56.8629 0009779 39.4228 320.7657 14.03450158318739
Kvant-2
1 20335U 89093A 96038.99259108 .00014183 00000-0 19294-3 0 5059
2 20335 51.6447 56.3488 0005053 313.4350 46.6164 15.57842997352833
GPS BII-05
1 20361U 89097A 96037.24934376 -.00000015 00000-0 10000-3 0 316
2 20361 55.9139 58.4980 0083928 130.4953 230.2872 2.00563489 35666
COSMOS 2054 (Altair-1)
1 20391U 89101A 96039.04059294 -.00000132 00000-0 00000+0 0 2870
2 20391 3.5910 64.3174 0001138 252.2748 179.3603 1.00272866 22693
SPOT 2
1 20436U 90005A 96038.22456221 .00000169 00000-0 10000-3 0 282
2 20436 98.7118 114.0287 0001485 19.1734 340.9493 14.20039633313254
UO-14
1 20437U 90005B 96037.77845444 -.00000020 00000-0 91187-5 0 1590
2 20437 98.5546 123.2202 0010117 229.2390 130.7913 14.29911022315277
UO-15
1 20438U 90005C 96038.20906287 -.00000012 00000-0 12217-4 0 9554
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2 20438 98.5486 121.8028 0009197 233.8040 126.2293 14.29223898315212
PACSAT
1 20439U 90005D 96039.77046043 -.00000010 00000-0 13171-4 0 9584
2 20439 98.5675 127.1877 0010475 224.2727 135.7618 14.29965691315570
DO-17
1 20440U 90005E 96039.17583732 .00000001 00000-0 17067-4 0 9588
2 20440 98.5648 127.1682 0010608 224.7649 135.2676 14.30107399315510
WO-18
1 20441U 90005F 96037.27385039 -.00000016 00000-0 10732-4 0 9622
2 20441 98.5676 125.2491 0011267 229.2899 130.7303 14.30077313315247
LO-19
1 20442U 90005G 96039.23850653 .00000001 00000-0 17287-4 0 9580
2 20442 98.5704 127.6262 0011397 223.4872 136.5409 14.30184050315544
GPS BII-06
1 20452U 90008A 96036.64929357 .00000016 00000-0 10000-3 0 1240
2 20452 54.0450 172.1526 0059899 85.9106 274.7356 2.00560263 44158
MOS-1B
1 20478U 90013A 96039.54798333 .00000090 00000-0 10000-3 0 8906
2 20478 99.1223 110.5877 0001049 334.1968 25.9106 13.94869323226489
DEBUT
1 20479U 90013B 96037.59678130 -.00000055 00000-0 -58323-4 0 9570
2 20479 99.0484 87.5634 0541197 62.1449 303.3401 12.83336897281021
FO-20
1 20480U 90013C 96037.62207468 -.00000030 00000-0 -27194-5 0 8540
2 20480 99.0453 87.4000 0541424 62.6216 302.8912 12.83232078281011
MOS-1B R/B
1 20491U 90013D 96038.83548331 .00000371 00000-0 76989-3 0 2143
2 20491 99.0699 149.2436 0469063 239.6158 115.7800 13.02980287284883
LACE
1 20496U 90015A 96039.84760267 .00000161 00000-0 12917-4 0 6194
2 20496 43.1039 221.5160 0011335 295.5840 64.3852 15.35329314333942
Nadezhda 2
1 20508U 90017A 96039.82125412 .00000049 00000-0 36564-4 0 6677
2 20508 82.9562 338.6080 0045076 7.8621 352.3225 13.73504528298136
OKEAN 2
1 20510U 90018A 96038.22842036 .00000129 00000-0 14488-4 0 4759
2 20510 82.5226 347.4812 0020526 30.8589 329.3804 14.78571620320322
GPS BII-07
1 20533U 90025A 96036.05093184 -.00000016 00000-0 10000-3 0 1661
2 20533 54.6694 292.5729 0050512 76.1487 284.4863 2.00552828 42914
PegSat
1 20546U 90028A 96040.23661003 .00003652 00000-0 69693-4 0 8954
2 20546 94.1231 279.0142 0062609 141.4731 219.1021 15.46127434325078
HST
1 20580U 90037B 96039.26192502 .00000386 00000-0 23024-4 0 7718
2 20580 28.4696 333.6823 0005929 252.3423 107.6514 14.91011154119176
MACSAT 2
1 20608U 90043B 96039.83863658 .00000122 00000-0 18002-4 0 1594
2 20608 89.9295 174.4860 0106287 146.8533 213.9404 14.64898039307357
Glonass 44
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1 20619U 90045A 96038.15653106 -.00000037 00000-0 10000-3 0 2683
2 20619 65.2296 328.4352 0023797 205.7463 154.1030 2.13102295 44515
Glonass 45
1 20620U 90045B 96033.11330907 -.00000071 00000-0 10000-3 0 2652
2 20620 65.2275 328.5989 0008081 24.0796 335.9624 2.13102479 44445
Glonass 46
1 20621U 90045C 96034.11910101 -.00000063 00000-0 10000-3 0 8549
2 20621 65.2430 328.6248 0012866 199.3685 160.5952 2.13101778 44466
Kristall
1 20635U 90048A 96038.99259108 .00014183 00000-0 19294-3 0 2983
2 20635 51.6447 56.3488 0005053 313.4350 46.6164 15.57842997323665
ROSAT
1 20638U 90049A 96038.75415087 -.00000279 00000-0 73256-6 0 5314
2 20638 52.9922 166.4244 0014368 95.6644 264.5980 15.07348187312647
Meteor 2-19
1 20670U 90057A 96038.13588869 -.00000077 00000-0 -81887-4 0 9565
2 20670 82.5457 91.9699 0014250 266.1627 93.7908 13.84146251283614
CRRES
1 20712U 90065A 96038.85309748 .00000001 00000-0 54657-4 0 2166
2 20712 18.0716 304.0262 7181163 279.7948 12.6236 2.35655527 40045
GPS BII-08
1 20724U 90068A 96038.37164866 .00000005 00000-0 00000+0 0 02
2 20724 54.9083 113.9300 0136912 172.7236 187.2558 2.00565389 38828
Feng Yun1-2
1 20788U 90081A 96039.50913211 .00000089 00000-0 87136-4 0 7200
2 20788 98.8125 49.4468 0014476 133.7526 226.4840 14.01393063277938
Meteor 2-20
1 20826U 90086A 96038.45735365 .00000054 00000-0 35342-4 0 9670
2 20826 82.5213 28.3512 0013293 158.2609 201.9119 13.83624729270761
GPS BII-09
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TDRS 4
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KO-23
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ASTRO-D
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UFO F1
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OKEAN 1-7
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RESURS 1-3
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2 23621 64.8371 208.3322 0017762 172.4241 187.5907 2.13102461 4235
Glonass 76
1 23622U 95037C 96039.22768104 .00000079 00000-0 00000+0 0 1016
2 23622 64.8340 208.3343 0036964 162.2462 197.8719 2.13102393 4231
Prognoz-M2
1 23632U 95039A 96039.72701810 .00000345 00000-0 00000+0 0 346
2 23632 66.8700 253.9520 8751454 318.4630 347.7840 0.26349800 500
SICH-1
1 23657U 95046A 96037.18455838 .00000158 00000-0 20688-4 0 548
2 23657 82.5364 322.0576 0028664 115.0299 245.3894 14.73450690 23392
Soyuz TM-22
1 23665U 95047A 96038.99259108 .00014183 00000-0 19294-3 0 1498
2 23665 51.6447 56.3488 0005053 313.4350 46.6164 15.57842997 24580
RADARSAT
1 23710U 95059A 96039.05362354 -.00000044 00000-0 00000+0 0 984
2 23710 98.5820 47.5830 0000803 73.0849 287.0424 14.29991584 13649
ISO
1 23715U 95062A 96039.94946695 .00000026 00000-0 10000-3 0 330
2 23715 4.6888 310.7562 8218962 123.1953 340.0978 1.00216821 842
Glonass 77
1 23734U 95068A 96039.34509468 .00000080 00000-0 00000+0 0 564
```

```
2 23734 64.8337 208.2484 0018166 328.3971 31.4800 2.13102089 1200
Glonass 78
1 23735U 95068B 96037.22595667 .00000065 00000-0 00000+0 0 525
2 23735 64.8298 208.3127 0005536 204.7003 155.2642 2.13125027 1152
Glonass 79
1 23736U 95068C 96037.70258401 .00000068 00000-0 00000+0 0 412
2 23736 64.8260 208.3092 0006552 185.6444 174.3347 2.13102167 1163
Progress M-30
1 23744U 95070A 96038.99259108 .00014183 00000-0 19294-3 0 514
2 23744 51.6447 56.3488 0005053 313.4350 46.6164 15.57842997 8029
PANAMSAT 3R
1 23764U 96002A 96039.37452471 -.00000271 00000-0 00000+0 0 259
2 23764 0.0796 346.3799 0027377 324.0427 279.4175 1.00264644 209
MEASAT 1
1 23765U 96002B 96039.24157247 -.00000246 00000-0 00000+0 0 206
2 23765 0.2157 249.0574 0003992 153.0178 274.1289 1.00273812 275
1996002C
1 23766U 96002C 96039.00279389 .00004036 00000-0 12470-2 0 165
2 23766 6.8751 268.0463 7343294 197.7934 106.8370 2.20273071 575
1996002D
1 23767U 96002D 96035.83618897 .00039860 00000-0 58902-2 0 145
2 23767 6.9028 267.6243 7279716 196.9502 110.7165 2.29766333 522
KOREASAT 2
1 23768U 96003A 96038.43736620 -.00000364 00000-0 00000+0 0 298
2 23768 0.0812 278.6046 0005023 321.8858 169.8639 1.00231890 249
1996003B
1 23769U 96003B 96038.05664781 .00001754 00000-0 98703-4 0 98
2 23769 25.3214 322.9384 0741857 127.2280 239.8264 13.90825056 3276
1996003C
1 23770U 96003C 96038.17762523 -.00000105 00000-0 10000-3 0 123
2 23770 21.0754 96.9204 6894124 11.0833 358.6930 2.19755451 520
Cosmos 2327
1 23773U 96004A 96038.19370164 .00000024 00000-0 10000-4 0 103
2 23773 82.9805 1.2047 0046649 221.2623 138.5000 13.73743270 2957
1996004B
1 23774U 96004B 96039.76551918 .00004173 00000-0 42900-2 0 208
2 23774 82.9779 0.0008 0039652 207.5477 152.2961 13.75602472 3176
Gorizont 31
1 23775U 96005A 96040.22368056 .00000147 00000-0 00000+0 0 302
2 23775 1.4745 286.0544 0005121 261.1847 72.1532 1.00258473 19240
1996005B
1 23776U 96005B 96029.00921427 .12303299 12826-4 88259-4 0 243
2 23776 51.6236 262.3386 0004734 331.6874 28.6897 16.52754420 590
1996005C
1 23777U 96005C 96026.14116828 .13925704 12407-4 11512-2 0 59
2 23777 51.6295 278.5026 0004191 56.6687 303.5124 16.38908937 124
1996005D
1 23778U 96005D 96039.59526092 -.00000088 00000-0 10000-3 0 28
2 23778 1.5023 284.2150 0021914 159.5398 202.4691 0.97175353 148
Palapa C-1
```

```
1 23779U 96006A 96037.22443290 -.00000464 00000-0 00000+0 0 74
2 23779 2.2630 327.4730 4603657 182.5580 179.9300 0.51210014 80
1996006B
1 23780U 96006B 96032.71463671 .00000883 00000-0 61696-2 0 20
2 23780 21.8572 328.6474 8706467 181.0926 172.9136 0.74675025 12
1996007A
1 23781U 96007A 96039.53394655 -.00000151 00000-0 00000+0 0 101
2 23781 0.5289 55.5698 0839775 184.6039 181.0370 1.13246464 40
1996007B
1 23782U 96007B 96038.82387768 .00038609 -42185-7 69569-3 0 26
2 23782 6.7974 61.5795 7387774 179.2201 180.0242 2.19524432 59
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

328. Re: Getting Started

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fhd2j$kgi@paperboy.ids.net>
Source record: 22995

In article <4fa9rm$nue@news.moneng.mei.com> Joe Lambert,
joe.lambert@mail.mei.com writes:
> I'm a software engineer and I am very interested in getting involved
>and learning Amateur radio communications with satellites and SETI. I
>went to a local ham fest and learned a little.

Did AMSAT have a booth at the hamfest? Generally there's some good literature available, hams with satellite experience to talk to, and some excellent books to purchase.

There are plenty of brochures, and some beginner's guides you can purchase which are normally available at the hamfests. If you can't find them give AMSAT headquarters a call at 301-589-6062 and ask them for information. Or browse the AMSAT WWW site at http://www.amast.org

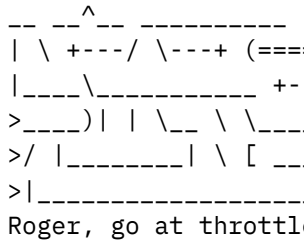
One excellent source I've found is "The Satellite Experimenter's Handbook" which is published by the League. 8x10 bound with a brown border on its cover. Very popular and available at every hamfest I've ever been to.

>However, I have no idea what
>band, frequency, radio, antenna, etc. I need.

A typical beginner's set up includes a 2 meter all-mode radio with a trackable beam antenna, and either a 10 meter all-mode receiver or a 70 cm. all-mode radio depending on what birds you want to operate. But there are exceptions - I've only got 2 meter FM equipment at the present which limits me to the shuttle, Mir, and a couple of specialized satellites.

It seems there are many different
>avenues one can follow, I'm looking for satellite linking and SETI
>information, what equipment and the like will I need?

Blatant plug - check out the April issue of "Popular Mechanics" for information on the SETI League. Or just check their web site (I forgot the URL)

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

329. Re: Help Macintosh and Satelites

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: chuckm@zocalo.com
Message-ID: <chuckm-0902962247410001@lr8e1-port1.zocalo.net>
Source record: 22996

```
> In article <4eec1n$9aa@hp5.online.apple.com>, r.serna@eworld.com (R.Serna)
> wrote:
>
> > Dears friens:
> >
> > I am interested in some software similar to PB/PG or Wisp for
> > Apple Macintosh Computer,please send me information
> > mi E,mail is: R.Serna@eworl.com
> >
> > thank`s EA3CFC

I use a program called OrbiTrack. Should be available on radio-oriented
ftp sites or contact:

| Bill Bard |
| BEK Developers |
| bekdev@innet.com |
-- -- -- -- -- -- -- --
```

330. Re: 'tracking' planets Re: KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@biggulp.callamer.com>
Message-ID: <Pine.OSF.3.91.960210115137.24523A-100000@biggulp.callamer.com>
Source record: 22997

Thanks you Philip for the suggestions regarding tracking planets. Indeed
I understand that most programs track only earth satellites.
You make a good case for using the program "voyager" but most of us
do not have access to Mac programs. So far, it appears that "Dance of
the Planets" is the only alternative.
As you observe, tracking the proposed Mars probe on 438.1 MHz is not
a planet track and will require other information. Just the idea of
having to use DSP in order to obtain any infomation will turn many off.
Possibly we can still find a simple method of finding antenna
pointing information by the use of Right Assention and Declination.
This sounds like a job for a calculator! Cliff Buttschardt W6HDO

331. Re: Help Macintosh and Satelites

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-1002961501070001@jake-7e.ip.realtime.net>
Source record: 22998

In article <chuckm-0902962247410001@lr8e1-port1.zocalo.net>,
chuckm@zocalo.com (Chuck Meyer) wrote:

> > In article <4eec1n$9aa@hp5.online.apple.com>, r.serna@eworld.com (R.Serna)
> > wrote:
> >
> > > Dears friens:
> > >
> > > I am interested in some software similar to PB/PG or Wisp for
> > > Apple Macintosh Computer,please send me information
> > > mi E,mail is: R.Serna@eworl.com
> > >
> > > thank`s EA3CFC
>
> I use a program called OrbiTrack. Should be available on radio-oriented
> ftp sites or contact:
>
> | Bill Bard |
> | BEK Developers |
> | bekdev@innet.com |
> -- -- -- -- -- -- -- --

OrbiTrack is not a substitute for WiSP or PB.

Look at http://www.clark.net/pub/mackall/home.html for a beta protocol
program for the Mac.

Ron W5RKN

--
Ron W5RKN

332. Re: Help Macintosh and Satelites

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-1002961502270001@jake-7e.ip.realtime.net>
Source record: 22999

In article <chuckm-0902962247410001@lr8e1-port1.zocalo.net>,
chuckm@zocalo.com (Chuck Meyer) wrote:

> > In article <4eec1n$9aa@hp5.online.apple.com>, r.serna@eworld.com (R.Serna)
> > wrote:
> >
> > > Dears friens:
> > >
> > > I am interested in some software similar to PB/PG or Wisp for
> > > Apple Macintosh Computer,please send me information
> > > mi E,mail is: R.Serna@eworl.com
> > >
> > > thank`s EA3CFC
>
> I use a program called OrbiTrack. Should be available on radio-oriented
> ftp sites or contact:
>
> | Bill Bard |
> | BEK Developers |
> | bekdev@innet.com |
> -- -- -- -- -- -- -- --

OrbiTrack is not a substitute for WiSP or PB.

Look at http://www.clark.net/pub/mackall/home.html for a beta protocol
program for the Mac.

Ron W5RKN

--
Ron W5RKN

333. ARLK008 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-02-10 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk008.1996@arrl.org>
Source record: 23000
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK008
ARLK008 Keplerian data

ZCZC SK08
QST de W1AW
Keplerian Bulletin 8 ARLK008
From ARRL Headquarters
Newington, CT February 10, 1996
To all radio amateurs

SB KEP ARL ARLK008
ARLK008 Keplerian data

Thanks to NASA, AMSAT and WA5QGD for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96040.27557317 .00000254 00000-0 10000-4 0 04025
2 16609 51.6446 49.9180 0005422 319.6651 40.3893 15.57837197569915
AO-10
1 14129U 83058B 96033.93435660 .00000153 00000-0 10000-3 0 04020
2 14129 26.3781 225.9024 5983982 347.5718 2.5114 2.05882205067085
RS-10/11
1 18129U 87054A 96040.07662078 .00000050 00000-0 38040-4 0 01918
2 18129 82.9242 243.9599 0011986 146.1097 214.0825 13.72362233432467
UO-11
1 14781U 84021B 96040.43483376 .00000098 00000-0 24396-4 0 08717
2 14781 97.7902 36.9512 0012376 137.3544 222.8627 14.69424857638746
RS-12/13
1 21089U 91007A 96040.15348336 .00000051 00000-0 38605-4 0 8653
2 21089 82.9232 285.0370 0027519 231.4113 128.4574 13.74065718251317
AO-13
1 19216U 88051B 96039.51647137 .00000225 00000-0 34097-4 0 01484
2 19216 57.3470 136.3032 7372087 31.3989 356.6231 2.09724794027113
UO-14
1 20437U 90005B 96040.22756035 -.00000034 00000-0 38201-5 0 01763
2 20437 98.5546 125.6265 0010232 220.8360 139.2056 14.29910987315624
RS-15
1 23439U 94085A 96040.49242021 -.00000039 00000-0 10000-3 0 01157
2 23439 64.8190 231.2112 0163908 221.5912 137.2444 11.27524030046271
```

```
AO-16
1 20439U 90005D 96040.26026275 -.00000011 00000-0 12713-4 0 09622
2 20439 98.5676 127.6699 0010496 222.6248 137.4118 14.29965700315644
DO-17
1 20440U 90005E 96040.22531041 -.00000016 00000-0 10572-4 0 09651
2 20440 98.5647 128.2012 0010629 221.3257 138.7116 14.30107273315663
WO-18
1 20441U 90005F 96040.28240207 -.00000017 00000-0 10313-4 0 09800
2 20441 98.5674 128.2102 0011267 220.5100 139.5244 14.30077405315676
LO-19
1 20442U 90005G 96040.21796240 -.00000017 00000-0 10166-4 0 09645
2 20442 98.5704 128.5907 0011428 220.0350 139.9997 14.30183932315681
FO-20
1 20480U 90013C 96040.11693105 -.00000033 00000-0 -86064-5 0 08640
2 20480 99.0460 89.4245 0541368 56.9830 308.2087 12.83232087281335
AO-21
1 21087U 91006A 96040.45962917 .00000094 00000-0 82657-4 0 06921
2 21087 82.9392 56.9836 0033761 204.4352 155.5205 13.74565659252328
UO-22
1 21575U 91050B 96040.16752219 .00000013 00000-0 18886-4 0 06724
2 21575 98.3692 110.2993 0007537 300.6989 59.3449 14.37011069239539
KO-23
1 22077U 92052B 96040.26377792 -.00000037 00000-0 10000-3 0 05685
2 22077 66.0788 99.3907 0007201 332.4012 27.6617 12.86295828164222
KO-25
1 22828U 93061F 96040.21130377 .00000020 00000-0 25544-4 0 04322
2 22828 98.5913 118.2163 0009279 235.9548 124.0740 14.28129436091709
IO-26
1 22826U 93061D 96040.19980103 -.00000012 00000-0 12810-4 0 04578
2 22826 98.5951 118.1545 0008538 253.7206 106.3035 14.27794308123596
AO-27
1 22825U 93061C 96040.19371797 -.00000024 00000-0 77797-5 0 04579
2 22825 98.5964 118.0103 0007826 250.4240 109.6106 14.27686133123589
PO-28
1 22829U 93061G 96040.22618410 -.00000056 00000-0 -51522-5 0 04678
2 22829 98.5935 118.2830 0009196 236.1988 123.8320 14.28109290123628

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
February 13, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

334. IC820 and PACSATS

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: bsmith@msn.com
Message-ID: <4fkt3i$md0@news.internetmci.com>
Source record: 23001

Anybody using a IC820 with PACSATS (AO-16). WOuld like to hear from you -
trying to overcome the tuning step - are you doing it manually?

Thank and 73

--

Bob Smith, Atlanta, GA N3FTU
mailto: n3ftu@amsat.org
http://wp.com/~bsmith
TAPR 5412 ARRL

335. Message to all from Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4fkvsh$gql@news.cyberportal.net>
Source record: 23002

```
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
Stat : PR
Posted : 02/09/96 21:19
To : ALL
From : R0MIR
@ BBS :
xID :
Subject: TGIF !!!
CPACTIME ON
SENDPAC $00
CONV
Mir, 9.02.96
Hello Folks,
this is our "Post-EVA TGIF message". Everything went fine, we have done our
work and retrieved two astrophysical cassettes, which were part of the
EUROMIR96-program. Now we are getting more and more into the preparations for
our return. It's friday, and we just would not feel allright if we would not
remind you about the TGIF drinks....
19 days and counting, many greetings,
Juri, Sergei and Thomas.
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

b
- Logged off

they are counting down.. soon a new crew.. Yuri & Yuri or Yuri and Serge? I am not sure..
cya

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

If you pick up a starving dog and make him prosperous, he will not bite you.
This is the principal difference between a dog and a man. - Mark Twain

An elephant is a mouse built to government specifications.

-Lazarus Long
```

336. National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: Aart.Wedemeijer@pa3cpl.idn.nl
Message-ID: <7a3_9602111219@idn.nl>
Source record: 23003

Replying to a message of Philip Chien to All:

PC> From: Philip Chien <kc4yer@amsat.org>
PC> Date: 10 Feb 1996 06:27:45 GMT
PC> Organization: Earth News

PC> In article <kenhDMEDHr.4H2@netcom.com> Ken Harris, kenh@netcom.com
PC> writes:
>> I saw an article in National Geographic at indicated that
>> members of an expedition to the north pole (if memory serves) used some
>> sort of new fangled gadget to send updates via satellite back home.
>> They had a photo of some people gathered around a notebook PC, and a
>> photo of a simple (dipole?) antenna. Anyone know how this worked?
>> Commercial or amateur?

The last few years many (southern) pole stations used KO-23 for sending email.
And pictures too! It's amateur-business so the messages have to be
non-business!

Write me direct if you want to kno more.

Greetings, Aart!
aart.wedemeijer@pa3cpl.idn.nl
http://www.noord.bart.nl/~aartw
(Last revision: January 21)
Using OS/2 WARP and is warping happier with every new fixpack.
Registered shareware: Fleetstreet, Taskbar, PMView, Gibbon double click,
Neologic News and netmanager by ART

337. Friend wants FAQ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: dfougere@dgs.ncs.dnd.ca
Message-ID: <4flucs$5ho@netfs.dnd.ca>
Source record: 23004

have a friend who is interested in any or all facets of comms with orbiting Astro/Cosmonauts. Any leads as to where I may find the FAQ would be greatly appreciated.

I don't make a lotta money, * Don Fougere
But I hava lotta toys, * Spectral Twilight BBS
I'm a 21st Century Digital Boy... * (613) 737-0467
- Bad Religion - * dfougere@dgs.dnd.ca

338. You Can Beam Messages to God for $9.95

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: miles@mail.utexas.edu
Message-ID: <miles-1102962140310001@slip-43-3.ots.utexas.edu>
Source record: 23005
Cross-posted to: sci.electronics.misc,rec.radio.amateur.space

I just came across http://www.golden.org/~startrek/

The text starts out:

"Modern technology has finally caught up with mankind's spiritual
needs. Here is a non-denominational, publicly accessible direct link
to the Heavens that can electronically beam prayers, hopes and
dreams into space, into time, ... into forever.

"Our equipment accepts your letters or drawings, and launches them
electronically at the speed of light on a powerful microwave radio
beam into deep space. As soon as they are sent, they become
available to be intercepted by God, spirits, or extraterrestrials .

"We are not attempting to sell a mystical claim or smoke and
mirrors. We are offering science fact, based on the same
technology that NASA uses to communicate with deep-space
probes like Voyager, and which modern astronomers use to study
the Universe as it was some 10 billion years ago.

"It is well known to modern science that the radio waves on which
the message is carried will endure until our present Universe ceases
to exist - another way of saying until the end of time. That is an
unprecedented lifetime guarantee!"

The page has quite a bit more text. It ends with the pitch:

"The cost is $9.95 per page. This includes the Broadcast
Certificate...with a signed and dated Authentication Seal."

I wonder who signs it...P. T. Barnum? :-)
--
Miles Abernathy, miles@mail.utexas.edu

339. Re: space heritage of electronic components

Newsgroup: rec.radio.amateur.space
Date: 1996-02-11 00:00:00 UTC
From: enigma@SEDS.LPL.Arizona.EDU
Message-ID: <4fjnur$heq@news.ccit.arizona.edu>
Source record: 23006
Cross-posted to: rec.radio.amateur.space,sci.space.science,sci.space.tech,sci.electronics.misc,sci.electronics.components

Sea Witch (pn30@columbia.edu) wrote:
: Matt Peterson <mpeterson@novell.com> wrote:

: >As I understand it, IC's are giving a "industrial" or "military" rating
: >at production time depending on their performance in a hostile
: >environment. Digikey, Mouser, etc. all carry industrial-grade ic's -
: >you'll probably have to contact the manufacturer to find sources for
: >military-grade.

: What are the requirements for industrial & military grade chips, as
: opposed to normal chips? i.e. What do they have to survive?

: Pierce
--

Military or JPL spec electronics have to survive the hostile
environment of beaurocratic red tape. Other than that the parts I used to
help construct the CCD controller and frame buffer for Mars Pathfinder
were not rated much better than comercial grade parts.

enigma@seds.lpl.arizona.edu********************enigma@starfire.lpl.arizona.edu
Andrew Tubbiolo / \ Steward Obs Radio Labs
140 N Highland / Technology high \ Steward Observatory
Tucson Az, 85719 / on the leading edge \ University of Arizona
NO-PHONE-YET / of life \ 520-621-3924
************************Andrew@aspc56.as.arizona.edu************************

340. Broadcasting Radio Station Database for you.....

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: chuck <chuck@mail.flinet.com>
Message-ID: <4fme8u$bsf@news.flinet.com>
Source record: 23007
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.swap

Friend,

A fully functional standalone Broadcasting Radio Station Database for IBM and compatibles with more than 4,000 Radio Station records already. This program covers stations on Longwave, Mediumwave, and Shortwave. Each record contains the Station name, Frequencies, Schedule, Languages, Country, and Continent. The program sorts in same order.

What's needed to get it? Your EMail address and your Postal Mailing address for registration and future information via Post of other Radio Related Database programs. This information will be kept confidential.

If you can read a document written in MS Word(extension is DOC), request the operating instructions for the Radio Station Database Program called Voyageur. You'll get an idea from reading this document of the Voyageur Database and what it does.

Incidently, the program offered with this notice is valid until June 6, 1996.

Hope to hear from you..

Chuck

KA4PRF

341. Re: LogSat ???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <311EFB7C.E4C@primenet.com>
Source record: 23008

Pierre-Francois Monet wrote:
>
> Hi Dear OM's
>
> Who can give me some info on LogSat ?
> Is it a good package for tracking satellite ?
> Where to get info on INTERNET , on wich ftp server can I get a testdrive
> version ?
>
> Many thanks in advance .
>
> Pierre-Francois
> f5bqp
> pf@paris.csd.harris.com
>
> ____
> | |
> | ########## |
> | ## ### ## __ __ __ __ __ Pierre-Francois MONET |
> | ## ### ## | | | | |\ | | | HARRIS CSC:pf@paris.csd.harris.com|
> | _/|_/|_/|_ |- |-- |--| | \ | | |- HARRIS Systemes Electroniques |
> | ## ### ## | | \ | | | \| |__ |__ Phone : (33) 1 34 65 40 50 |
> | ## ### ## Ext. : 4051 |
> | ########## AX25 BBS : f5bqp@f6ptt-1 |
> | ampr.org : 44.151.91.1 |
> |____|
>
> --
> ____
> | |
> | ########## |
> | ## ### ## __ __ __ __ __ Pierre-Francois MONET |

Logsat v5.1 is available from AMSAT http://www.amsat.org/amsat/AmsatHome.html and also on Compuserve in the Ham Radio Forum. I have been using it for about 2 years now and have found it to be the best (most graphical) Windows tracking program by far. The author has made great improvements to the program recently including support for the Kansas City Tracker/Tuner. He is also happy to hear from anyone with suggestions and frequently will incorporate your suggestions into the program. Program also includes a logging module and an antenna design module.

BTW, I do not work for nor recieve any compensation from either the author or LogSat Inc. I just really like the program.

Stephanie
kc7dba@primenet.com

342. LogSat ???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: pf@misg.csd.harris.com
Message-ID: <4fmosu$45s@hawk.hcsc.com>
Source record: 23009

Hi Dear OM's

Who can give me some info on LogSat ?
Is it a good package for tracking satellite ?
Where to get info on INTERNET , on wich ftp server can I get a testdrive
version ?

Many thanks in advance .

Pierre-Francois
f5bqp
pf@paris.csd.harris.com

_____
| |
| ########## |
| ## ### ## __ __ __ __ __ Pierre-Francois MONET |
## ### ##					\			HARRIS CSC:pf@paris.csd.harris.com
_/	_/	_/	_	-	--	--		\			- HARRIS Systemes Electroniques
## ### ##		\			|	__	__ Phone : (33) 1 34 65 40 50
Ext. : 4051
########## AX25 BBS : f5bqp@f6ptt-1
ampr.org : 44.151.91.1
_____

--

_____
| |
| ########## |
| ## ### ## __ __ __ __ __ Pierre-Francois MONET |

343. Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: brent@network.ucsd.edu
Message-ID: <4fnrf9INNrar@network.ucsd.edu>
Source record: 23010

In article <7a3_9602111219@idn.nl> Aart.Wedemeijer@pa3cpl.idn.nl (Aart Wedemeijer) writes:
>Replying to a message of Philip Chien to All:
>
>The last few years many (southern) pole stations used KO-23 for sending email.
>And pictures too! It's amateur-business so the messages have to be
>non-business!
>

Pole hasn't been using any of the Amateur satellites, but rather uses
older inclined geo-syncs for pictures, email etc. The bulk of their
transmissions are on the GOES 3 and LES 9 satellites.

Two years ago we utilized both the LES and GOES 2 satellites to make a
geographic north to geographic south pole internet connection with a US
ice-breaker operating up north.

McMurdo has done a quite bit on the amateur satellites.

Brent

344. Re: LogSat ???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-1202961800480001@maria-5a.ip.realtime.net>
Source record: 23011

In article <4fmosu$45s@hawk.hcsc.com>, pf@misg.csd.harris.com
(Pierre-Francois Monet) wrote:

> Hi Dear OM's
>
> Who can give me some info on LogSat ?
> Is it a good package for tracking satellite ?
> Where to get info on INTERNET , on wich ftp server can I get a testdrive
> version ?
>
> Many thanks in advance .
>
> Pierre-Francois
> f5bqp
> pf@paris.csd.harris.com
>

ftp://ftp.amsat.org/amsat/software/windows/tracking/logsat30.zip

Give it a try.

Ron W5RKN

--
Ron W5RKN

345. Ham Radio Online goes Interactive! Check us out!

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: vbook@vbook.com
Message-ID: <4fnpc6$38f@news.accessone.com>
Source record: 23012
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.antenna,,rec.radio.amateur.equipment,rec.radio.amateur.policy,rec.radio.scanner,rec.radio.shortwave

INTRODUCING HAM RADIO ONLINE INTERACTIVE!
Now you can post free classified ads, DX openings, VHF band openings
and much more. And with over 10,000 readers stopping by last month,
your thoughts will actually get read at this ham radio web site! We are not
just pointers to cyberspace - we've got actual content - feature articles,
newsletters, product reviews, real-time propagation conditions and more.

The February 1996 edition of Ham Radio Online International Magazine
is available at http://www.accessone.com/~vbook/hronline.htm

Some of the NEW February stories include a review of SkyTel's "2-way paging" system,
radio surveillance frequencies, and the effects of two-way radio operation in blasting
zones.

Ham Radio Online has been selected as a featured web site by America Online
and a Top 100 web site for the month of January by Planet Earth, Inc.
New articles are available now and we add articles throughout the month.

Ham Radio Online has up-to-date news about Amateur Radio from around the world,
feature stories, real-time propagation and auroral condition reports, real-time
earthquake and severe weather conditions for emergency communications planning,
online humor section and the Ham Radio Online Library with fully indexed (find
any section with just a mouse click) Part 97 rules and regulations.

Plus we cover broadcasting, shortwave, scanning generally anything having to
do with radio telecommunications.

And we plan to offer some totally cool new services during the coming months. As
always its free and free of ads.

Thanks to you, we had over 10,000 readers stop by during January!

Please enjoy!

73, Ed Mitchell
KF7VY
vbook@vbook.com
http://www.accessone.com/~vbook/hronline.htm

---
personal email to vbook@vbook.com
Visit Ham Radio Online, it's free, at http://www.accessone.com/~vbook/hronline.htm

346. Looking for Dave Larsen, N6JLH

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: p56959@mermaids.es.hac.com
Message-ID: <p56959-1202961954520001@tamc107.es.hac.com>
Source record: 23013

I am looking for the address and / or phone number of Mr. Dave Larsen of Jackson, California. The phone number I had has been changed to an unlisted number.

I have some 'very important news' to relay to him regarding my brother Arturo (LU2EYD) who from time to time communicated with him thru the space station MIR.

Anybody having any knowledge of Mr. Larsen's address and / or phone number, or having direct contact with him (and can relay this message) is requested to contact the undersigned via e-mail or by phone direct to the following phone numbers: (310) 416-4123 office or (310) 575-3342 home.

Any help anyone can provide regarding this matter will be greatly appreciated.

Sincerely,

Jose Fernandez
W6/LU6AND

347. * SpaceNews 12-Feb-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-02-12 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4fog6p$mu8@pilot.njin.net>
Source record: 23014
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.info

```
From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 12-Feb-96 *
Date: 12 Feb 1996 17:50:01 -0500
Organization: Rutgers University
Message-ID: <4fog6p$mu8@pilot.njin.net>

SB NEWS @ AMSAT $SPC0212
* SpaceNews 12-Feb-96 *

BID: $SPC0212

=========
SpaceNews
=========

MONDAY FEBRUARY 12, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* RS-12 NEWS *
==============
The Russian RS-12 Amateur Radio communications satellite has been in Mode
KT since 02-Feb-96. Mode KT takes an uplink on 15 meters and downlinks it
on BOTH the 10 meter and 2 meter bands. Before this change, RS-12 was in
Mode K, and the only downlink was on 15 meters.

The 2-meter downlink is strong, and allows better communications performance
for groundstations who experience difficulties in operating full-duplex on
the 10 and 15 meter HF bands.

[Info via Oscar, DJ0MY]

* RS-12 QSL INFO *
==================
QSLs for contacting the RS-12 ROBOT (autotransponder) are available through:

DF4XW
Werner Schroder
Hermesweg 29
21075 HH 90
Germany

[Info via Maurizio Bertolino]

* SATELLITE FREQUENCIES *
=========================
```

Due to numerous requests for satellite frequency information, G3RWL has provided the following frequency list. All frequencies listed are in Megahertz (MHz):

Satellite Uplink Downlink Beacons Notes
========= ====== ======== ======= =====
OSCAR 10 435.025-175 145.83-98 145.81/987
OSCAR 11 (UoSAT 2) 145.826 Experimental beacon
435.025 on 2401.5 MHz
OSCAR 13(Mode B) 435.425-575 145.825-975 145.813/985
(Mode S) 435.603-639 2400.711-747 2400.664
OSCAR 16 (PACSAT) 145.90-96 437.051 437.026/051 S beacon 2401.143
OSCAR 17 (DOVE) 145.825 S beacon 2401.221
OSCAR 18 (WEBERSAT) 437.102 spare TX on 437.075
OSCAR 19 (LUSAT) 145.84-90 437.126 437.126/154 CW on 437.127
OSCAR 20 (Fuji) 145.9-146 435.8-.9 435.797/91 .797=CW, .910=packet
OSCAR 22 UoSAT 5 145.9/.975 435.120 435.120
OSCAR 23 Kitsat 1 145.85/90 435.175 435.175
OSCAR 25 Kitsat 2 145.87/98 436.500 spare TX 435.175
OSCAR 26 145.875/90/925/95 435.822 secondary TX 435.867
OSCAR 27 AMRAD 145.850 436.797
RS 10 (Mode A) 145.86-90 29.36-40 29.357/403 Robot uplink 145.820
(Mode K) 21.16-20 29.36-40 29.357/403 Robot uplink 21.120
(Mode T) 21.16-20 145.86-90 145.857/903 Modes KA & KT also
RS 11 (Mode A) 145.91-95 29.41-45 29.407/453 Robot uplink 145.830
(Mode K) 21.21-25 29.41-45 29.407/453 Robot uplink 21.130
(Mode T) 21.21-25 145.91-95 145.907/953 Modes KA & KT also
RS 12 (Mode A) 145.91-95 29.41-45 29.408/454 Robot uplink 145.831
(Mode K) 21.21-25 29.41-45 29.408/454 Robot uplink 21.129
(Mode T) 21.21-25 145.91-95 145.912/959 Modes KA & KT also
RS 13 (Mode A) 145.96-146 29.46-50 29.458/504 Robot uplink 145.840
(Mode K) 21.26-30 29.46-50 29.458/504 Robot uplink 21.138
(Mode T) 21.26-30 145.96-146 145.862/908 Modes KA & KT also
RS 15 (Mode A) 145.85-89 29.36-40 29.353/398

[Info via Richard W. L. Limebear, G3RWL]

* THANKS! *
===========
Thanks to all who sent messages of appreciation to SpaceNews, especially:

N1RHI VE1AOE VE1RMC ZL1UDY DL2GRO OH2LVZ HS3CZA N3LDF
DF5DP G0HZX Bob Goodhart Jann Larsson

* FEEDBACK/INPUT WELCOMED *
==========================
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/

PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--
John A. Magliacane, KD2BD * /\/\ * Voice : 1-908-224-2948
Advanced Technology Center |/\/\/\| Packet : KD2BD @ KS4HR.NJ.USA.NA
Brookdale Community College |\/\/\/| Internet: magliaco@pilot.njin.net
Lincroft, NJ 07738 * \/\/ * Morse : -.- -.. ..--- -... -..

348. MIR contacts on packet

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: relliott@cyberhighway.net
Message-ID: <4fp30g$hos@host-3.cyberhighway.net>
Source record: 22917

Is there anybody out there that has information on what qualifies as a contact for MIR on packet? I have heard it just takes a
confirmed CONNECT. I also need to know the address to send the required information.

Do I have to leave a message on the PBBS on MIR?

Any help will be greatly appreciated!

Later,
Rich Elliott KC7CDK
relliott@cyberhighway.net
http://www.cyberhighway.net/~relliott/

349. Good satellite tracker for WIN95

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: cerebus@gate.net
Message-ID: <4fp3i8$km6@news.gate.net>
Source record: 22918

Can someone recommend a really good satellite tracker for Windows
95? Thanks...

350. Re: You Can Beam Messages to God for $9.95

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: bkobb@newsignals.com
Message-ID: <bkobb-1302960956570001@bkobb.ppp.nova.org>
Source record: 22919
Cross-posted to: sci.electronics.misc,rec.radio.amateur.space

In article <miles-1102962140310001@slip-43-3.ots.utexas.edu>,
miles@mail.utexas.edu (Miles Abernathy) wrote:

> "Modern technology has finally caught up with mankind's spiritual
> needs. Here is a non-denominational, publicly accessible direct link
> to the Heavens that can electronically beam prayers, hopes and
> dreams into space, into time, ... into forever.

This is essentially the same business proposition as Space Shot.
From page 99 of Spectrum Guide (930-931 MHz):

"An exotic radio service, Space Shot, once tried to get access
to this band. Space Shot billed itself as 'The Interplanetary
Communication System that Links You to the Universe.'

"Space Shot offered to help customers 'actively search for
extraterrestrial life' by sending love notes, peace messages
or birthday wishes into space on 903.0125 MHz for $5.00 per
'launch'. Its purveyors held a temporary, experimental license,
but the FCC turned down its request for formal, permanent
status in 1985.

"The Commission dryly said it doubted that the Space Shot
transmitter could activate receivers at the 'target locations,'
which were supposed to be the Sun, the Moon and 'any of the
planets in our Solar System.'

"We viewed the proposal as an intriguing test of the FCC's
pro-marketplace philosophy. Industry commenters called
Space Shot a 'radio version of the Pet Rock.'"

Bennett Kobb KC5CW
Spectrum Guide/America's Airwaves
http://home.navisoft.com/nspi

351. Re: 'tracking' planets Re: KR5600 to track planets ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fpa7a$soe@paperboy.ids.net>
Source record: 22920

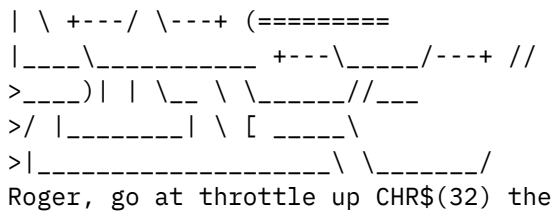
In article
<Pine.OSF.3.91.960210115137.24523A-100000@biggulp.callamer.com> Clifford
Buttschardt, cbuttsch@biggulp.callamer.com writes:
>Thanks you Philip for the suggestions regarding tracking planets.
Indeed
>I understand that most programs track only earth satellites.
> You make a good case for using the program "voyager" but most of us
>do not have access to Mac programs.

Sorry, can't help it if you're 'Macintosh deprived'. ;-)

Actually I just remembered that the CD astronomy program "Red Shift"
which is available on both Mac and PC platforms will track objects in
orbit around the sun. So that may be suitable.

> As you observe, tracking the proposed Mars probe on 438.1 MHz is
not
>a planet track and will require other information.

Actually - in the most basic sense, the Mars Pathfinder is a planet - an
object in orbit around the sun. It's just that it's pretty small and has
pretty sophisticated electronics (in comparison with most planets) and in
an elliptical orbit where the perihelion touches Earth's orbit and the
aphelion touches Mars's orbit.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET


Roger, go at throttle up CHR$(32) the final frontier

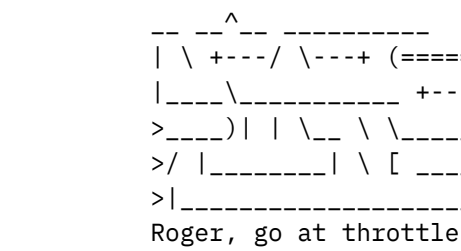
352. E-mail from the south pole - was Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4fpaen$soe@paperboy.ids.net>
Source record: 22921

In article <7a3_9602111219@idn.nl> Aart Wedemeijer,
Aart.Wedemeijer@pa3cpl.idn.nl writes:
>
>The last few years many (southern) pole stations used KO-23 for sending
email.
>And pictures too! It's amateur-business so the messages have to be
>non-business!

It's a bit beyond the reach of this newsgroup, but satellite
communications with the south pole is actually fairly sophisticated. The
old ATS-3 satellite and the original TDRS-1 satellite are in fairly
highly inclined geosynchronous orbits due to drift, and over most of
Antarctica for parts of each day. In addition the purposely high
inclination LES-8 and LES-9 satellites are used for polar communications.
Those satellites are nuclear powered - something which wasn't realized
by somebody I corresponded with via E-mail from the South pole.

His sig had his location as 90 degrees South. But I never did find out
what his latitude was. ;-)

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

353. Re: MIR contacts on packet

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960213174419.29872B-100000@spacelink>
Source record: 22922

My MIR QSL was received after I uploaded a greeting to the PBBS, copied
it on a following pass, and included that copy in my application. THe
funny thingwas that I applied twice by mail and never received a reply so
I hand carried it to Moscow on a trip and left it with another ham in
that city!
The MIR PBBS call is R0MIR-1. Treat is as you would uploading to any
other station.
I have also worked voice with the Cosmonauts on my HT.
-Richard

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

354. AMSAT-DL Journal and WWW

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: fsperber@aol.com
Message-ID: <4fqie8$3va@newsbf02.news.aol.com>
Source record: 22923

The URL of AMSAT-DL Journal's web-pages has changed to:
http://members.aol.com/ADLJ/index.html

The AMSAT-DL main-pages at
http://www.aball.de/~pg/amsat/
are not affected by the changes.

73, Frank, DL6DBN/AA9KJ

355. Re: Getting Started

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4fqhhd$ri1@service2.uky.edu>
Source record: 22924

In article <4fa9rm$nue@news.moneng.mei.com>, joe.lambert@mail.mei.com (Joe Lambert) says:
>
>Hello,
>
> I'm afraid to say it but you have another Amateur radio neophyte on
>board. :-)
>
> I'm a software engineer and I am very interested in getting involved
>and learning Amateur radio communications with satellites and SETI. I
>went to a local ham fest and learned a little. Should I buy the Amateur
>Radio Handbook? It looked like it had good information. I'm not new to
>writing code or electronics and computers in general, I've been involved
>for 10+ years so technology isn't new to me. However, I have no idea what
>band, frequency, radio, antenna, etc. I need. Where do I get the low down
>on what all the buzz words mean? It seems there are many different
>avenues one can follow, I'm looking for satellite linking and SETI
>information, what equipment and the like will I need?
>
>E-Mail is not only accepted, but encouraged. :-)
>
>Thank you,
>Joe Lambert
>Software Engineer
>Marquette Electronics
>Cardiology Equipment
>
Do a net search for SETI. There is a seti group with a web page and
some good links. I have not been there in a while, and my system has
"evovled"(yea it CRASHED big time, lost the hard file and the netscape
history file was something I neglegeted to back up <hint>) so I don't
know exactly where they are. But they are out there.
Good luck.

356. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: rdk1@NIOSR1.EM.CDC.GOV
Message-ID: <3120673F@SmtpOut.em.cdc.gov>
Source record: 22925

```
SUBSCRIBE ham-space AL7PT rdk1@niosr1.cdc.em.gov
```

357. wx-sat. receiver if stage

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: ta2ei@antrak.ta2ka.ampr.ORG
Message-ID: <2610@antrak.ta2ka.ampr.org>
Source record: 23015

Dr OMs,
I am interested in wx satellite reception, particularly low
orbite wx satellites... As you know, they aretransmit APT
format fax information with a bandwith of 40 kHz..
THe NBFM receivers have abt. 15 kHz and WBFM receivers have >100
kHz bandwith so they are not suitable to receive the wx satellites
signals. Now i'm looking for a IF stage that has 40 kHz bandwith..
A circuit built with either ic(s) or discrete devices is welcome.
Tnx for all information... Best regards..73's
Recep Aydin Gulec
ta2ei
pse leave a msg to ta2ei or send to ta2ei@antrak.ta2ka.ampr.org

358. Looking for interconnection cable for HP8505, 8501 or 8750

Newsgroup: rec.radio.amateur.space
Date: 1996-02-13 00:00:00 UTC
From: wave@mindspring.com
Message-ID: <4fov83$s7k@brickbat.mindspring.com>
Source record: 23016
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.scanner,rec.radio.swap,rec.video.cable-tv,rec.video.satellite.dbs,rec.video.satellite.tvro

I am in desperate need of a couple interconnection cables for the
HP8505 network Analyzer. The cable is a D-connector with 17 pins and
7 coax cables, but only six are used. If you have any info on where I can
find some I would appreciate it.

Thanks
AC4OP
Pieter
wave@mindspring.com
http://www.mindspring.com/~wave

359. Ham/SSB Mac Weather Fax

Newsgroup: rec.radio.amateur.space
Date: 1996-02-14 00:00:00 UTC
From: F C Mavronicolas <mavro@pb.net>
Message-ID: <4frlh8$9t3@ns2.pb.net>
Source record: 22926

Would appreciate any info on obtaining weather fax with a Mac over
HAM/SSB radio to be used aboard sailing yacht for Newport-Bermuda race

360. Sat Tracking C source code

Newsgroup: rec.radio.amateur.space
Date: 1996-02-14 00:00:00 UTC
From: "C.B.J. Oldham" <cbjo1@le.ac.uk>
Message-ID: <4fsq6s$635@ipgate.le.ac.uk>
Source record: 22927

Hi. I'm a postgrad student in the UK. Currently I am head of a team that is trying to automate our NOAA AVHRR receiver system.

What I am looking for is C routines that will take the NASA two line elements, my lat and long and the time and return a direction and azimuth to direct the dish.

I am looking for routines rather than a complete program as we have to build a complete system ourselves in C.

I have seen the routines, or something similar, on one of the NASA sites previously, but I've been looking for a few days and can't find them again!

Any assitance would be very much appreciated. I'd prefer to be e-mailed if possible, thanks.

Charles Oldham

361. Re: Ham/SSB Mac Weather Fax

Newsgroup: rec.radio.amateur.space
Date: 1996-02-14 00:00:00 UTC
From: Sean sharkey <Sean@expltd.demon.co.uk>
Message-ID: <960214122914000052@expltd.demon.co.uk>
Source record: 22928

In article <4frlh8$9t3@ns2.pb.net>, F C Mavronicolas writes:

>
> Would appreciate any info on obtaining weather fax with a Mac over
> HAM/SSB radio to be used aboard sailing yacht for Newport-Bermuda
race
>
>
There are a couple of ways to do this either using a piece of external hardware to convert the audio to data for display on screen or using the mic input on your Mac, if it has one.

If you are using a Mac with a mic input then have a look at a piece of shareware called RadFax. Quite simply you feed audio from your HF receiver into the mic input on your Mac and RadFax will display the incoming WEFAX picture. Have a look at ftp.demon.co.uk /pub/ham/mac.

If you Mac has no mic input then you will need some form of external decoder most of the popular ham data TNCs are capable of this, PK232, KAM + etc etc. Most of the major TNCs also have controller software which will run on the Mac, in the case of the PK232 it's called MacRatt II and with the KAM it's HostMaster. Both will allow you to display received WEFAX images. As these are commerical packages you'll need to get your local dealer to order it.

Hope this helps,

Sean.

362. Re: Antennas for satellites, advice

Newsgroup: rec.radio.amateur.space
Date: 1996-02-14 00:00:00 UTC
From: Jim Barbre <jbarbre@pogo.scs.unr.edu>
Message-ID: <Pine.OSF.3.91.960214203453.6448A-100000@pogo.scs.unr.edu>
Source record: 22929

On 6 Feb 1996, Jim Fellows wrote:

> All that I have read so far in the "Satellite Experimenters HandBook" and other
> publications recommend *switchable sense* circular polarity antennas. Well the
> advice I got was to use either fixed sense, that being RHCP, or linearly
> polarized antennas with more gain. The reasoning being for the former is that
> almost all the non-LEO birds are RHCP and that *should* be sufficient. The
> reasoning for the latter is that the approximate 3 dB loss between circular and
> linear polarizations can be made up by higher gain arrays (stacked) and this
> also would then work better for the weak signal terrestrial SSB work that I do.
>
>

Dear Jim, et al

I work the high orbit birds (Oscar 10 and AO-13) exclusively. For my 70cm uplink I use fifty watts into a single, horizontally polarized yagi. It's from Rutland Arrays, is 14 feet long and (if I remember correctly) has 28 elements. Several operators have commented to me on how good my signal sounded. I also use Aircom Plus cable and the special N-connectors which I get from SSB Electronics. I am NOT affilitated with either of these two companies, but I must say my experience with thier products has been good. It IS possible to work the high orbit birds using linear polarization.

On the 2 meter downlink I use 2 8-element yagis (again Rutland Arrays) which I have phased for RHCP. I found that using only one 8-element yagi with a good mast-mounted preamp allowed me to work AO-13 with some difficulty, but I was unable to hear anything but the beacon on Oscar 10. Using 2 yagis phased for RHCP allows me to work both AO-13 and Oscar 10 and gives a more-than-adequate downlink. I suppose if one were _always_ on the birds that there would be a time when the ability to switch to LHCP would come in handy, but I do not believe that to be the case very often. Perhaps someone who has actually used LHCP on the downlink can elucidate as to just how often they have used it. Hope this hasn't confused you even further.

Jim Barbre jbarbre@scs.unr.edu KB7YSY Elko, Nevada USA

363. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-02-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_824412061@rtfm.mit.edu>
Source record: 22930
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

364. Weather Satellite Groundstation Training Course to be offered

Newsgroup: rec.radio.amateur.space
Date: 1996-02-15 00:00:00 UTC
From: Paul Ruscher <ruscher@met.fsu.edu>
Message-ID: <3123B0BE.431A@met.fsu.edu>
Source record: 22931
Cross-posted to: rec.radio.amateur.space,sci.geo.meteorology,k12.ed.science

During summer 1996, the Florida EXPLORES! program will be offering for the first time part of its groundstation training course via the WWW and other electronic avenues, for credit at FSU. Operators (or operators soon-to-be) of weather satellite groundstations who are interested in taking this class may view the course syllabus at

http://www.met.fsu.edu/explores/summercourse96.html

Paul Ruscher
FSU Meteorology
ruscher@met.fsu.edu

PS - This course is designed primarily for educators who use the course in their teaching at the K-12 or College/University level.

More information on Florida EXPLORES! may be found at
http://www.met.fsu.edu/explores/explores.html

365. Re: E-mail from the south pole - was Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-15 00:00:00 UTC
From: brent@network.ucsd.edu
Message-ID: <4fvv93INNgki@network.ucsd.edu>
Source record: 22932

In article <4fpaen$soe@paperboy.ids.net> Philip Chien <kc4yer@amsat.org> writes:
>
>His sig had his location as 90 degrees South. But I never did find out
>what his latitude was. ;-)
>

I think I remember that email... :)

FYI: TDRS1 just came visible to the pole in the past couple of months.
Though it's not being used yet at Amundsen-Scott Station (90 South),
NASA is planning on some experiments with the bird from there in the
next couple of years. The plan is to use it for uni-directional high
bandwidth (100+ MBPS) data transfers from the Pole to the States. The
astronomers at the Pole generate HEAPS of data that needs to get back
to the states in near real-time. It almost seems silly that at a place
where there are usually only 25 people, they can saturate a 100 MBPS
link...

Brent

==
Brent Jones
Antarctic Support Associates
U.S. Antarctic Program
==

366. Re: Satellite Tracking Software

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: Darby G Cooper <dgcooper>
Message-ID: <4g0ovi$r6@news.iastate.edu>
Source record: 22933

I would recommend TrakSat for DOS (although it will run in a DOS window)
It is a simple program with only the basic graphic displays but I find
it useful

It can be found at:

ftp://ftp.amsat.org/amsat/software/PC/tracking/trak310.zip

--
Darby G Cooper
KB0VFE
dgcooper@iastate.edu

367. Information on equipment sought by new Tech

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: tomz@premier1.net
Message-ID: <DMuJuB.GLH@data-io.com>
Source record: 22934
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Hi,
I am going to be taking my Tech tests on Saturday (2/17) and am now starting to look in to what type of radios to get. I plan to put a 2M Mobile in my truck and get a more substantial base for home.

For home I'm looking into Base Multiband / Multimode Transceivers and trying to decide what will be my best bet. I was thinking of one that would cover at least 2M and perhaps 70cm. I am interested in working into Satellite and EME as well as FM and perhaps some local CW, 12V operation would be a plus but not a major requirement. I do plan on upgrading to at least General with in the next year and expanding also into some HF as well. So I would want to take that into consideration as well. possibly using Transverters get to the higher freqs for satellite and EME and going with a more basic UHF/VHF base unit.

For the mobile unit I was thinking of a rather simple 2M unit for repeater and simplex FM. I live in a rather remote area in the western foothills of the Cascades so I think one of the higher output power units would be in order. I was considering picking up one of the new Radio Shack units. As far as I can tell it has most everything I am looking for at a reasonable price. From the cross talk I have seen on the net and the write up in CQ (VHF) it seems to be a good choice.

I would like to take advantage of the wealth of experience of those out here on the net and get some input from you as to what you think. Suggestions on equipment to get or avoid as well as things to look for or useless features to not even consider. For me price, value and reliability are important, I have a modest but hopefully adequate amount set aside for starting up and want to use it wisely. The Base unit I'll be looking for used at up coming Ham fests so any information about current or older equipment would be helpful. I was thinking of picking up the Mobil new (if it is in or around the same price range as the Radio Shack unit) but am vary open to suggestions. I would also welcome comment on other accessory gear that you feel would be useful as well as thoughts on band selection (pros and cons of the diffrent amature bands) or what ever info. you would like to pass on to a newbie like myself. I know there are lots of books and other sources around and would not mind pointers to the better source like that, but I am primarily looking for personal insights and experience.

Thanks
TZ

Reply here or by e-mail to tomz@premier1.net

368. Re: You Can Beam Messages to God for $9.95

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: rstevew@armory.com
Message-ID: <4g1sbp$ceg@news.scruz.net>
Source record: 22935
Cross-posted to: sci.electronics.misc,rec.radio.amateur.space

In article <miles-11029621403100001@slip-43-3.ots.utexas.edu>,
Miles Abernathy <miles@mail.utexas.edu> wrote:
>I just came across http://www.golden.org/~startrek/
>
>The text starts out:
>
>"Modern technology has finally caught up with mankind's spiritual
>needs. Here is a non-denominational, publicly accessible direct link
>to the Heavens that can electronically beam prayers, hopes and
>dreams into space, into time, ... into forever.
>
>"Our equipment accepts your letters or drawings, and launches them
>electronically at the speed of light on a powerful microwave radio
>beam into deep space. As soon as they are sent, they become
>available to be intercepted by God, spirits, or extraterrestrials .
>
>"We are not attempting to sell a mystical claim or smoke and
>mirrors. We are offering science fact, based on the same
>technology that NASA uses to communicate with deep-space
>probes like Voyager, and which modern astronomers use to study
>the Universe as it was some 10 billion years ago.
>
>"It is well known to modern science that the radio waves on which
>the message is carried will endure until our present Universe ceases
>to exist - another way of saying until the end of time. That is an
>unprecedented lifetime guarantee!"
>
>The page has quite a bit more text. It ends with the pitch:
>
>"The cost is $9.95 per page. This includes the Broadcast
>Certificate...with a signed and dated Authentication Seal."
>
>I wonder who signs it...P. T. Barnum? :-)
>--
>Miles Abernathy, miles@mail.utexas.edu

Screw talking to "Gawd"! Any such worth its salt doesn't need same!
But now hold on before you dismiss the idea of broadcasting to aliens!
For all we know they communicate intersystem on giant narrow lasers
anyway! Maybe they use neutrino interference, or some such, between
each other, but maybe some of them are always listening for signs of
INTELLIGENT life. Maybe they see totally MORONIC crap coming at them
from all over periodically, from races for the short time with radio

and TV before those races learn not to pollute and get fiber optics!!
Maybe we will hear something as soon as our pollution gets out, and
maybe it will be a warning to shut up or ELSE! While we are waiting for
THAT, though, perhaps they are listening to see what we're saying,
dumping "I Love Lucy" to /dev/null, or their equivalent, and even
listening for any POSSIBLY sterling CONTENT to justify bothering to
answer back! And it IS QUITE easy to get out with even a backyard
dish and a transmitter to spherical angles of space that might contain
such listeners if you use the right FM bands, such as that of TV and
radio audio. And if you are smart enough to send the right and well
crafted message, yours MIGHT be the message that might get them sending
narrow maser at us in response, given a few decades or centuries of
travel!! You might be famous after you're dead! :-) Heartwarming,
isn't it?! It is dumb, but quite possible that if SETI finds any
number of signals from other worlds, that they may be dumb broadcasts
that are as assinine and puzzling to another species as ours have
been!! ;-> Might be amusing to find some race sending us back early FM
junk just to tell us they heard us, and it might be a stupid kid show
from the fifties!! And we'd think it was Nik at Night bleeding in and
change the channel to get rid of the "distortion from earth-based
sources"!!! Dumb, really dumb!!
-Steve
--
-Steve Walz rstevew@armory.com ftp://ftp.armory.com/pub/user/rstevew
mirrored: ftp://ieee.cas.uc.edu/pub/electronics/faqs/ftp.armory.com
and Europe: ftp://ftp.cised.unina.it/pub/electronics/ftp.armory.com
and Oz: ftp://ftp.peninsula.apana.org.au/pub/electronics/ftp.armory.com

369. NOAA APT

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: nigel@ndavison.demon.co.uk
Message-ID: <824470654.3535@ndavison.demon.co.uk>
Source record: 22936

Hi,

Could somebody please tell me what APT stands for, and also supply me with some info regarding the content of an NOAA APT signal, ie frequency content, and minimum audio bandwidth required for acceptable results.

I know that I need 35 Khz IF BW but as we are all aware, common scanners do not have this feature. All I can do is use WFM and use a sound program so filter out the wanted and exclude the not wanted.

Any help would be appreciated.

Regards

Nigel Davison

370. Re: NOAA APT

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4g207a$dnr@service2.uky.edu>
Source record: 22937

In article <824470654.3535@ndavison.demon.co.uk>, nigel@ndavison.demon.co.uk (Nigel Davison) says:
>
>Hi,
>
>Could somebody please tell me what APT stands for, and also supply me
>with some info regarding the content of an NOAA APT signal, ie
>frequency content, and minimum audio bandwidth required for acceptable
>results.
>
>I know that I need 35 Khz IF BW but as we are all aware, common
>scanners do not have this feature. All I can do is use WFM and use a
>sound program so filter out the wanted and exclude the not wanted.
>
>Any help would be appreciated.
>
>Regards
>
>Nigel Davison

I think APT=Advanced Picture Technology. I will check Dr.Taggerts
WX sat hand book. This is a GOOD book to get, try the ARRL website,
their bookstore has it.
I used a Pro2004 scanner in the wide fm (75KHz) mode. While it was too
wide, it worked. I started out with the scanner, a radio shack diskcone,
and and an older JFET preamp(located at the scanner no less). It gave
surprizingly good results for everything being done wrong.
I now use a crossed dipole, over a set of reflecting dipoles, with the
JFET preamp mounted at the antenna, good qualilty (RG-214) coax, and
the pro2004 with an out board if strip(to get the 35-40KHZ bw), a A&A
NOAA APT demode feeding the parallel port on a 486. I use JVFAX 7.0 to
capture and display the image.
Check out JVFAX 7.0, there is a real simple uA741 opamp based HF fax
demod. There is also a simple single ic front end that will convert
NOAA apt to a signal that the hf fax demod can "Read". While not as
good as a real NOAA apt demod, it does work fairly well.
Good luck!

371. Re: Satellite Tracking Software

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: pklein@news.seattleu.edu
Message-ID: <4g2uie$k7@handel.seattleu.edu>
Source record: 22938

In article <4fst1p$a94@kwuz.nerc-keyworth.ac.uk>,
Paul \"Jimbo\" Duncan GW7KES <pdu> wrote:

>Hi can anyone recommend me a good satellite tracking prog for DOS or Windows.
>I used to have pctrak, but seem to have lost it. The prog must be available on
>an ftp site.

Apart from InstantTrack, which is sold to benefit the AMSAT satellite
programs, my favorite is STSPLUS. It's DOS-based, and a thing of beauty.
It even has detailed Doppler information InstantTrack lacks, and many
different map views.

For Windows, WINORBIT is also good. Both can be found at

Web: http://www.amsat.org/amsat/AmsatHome.html
(find "downloadable software")
ftp: ftp.amsat.org/amsat/software

73,
Peter - KD7MW

--
Peter A. Klein (pklein@seattleu.edu) : ------==3== --- ---
Information Services, 5569 : | | | | | | | |
Seattle University : @| @| @| @| @| @| @| @|

372. GEO Orbital Locations of US SIGINT Satellites [check them out!!]

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: John Pike <johnpike@fas.org>
Message-ID: <4g0j67$pe0@clarknet.clark.net>
Source record: 22939
Cross-posted to: sci.space.policy,sci.astro.amateur,alt.politics.org.cia,alt.politics.org.nsa,rec.radio.amateur.space

At the 1995 World Radio Conference, the US registered the following satellites as operating in the 17.8-21.2 GHz downlink and 30-31 GHz uplink bands.

station longitude

US CSID-A1 E 000
US CSID-A2 E 044
US CSID-A3 E 075
US CSID-A4 E 082
US CSID-A5 E 092
US CSID-A6 E 110
US CSID-E1 W 010
US CSID-E2 W 013
US CSID-E3 W 024
US CSID-E4 W 030
US CSID-W1 W 141
US CSID-W2 W 144

The US also registered

US CSID-P non-GSO [63 degrees, 39400-1000 km, 8 satellites]

[source: WRC-95 Document 235(Rev.2)-E 14 November 1995]

It is to be expected that geostationary SIGINT [VORTEX, MAGNUM, etc] birds will be found occupying some [but perhaps not all] of the registered orbital locations, and that the HEO registrations cover JUMPSEAT/TRUMPET spacecraft.

These systems have been operating at these locations since the 1970s, and their spectrum/orbit allocations were grandfathered to protect them from potential interferrence from new KA-band applicants, such as Teledesic.

These systems are associated with two ground stations, one in the Washington area, and the other at Castle Rock near Denver. These ground stations have a 200 dbi gain.

--
John Pike
Federation of American Scientists http://www.fas.org/pub/gen/fas/
CyberStrategy Project http://www.fas.org/pub/gen/fas/cp/
Intelligence Reform Project http://www.fas.org/pub/gen/fas/irp/
Military Analysis Network http://www.fas.org/pub/gen/fas/man/

Space Policy Project http://www.fas.org/pub/gen/fas/spp/

373. Re: Satellite Tracking Software

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <3124A69B.834@primenet.com>
Source record: 22940

Paul "Jimbo" Duncan GW7KES wrote:
>
> Hi can anyone recommend me a good satellite tracking prog for DOS or Windows.
> I used to have pctrak, but seem to have lost it. The prog must be available on
> an ftp site.
>
> Thanks,
>
> Paul, G7KES.

Hi Paul,

I would recommend LogSat. It is a Windows program, includes support for
the KCT Tracker/Tuner if you need it, and also includes a logging module
and an antenna design module. Great program that is highly supported by
the author. You can find it at:

http://www.amsat.org/amsat/ftpsoft.html#win

73, Stephanie

374. Re: Mir 9600 Packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-16 00:00:00 UTC
From: Luiz FElipe Ceglia <lceglia@ism.com.br>
Message-ID: <4g25u7$7le@unix1.ism.com.br>
Source record: 22941

..
>>Also, do they give QSL cards out for Mir? If so, where do I send the
>card?

I've sent a card for them about 1 year and a half, with the IRC's and
evthng, but they didn't replyed yet. (I lost the address :( )

luiz felipe ceglia

PU1WLF

375. Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: ndavis@spider.lloyd.com
Message-ID: <4g3574$blu@harry.lloyd.com>
Source record: 22942

> a standard
>hiking ELT (Emergency Location Transmitter) which sent a beacon which was
>heard on the NOAA and Cosmos satellites which are part of the
>COPAS/SARASAT program.

I'm curious. What is a standard Hiking ELT and what frequency does it
operate on.

376. Wich DX and CallBooks are copatible whit Kansas City Tracker ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4g383t$nif@ping1.ping.be>
Source record: 22943

Hello

Can somebody tell me wich DX-book or Call-book is capable with the
Kansas City Tracker ?

377. Re: Information on equipment sought by new Tech

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Feb17.034147.19275@ke4zv.atl.ga.us>
Source record: 22944
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

In article tomz@premier1.net (Tom Zoch) writes:
>
>I am going to be taking my Tech tests on Saturday (2/17) and am now starting
>to look in to what type of radios to get. I plan to put a 2M Mobile in my
>truck and get a more substantial base for home.
>
>For home I'm looking into Base Multiband / Multimode Transceivers and trying
>to decide what will be my best bet. I was thinking of one that would cover
>at least 2M and perhaps 70cm. I am interested in working into Satellite and
>EME as well as FM and perhaps some local CW, 12V operation would be a plus
>but not a major requirement. I do plan on upgrading to at least General with
>in the next year and expanding also into some HF as well. So I would want to
>take that into consideration as well. possibly using Transverters get to the
>higher freqs for satellite and EME and going with a more basic UHF/VHF base
>unit.
>
>For the mobile unit I was thinking of a rather simple 2M unit for repeater
>and simplex FM. I live in a rather remote area in the western foothills of
>the Cascades so I think one of the higher output power units would be in
>order. I was considering picking up one of the new Radio Shack units. As far
>as I can tell it has most everything I am looking for at a reasonable price.
>From the cross talk I have seen on the net and the write up in CQ (VHF) it
>seems to be a good choice.
>
>I would like to take advantage of the wealth of experience of those out here
>on the net and get some input from you as to what you think. Suggestions on
>equipment to get or avoid as well as things to look for or useless features
>to not even consider. For me price, value and reliability are important, I
>have a modest but hopefully adequate amount set aside for starting up and
>want to use it wisely.

The Radio Shack mobile is Ok, but wait for it to go on sale. There are
many other 2 meter radios that will also fit your needs. The used market
will offer you the best value. For example, the IC-28H was one of the first
"high power" compact 2 meter mobile rigs, and it is available used at
attractive prices. However, you might want to think twice about other
miniature mobile rigs if you need high power. While the IC-28H had adequate
heatsinking for extended high power operation, many of the other rigs do not.
An alternative is a lower power radio and a brick amplifier. You can find
tons of 10 watt class 2 meter radios on the used market cheap, and a brick
isn't too expensive. That can give you 160 watts.

You've also got to consider environmental factors. If temperature
extremes and rough off-road driving are factors, you need a radio

that will hold up under those conditions. Yaesu has some "milspec" radios that might meet the need. They're a bit larger than the current crop of tiny radios, but still small enough to be practical for mounting in a truck.

Also, don't forget a high performance, and rugged, antenna. Antenna gain works both ways, transmit and receive, so it is more valuable than just a high output radio. A NMO mounted Larsen 5/8ths wave antenna may be just the thing to put on top of the truck. If you travel into the outback regularly, a collapsable yagi and a push up pole might ride in the truck for those times when a bit more gain and height would make the difference (obviously for use when you're stopped). Good coax is a must, don't throw away your power in cheap coax.

For the base rig, your choices are quite a bit more limited. For a 2 meter only multimode, the IC-275H is the unquestioned champ. But for satellite, the tried and true FT-736R 2m/70cm *duplex* radio remains the favorite of satellite operators. Beware of the Kenwood TS-790A, it has problems for satellite use, and a bad thermal design and poor user interface to boot. The IC-820H is a bit quirky for satellite use, and the IC-970 is too expensive for your budget.

An option for the soon to be General is the new IC-706. It is both HF and 2 meters. That still leaves you looking for 70 cm equipment for satellite operation, however. And while the radio is nice (very nice), it isn't completely top of the line in terms of raw receiver performance. If you're thinking of HF mobile, however, and need a radio to do dual duty, it is a very attractive and cost effective option. It is 100 watts on HF and 6 meters, and 10 watts on 2 meters. So use of a brick to bring the 2 meter side up to 160 watts would make a potent mobile or base combination for HF through 2 meters all mode. (If I could have only one radio, I think this would be it.)

HF only radios and transverters are an option, but beware, there are several potential gotchas here. First, the number of suitable transverters is limited, and the number of HF rigs that work well with transverters is limited too. The SSB Electronics transverters are about the only commercial choice. They're very good, but also expensive. Second, you need to listen at the same time that you transmit for satellite operation, and that means two transverters and *two HF radios* because most (if not all) HF radios won't operate full duplex. Of course, one of the HF rigs can be only a receiver, but it needs to be a good one, and there are few of those on the market today.

You could pair a two meter all mode with a HF rig and 70cm transverter. That would work all right for satellite, but now you have 3 boxes to deal with, and a fair hunk of change invested. Or you could use a 70cm all mode, like the excellent

IC-475H, and a 2 meter all mode like the IC-275H (makes a *wonderful* Mode B station), but now you don't have HF, and the pair costs quite a bit more than a FT-736R.

The 2 meter rig *could* be the IC-706, however, paired with an IC-475H for 70cm, and then you'd have HF too. That's an interesting combination.

Again, I'd advise that there are tons of used rigs out there. You *can* find excellent buys on used HF equipment, such as the fine IC-735, and many many choices for FM VHF/UHF rigs. Where things get a bit tight are in the multimode VHF/UHF market and the transverter market. There have been many fewer of those sold, and some aren't very good, so you might have a hard time finding what you need on the used market.

And finally, you can *build*. That's not as popular as it once was, but thanks to high integration parts, and some excellent designs, you can build credible equipment for VHF/UHF FM or SSB, and even for HF. VHF FM rigs are almost trivial to build today, and thanks to Rick Campbell (and the new DDS chips), single band SSB rigs up through 70cm are also a snap. A multiband HF rig could be daunting, however, due to all the required filters and switching.

The real drawback to building is packaging. Making something homebrew look nice and be easy to operate is still not trivial. However, microprocessors can take much of the pain out of the user interface, and Ten-Tec sells some nice cabinets. This probably isn't the right approach for a new ham though. You do need some skills besides being able to solder to successfully build a quality rig from scratch.

You can basically forget kits, most of them offer less performance, and higher cost, than commercially built equipment (especially if bought used) and teach you little other than how to follow directions and solder. Some kits can be used as *subassemblies* however, such as the Kanga kits of Campbell's designs, the Down East Microwave kits, and some of Ten-Tec's kit offerings such as their 6 meter transverter (you can't buy a 6 meter transverter for what Ten-Tec gets for their kit). FAR Circuits also performs a real service by offering boards for popular circuits at low cost. This takes a lot of the pain out of building, though if you use SMD parts, making your own boards isn't hard. Accurately registering all those through holes is what makes PC board fabrication difficult for the home builder.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

378. NORAD Two-Line Orbital Element Sets (TLE757)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4g4qko$8p5@blackbird.afit.af.mil>
Source record: 22945

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

Note: The Celestial BBS will cease operations around mid-March 1996. It will be replaced before then with a new WWW site for distributing the current selection of data and software. Data will continue to be available via anonymous ftp at archive.afit.af.mil.

```
- Current Two-Line Element Sets #757 -
Alouette 1
1 00424U 62049A 96045.68060192 .00000043 00000-0 40675-4 0 1745
2 00424 80.4540 45.6080 0024925 354.9553 5.1345 13.67861408665450
ATS 1
1 02608U 66110A 96043.33813422 -.00000277 00000-0 10000-3 0 9551
2 02608 14.6308 354.1574 0001234 131.0838 228.9786 1.00396576 23603
ATS 3
1 03029U 67111A 96047.24803662 -.00000123 00000-0 10000-3 0 4555
2 03029 14.8955 1.0933 0010874 266.5235 221.7655 1.00273135103546
Starlette
1 07646U 75010A 96046.99864929 -.00000144 00000-0 -17640-5 0 9496
2 07646 49.8281 270.8866 0206232 186.9483 172.8537 13.82190147 62061
LAGEOS
1 08820U 76039A 96045.05364464 -.00000005 00000-0 10000-3 0 1711
2 08820 109.8615 343.4781 0043767 155.4991 204.7614 6.38664558205902
ETS-2
1 09852U 77014A 96039.30677794 -.00000283 00000-0 10000-3 0 611
2 09852 13.0710 34.4343 0003287 131.4435 228.6545 1.00022438 16346
GOES 2
1 10061U 77048A 96039.45441811 .00000056 00000-0 10000-3 0 6395
2 10061 12.1785 38.6184 0010693 144.7401 301.8649 1.00263695 13146
IUE
1 10637U 78012A 96047.07969668 -.00000217 00000-0 10000-3 0 2349
2 10637 35.5770 85.0666 1348753 53.6497 3.2031 1.00268262 18715
GPS BI-01
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1 10684U 78020A 96043.07612092 .00000001 00000-0 10000-3 0 4254
2 10684 64.9401 27.6133 0058942 164.3082 195.8850 1.98069566116913
GPS BI-02
1 10893U 78047A 96044.81684895 .00000072 00000-0 10000-3 0 2164
2 10893 63.2318 264.9834 0230413 12.0972 348.6071 2.01624145130307
GOES 3
1 10953U 78062A 96047.24481941 -.00000137 00000-0 10000-3 0 6184
2 10953 11.1752 41.3427 0002284 288.0651 161.8994 1.00278736 17835
SeaSat 1
1 10967U 78064A 96044.57338373 -.00000066 00000-0 22677-4 0 4648
2 10967 107.9884 276.9373 0002491 268.4802 91.6053 14.38086285923536
GPS BI-03
1 11054U 78093A 96046.49745523 .00000078 00000-0 10000-3 0 3827
2 11054 62.9192 263.7677 0045356 179.0225 181.0144 1.93505228126282
Nimbus 7
1 11080U 78098A 96043.17071608 -.00000042 00000-0 -32184-6 0 5644
2 11080 98.9692 271.4121 0008846 311.7526 48.2871 13.83697145873740
GPS BI-04
1 11141U 78112A 96046.98536212 -.00000015 00000-0 10000-3 0 271
2 11141 64.9451 29.7256 0049360 27.4359 332.8236 1.92894744 15520
GPS BI-05
1 11690U 80011A 96046.19921017 -.00000008 00000-0 10000-3 0 9917
2 11690 65.2824 29.0364 0149217 193.3968 166.2036 2.00570378131734
GPS BI-06
1 11783U 80032A 96044.51058264 .00000081 00000-0 10000-3 0 1284
2 11783 62.3609 257.8509 0226924 29.7081 331.5978 2.03456598116293
GOES 5
1 12472U 81049A 96046.02053910 -.00000134 00000-0 10000-3 0 9143
2 12472 7.9673 51.4999 0004932 44.6550 315.4989 1.00205238 11865
Cosmos 1383
1 13301U 82066A 96046.89566766 -.00000032 00000-0 -54553-4 0 4738
2 13301 82.9294 223.4489 0026183 215.8011 144.1393 13.68072037680651
LandSat 4
1 13367U 82072A 96045.63518471 .00000006 00000-0 11148-4 0 8431
2 13367 98.0965 100.1921 0006879 154.7890 205.3642 14.57170678722545
DMSP B5D2-1
1 13736U 82118A 96046.06583445 -.00000022 00000-0 92286-5 0 9526
2 13736 98.6263 236.4175 0009023 31.5008 328.6710 14.25769848683520
IRAS
1 13777U 83004A 96046.51357479 .00000123 00000-0 11481-3 0 2308
2 13777 98.9633 234.6116 0013867 79.3529 280.9219 13.99240972336210
Cosmos 1447
1 13916U 83021A 96046.10896984 .00000031 00000-0 16703-4 0 5681
2 13916 82.9451 282.0724 0038733 133.0503 227.3911 13.74335311646838
TDRS 1
1 13969U 83026B 96047.20079808 -.00000164 00000-0 00000+0 0 5477
2 13969 8.7836 44.8745 0003958 276.0718 155.4731 1.00435598 20160
GOES 6
1 14050U 83041A 96047.16202734 -.00000269 00000-0 10000-3 0 4893
2 14050 6.7977 54.7974 0002284 7.6735 64.4336 1.00291735104973
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OSCAR 10
1 14129U 83058B 96046.56186910 -.00000124 00000-0 10000-3 0 4034
2 14129 26.3643 223.9075 5983094 351.0706 1.5442 2.05879267 67343
LandSat 5
1 14780U 84021A 96046.50242879 -.00000016 00000-0 68902-5 0 4259
2 14780 98.3521 104.2060 0002415 341.1798 18.9319 14.57039685636068
UoSat 2
1 14781U 84021B 96046.97195931 .00000114 00000-0 26995-4 0 8625
2 14781 97.7910 43.1907 0012610 117.3145 242.9367 14.69426565639708
GPS BI-09
1 15039U 84059A 96043.92867378 -.00000006 00000-0 10000-3 0 3935
2 15039 64.5967 24.1522 0083054 18.9816 341.3273 1.92302246 85023
Cosmos 1574
1 15055U 84062A 96047.24387867 .00000023 00000-0 82161-5 0 7690
2 15055 82.9561 335.8743 0027088 324.6966 35.2396 13.73631575584245
GPS BI-10
1 15271U 84097A 96045.33240537 .00000083 00000-0 10000-3 0 1149
2 15271 62.0454 258.3267 0159292 357.1903 2.7739 2.00609256 82781
Cosmos 1602
1 15331U 84105A 96046.79977120 .00000155 00000-0 15441-4 0 4533
2 15331 82.5326 227.6811 0020397 357.5530 2.5593 14.84721992614818
NOAA 9
1 15427U 84123A 96046.77327884 .00000063 00000-0 57309-4 0 5856
2 15427 98.9623 111.5434 0014523 303.7304 56.2480 14.13761400576338
GPS BI-11
1 16129U 85093A 96035.16193575 -.00000026 00000-0 10000-3 0 7041
2 16129 65.2747 27.8780 0156130 85.3305 276.4731 1.89368088 19386
Mir
1 16609U 86017A 96047.33199607 .00029584 00000-0 39865-3 0 4119
2 16609 51.6447 14.5499 0005078 1.6850 358.4176 15.57561628571017
SPOT 1
1 16613U 86019A 96046.54640076 .00000090 00000-0 62356-4 0 8992
2 16613 98.6263 117.1415 0001146 44.4526 315.6737 14.20091519202907
Cosmos 1766
1 16881U 86055A 96045.70873663 .00000080 00000-0 67437-5 0 3682
2 16881 82.5204 286.4743 0020859 27.1011 333.1283 14.83708171515539
EGP
1 16908U 86061A 96044.68680711 -.00000083 00000-0 10000-3 0 644
2 16908 50.0106 19.7713 0011423 56.4073 303.7849 12.44413645100900
NOAA 10
1 16969U 86073A 96046.88311121 .00000006 00000-0 20968-4 0 5042
2 16969 98.5182 47.4866 0013568 356.1698 3.9373 14.24972962489183
MOS-1
1 17527U 87018A 96047.19561648 -.00000044 00000-0 00000+0 0 3848
2 17527 98.9647 111.7934 0016688 304.3121 55.6475 14.00434286457916
GOES 7
1 17561U 87022A 96046.36409635 .00000024 00000-0 10000-3 0 7684
2 17561 2.8206 70.5227 0003902 338.6451 98.4880 1.00346684 16070
Kvant-1
1 17845U 87030A 96046.88282980 -.00114894 00000-0 -15351-2 0 5377
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2 17845 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823505058
DMSP B5D2-3
1 18123U 87053A 96046.80248057 -.00000033 00000-0 57519-5 0 3215
2 18123 98.7706 239.0861 0013290 243.8396 116.1414 14.15431109447184
RS-10/11
1 18129U 87054A 96045.54472863 .00000028 00000-0 14050-4 0 1769
2 18129 82.9239 239.9165 0012350 131.5009 228.7203 13.72362212433217
Meteor 2-16
1 18312U 87068A 96044.54588002 .00000024 00000-0 80705-5 0 4591
2 18312 82.5550 90.9551 0010866 206.3007 153.7611 13.84071156428936
Meteor 2-17
1 18820U 88005A 96046.78469486 .00000073 00000-0 51436-4 0 8551
2 18820 82.5449 144.4809 0015199 272.0940 87.8479 13.84751469406586
DMSP B5D2-4
1 18822U 88006A 96046.08138491 -.00000017 00000-0 10874-4 0 1863
2 18822 98.3889 243.9650 0006476 12.0423 348.0909 14.23180230417067
Glonass 34
1 19163U 88043A 96045.17248509 .00000023 00000-0 10000-3 0 533
2 19163 65.2102 90.0279 0007889 162.0973 197.9998 2.13102359 59591
Glonass 36
1 19165U 88043C 96045.22929206 .00000024 00000-0 10000-3 0 4604
2 19165 65.1930 89.9772 0001882 328.5397 31.5234 2.13102059 60216
METEOSAT 3
1 19215U 88051A 96042.69593962 -.00000081 00000-0 10000-3 0 2391
2 19215 3.0104 68.4880 0003709 148.8961 211.3542 0.96947550 15951
AO-13
1 19216U 88051B 96046.19165373 -.00000428 00000-0 31259-4 0 1510
2 19216 57.3543 135.0313 7374748 32.0179 356.5455 2.09730226 27256
OKEAN 1
1 19274U 88056A 96045.39937642 .00000234 00000-0 26112-4 0 689
2 19274 82.5112 27.4584 0019634 166.0048 194.1729 14.82447546411039
Meteor 3-2
1 19336U 88064A 96045.55765513 .00000051 00000-0 10000-3 0 4590
2 19336 82.5418 253.9025 0016123 180.5351 179.5748 13.16976235363202
Glonass 39
1 19503U 88085C 96045.72792561 -.00000053 00000-0 10000-3 0 3504
2 19503 65.6305 328.8848 0005240 131.5630 228.4645 2.13101934 57711
NOAA 11
1 19531U 88089A 96046.88024115 -.00000033 00000-0 77033-5 0 3947
2 19531 99.1906 61.7696 0011147 223.3721 136.6574 14.13081022381178
TDRS 2
1 19548U 88091B 96044.75365319 -.00000202 00000-0 10000-3 0 1817
2 19548 2.2436 72.8391 0005197 186.5756 240.4470 1.00271368 14280
Glonass 40
1 19749U 89001A 96044.35807158 .00000019 00000-0 10000-3 0 5707
2 19749 65.1552 89.5961 0006533 256.8194 103.1843 2.13101732 55196
Glonass 41
1 19750U 89001B 96045.35177777 .00000025 00000-0 10000-3 0 4769
2 19750 65.1792 89.6066 0006761 218.2391 141.7886 2.13101836 55230
GPS BII-01
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2 19802 55.2795 115.8190 0023556 187.9648 172.0638 2.00565499 51119
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1 19822U 89016A 96045.76764248 .00009856 00000-0 51387-3 0 6648
2 19822 75.0946 195.3593 3757757 199.2199 141.7556 7.89994547156936
Meteor 2-18
1 19851U 89018A 96046.05351381 .00000009 00000-0 -54393-5 0 4580
2 19851 82.5171 19.2556 0014120 328.3739 31.6556 13.84405461351798
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TDRS 3
1 19883U 89021B 96046.22389170 -.00000281 00000-0 00000+0 0 1810
2 19883 0.0378 282.3753 0002821 47.8037 213.8817 1.00268877197872
GPS BII-02
1 20061U 89044A 96045.83734969 -.00000005 00000-0 10000-3 0 1887
2 20061 54.2992 291.4826 0152340 218.0303 140.9365 2.00562443 48989
Nadezhda 1
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2 20103 82.9581 198.8774 0038701 35.5953 324.7773 13.73862881331887
GPS BII-03
1 20185U 89064A 96042.18656300 -.00000009 00000-0 10000-3 0 2046
2 20185 55.0814 116.2046 0018873 321.6398 38.2423 2.00554246 47483
GMS 4
1 20217U 89070A 96047.09727431 -.00000384 00000-0 10000-3 0 3090
2 20217 1.5403 75.3722 0000967 77.7630 147.4650 1.00266603 24192
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2 20261 82.5935 348.8701 1241671 319.9318 31.6293 12.47322863290656
GPS BII-04
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2 20302 53.2927 231.3403 0018899 180.9587 179.0136 2.00561772 46373
Meteor 3-3
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2 20305 82.5426 209.7839 0005905 268.5886 91.4537 13.04430012302135
COBE
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2 20322 98.9484 63.3139 0009596 21.1982 338.9590 14.03454234319651
Kvant-2
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2 20335 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823354069
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2 20361 55.9204 58.1805 0084304 130.7153 230.0686 2.00564044 35823
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1 20391U 89101A 96046.11487208 -.00000147 00000-0 00000+0 0 2894
2 20391 3.6079 64.3135 0001331 264.8441 200.5385 1.00272727 22769
SPOT 2
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2 20436 98.7123 121.8747 0002680 9.0190 351.1013 14.20040443314387
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1 20440U 90005E 96043.23379860 -.00000012 00000-0 12300-4 0 9594
2 20440 98.5647 131.1617 0010701 211.2454 148.8086 14.30107555316094
WO-18
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2 20452 54.0518 171.7447 0060610 87.0956 273.5488 2.00560235 44353
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1 20491U 90013D 96043.21235928 .00000498 00000-0 10088-2 0 2154
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2 20496 43.1013 187.3689 0011328 329.5380 30.4822 15.35348868334866
Nadezhda 2
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2 20508 82.9561 333.3973 0044744 348.2606 11.7499 13.73504321299102
OKEAN 2
1 20510U 90018A 96046.82304697 .00000189 00000-0 22620-4 0 4775
2 20510 82.5232 339.4980 0019832 4.3350 355.8028 14.78574125321591
GPS BII-07
1 20533U 90025A 96045.02583412 -.00000008 00000-0 10000-3 0 1689
2 20533 54.6543 292.2105 0050584 75.6586 284.9629 2.00552584 43099
PegSat
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2 20546 94.1224 282.8127 0063553 116.4928 244.2864 15.46184264326107
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2 20619 65.2313 328.1652 0024645 202.3608 157.5564 2.13102265 44686
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Kristall
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2 20635 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823324890
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1 20638U 90049A 96045.64982243 -.00000208 00000-0 53380-5 0 5332
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2 20712 18.0756 301.9993 7180561 283.5427 11.6452 2.35655788 40163
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2 20724 54.9187 113.6064 0122310 179.3793 180.6884 2.00563394 38985
Feng Yun1-2
1 20788U 90081A 96046.86302742 -.00000024 00000-0 12307-4 0 7262
2 20788 98.8136 56.5493 0014611 113.0985 247.1718 14.01393218278968
Meteor 2-20
1 20826U 90086A 96043.01318054 .00000041 00000-0 23592-4 0 9681
2 20826 82.5213 24.7238 0013698 145.7383 214.4661 13.83624818271395
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2 20830 55.8605 56.0953 0064390 98.0430 262.7370 2.00560995 39621
GPS BIIA-10
1 20959U 90103A 96046.30221667 -.00000015 00000-0 10000-3 0 9733
2 20959 55.1144 115.6399 0106025 232.6596 126.4213 2.00565680 38213
DMSP B5D2-5
1 20978U 90105A 96046.80678688 .00000076 00000-0 42493-4 0 5150
2 20978 98.6094 118.8594 0079064 170.7638 189.5011 14.32624619272192
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1 21007U 90110B 96044.18818628 .00000019 00000-0 10000-3 0 9585
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Glonass 49
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2 21087 82.9391 53.9652 0033851 192.3295 167.7036 13.74565909252887
RS-12/13
1 21089U 91007A 96044.15846511 .00000046 00000-0 32966-4 0 8664
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MOP-2
1 21140U 91015B 96044.47398148 -.00000014 00000-0 00000+0 0 1404
2 21140 0.2872 68.1023 0001509 246.8299 358.5579 1.00274537 20355
Nadezhda 3
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2 21152 82.9232 236.3912 0041693 324.6704 35.1691 13.73529412246952
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2 21216 64.9683 327.7918 0007119 196.3781 163.6247 2.13102785 37873
Glonass 51
1 21217U 91025B 96042.20980712 -.00000040 00000-0 10000-3 0 8853
2 21217 64.9692 327.8947 0008653 232.3902 127.5635 2.13101642 37801
Glonass 52
1 21218U 91025C 96041.85140833 -.00000039 00000-0 10000-3 0 3613
2 21218 64.9782 327.8749 0008520 314.7547 45.2125 2.13102116 37802
GRO
1 21225U 91027B 96046.17384807 .00002200 00000-0 41598-4 0 3364
2 21225 28.4621 322.4016 0002769 256.3929 103.6366 15.43656639150903
Meteor 3-4
1 21232U 91030A 96046.63375505 .00000051 00000-0 10000-3 0 8698
2 21232 82.5393 99.4454 0014664 104.6447 255.6308 13.16470690231411
NOAA 12
1 21263U 91032A 96046.89972887 .00000027 00000-0 31287-4 0 8209
2 21263 98.5675 69.4596 0011818 271.4412 88.5414 14.22596730247074
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2 21552 56.1485 53.9297 0070748 246.7801 112.5146 2.00572127 33782
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2 21576 98.3590 112.7854 0003544 304.5812 55.5040 14.36423678240070
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2 21577 98.3648 112.3969 0005870 293.6016 66.4552 14.36508808239960
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TDRS 4
1 21639U 91054B 96046.26131551 .00000068 00000-0 00000+0 0 9981
2 21639 0.0290 98.5363 0004519 252.9108 72.7931 1.00273227110650
Meteor 3-5
1 21655U 91056A 96046.50139803 .00000051 00000-0 10000-3 0 8678
2 21655 82.5492 47.1134 0014636 113.4920 246.7749 13.16844587216523
UARS
1 21701U 91063B 96044.03047680 -.00000067 00000-0 15205-4 0 7394
2 21701 56.9845 251.5452 0005646 104.0903 256.0759 14.96483513241625
DMSP B5D2-6
1 21798U 91082A 96046.89638804 -.00000016 00000-0 15134-4 0 1705
2 21798 98.9498 64.0830 0012247 212.0034 148.0416 14.13944926217642
Glonass 53
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2 21853 65.0887 88.5572 0006889 201.8793 158.1616 2.13102291 31486
Glonass 54
1 21854U 92005B 96046.10528407 .00000030 00000-0 10000-3 0 2538
2 21854 65.0897 88.5257 0015133 10.1924 349.9149 2.13104157 31481
Glonass 55
1 21855U 92005C 96046.17131963 .00000030 00000-0 00000+0 0 2404
2 21855 65.0898 88.5290 0008340 213.0987 146.9256 2.13102136 31473
JERS-1
1 21867U 92007A 96047.21516069 .00000333 00000-0 32584-4 0 7957
2 21867 97.6959 126.1861 0000887 93.5283 266.6043 14.98660637219592
GPS BIIA-12
1 21890U 92009A 96045.53963780 .00000075 00000-0 10000-3 0 7607
2 21890 53.8239 231.7394 0058916 189.6093 170.2931 2.00558064 29167
GPS BIIA-13
1 21930U 92019A 96042.75732785 -.00000057 00000-0 10000-3 0 7323
2 21930 55.7163 353.6825 0030456 181.7115 178.2860 2.00562043 28035
EUVE
1 21987U 92031A 96043.79131862 .00000863 00000-0 29989-4 0 5209
2 21987 28.4329 306.0135 0009907 122.1281 238.0272 15.19655410204587
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1 22012U 92038A 96045.10124233 .00000144 00000-0 10367-4 0 6952
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GPS BIIA-14
1 22014U 92039A 96046.28582459 -.00000004 00000-0 00000+0 0 6621
2 22014 54.8607 173.5240 0049692 308.5805 50.9369 2.00559969 19942
Glonass 56
1 22056U 92047A 96046.07002855 -.00000054 00000-0 00000+0 0 1563
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Glonass 57
1 22057U 92047B 96044.95822693 -.00000052 00000-0 00000+0 0 1354
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KO-23
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2 22078 66.0812 89.0155 0008752 336.6393 23.4223 12.86578214164862
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LAGEOS II
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2 22195 52.6555 71.1098 0137349 21.9475 338.6902 6.47293809 78138
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1 22231U 92079A 96046.43513824 -.00000005 00000-0 10000-4 0 6653
2 22231 54.6794 174.6456 0030086 279.8159 79.7970 2.00553121 23708
GPS BIIA-17
1 22275U 92089A 96046.57486237 -.00000009 00000-0 10000-3 0 6950
2 22275 54.6270 172.1346 0052027 252.4807 106.9136 2.00574609 23118
TDRS 5
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2 22314 2.3725 70.6385 0002487 245.6482 342.8487 1.00275577 11354
GPS BIIA-18
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Glonass 59
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ASTRO-D
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2 22521 31.1034 134.2427 0056589 19.7747 340.5069 15.02741407163836
UFO F1
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GPS BIIA-19
1 22581U 93017A 96045.29412230 -.00000070 00000-0 10000-3 0 5049
2 22581 55.2139 353.0267 0061339 35.5875 324.8058 2.00564634 21133
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RADCAL
1 22698U 93041A 96044.13760471 .00000066 00000-0 23217-4 0 4666
2 22698 89.5418 277.9462 0092805 14.9391 345.4508 14.21365540136664
GPS BIIA-21
1 22700U 93042A 96045.39152752 .00000078 00000-0 10000-3 0 5082
2 22700 54.2340 233.3859 0045631 354.6275 5.3524 2.00571581 19261
NOAA 13
1 22739U 93050A 96045.88394969 -.00000018 00000-0 15401-4 0 9973
2 22739 99.0280 0.3968 0009496 207.2291 152.8376 14.10955536129665
GPS BIIA-22
1 22779U 93054A 96046.98386633 -.00000006 00000-0 10000-3 0 5749
2 22779 54.4324 292.3296 0016646 263.7378 96.1378 2.00563005 18052
Meteor 2-21
1 22782U 93055A 96045.13155083 .00000030 00000-0 13869-4 0 4622
2 22782 82.5477 85.4666 0022331 330.5860 29.4034 13.83048016123986
UFO F2
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2 22787 4.2540 326.1041 0051962 263.2146 342.9526 1.00287821 7565
SPOT 3
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PO-28
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KO-25
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GPS BIIA-23
1 22877U 93068A 96047.02989637 -.00000007 00000-0 10000-3 0 3910
2 22877 55.5873 54.0157 0041085 296.8824 62.7376 2.00561073 16945
METEOSAT 6
1 22912U 93073B 96047.22783714 -.00000103 00000-0 10000-3 0 4071
2 22912 0.3248 287.9165 0002509 7.5226 282.0990 1.00269082 6634
HST Array
1 22920U 90037C 96046.83067039 .00004375 00000-0 30060-3 0 4306
2 22920 28.4686 217.6624 0003345 258.6629 101.3589 15.03537367120989
Meteor 3-6
1 22969U 94003A 96045.89662253 .00000051 00000-0 10000-3 0 2329
2 22969 82.5586 347.4817 0014182 181.1728 178.9349 13.16734845 98822
TUBSAT-B
1 22970U 94003B 96046.22123382 .00000051 00000-0 10000-3 0 2245
2 22970 82.5562 347.1646 0015492 177.6515 182.4676 13.16827031 98872
GPS BIIA-24
1 23027U 94016A 96043.12123205 -.00000058 00000-0 10000-3 0 3185
2 23027 55.0838 354.9714 0064223 202.8646 156.8548 2.00573278 14177
Glonass 62
1 23043U 94021A 96045.19072346 -.00000053 00000-0 00000+0 0 3121
2 23043 64.6879 328.2331 0004492 199.7496 160.2583 2.13103093 14361
Glonass 63
1 23044U 94021B 96046.01180213 -.00000054 00000-0 00000+0 0 2868
2 23044 64.6838 328.2056 0028140 206.7636 153.1151 2.13102821 14384
Glonass 64
1 23045U 94021C 96046.18857208 -.00000054 00000-0 00000+0 0 2952
2 23045 64.6698 328.2040 0011547 28.2050 331.8807 2.13102243 14383
GOES 8
1 23051U 94022A 96045.44743465 -.00000262 00000-0 00000+0 0 4703
2 23051 0.2413 265.2309 0002191 45.4486 278.8753 1.00259061 14126
MSTI 2
1 23101U 94028A 96044.57676770 .00004443 00000-0 72953-4 0 2840
2 23101 97.0868 239.5520 0013257 64.6909 295.5713 15.52841265 99958
STRV-1A
1 23125U 94034B 96044.67076449 .00000815 00000-0 24238-3 0 2550
2 23125 7.4628 292.7520 7248342 317.0557 5.0444 2.31833403 13230
STRV-1B
1 23126U 94034C 96045.12168483 .00001076 00000-0 26745-3 0 2276
2 23126 7.5064 292.8436 7252810 316.9761 5.2377 2.31695607 13287
Nadezhda 4
1 23179U 94041A 96045.17749673 .00000048 00000-0 33813-4 0 1679
2 23179 82.9466 328.5103 0037850 108.2362 252.2922 13.75677191 79744
Glonass 65
1 23203U 94050A 96043.97991619 .00000094 00000-0 00000+0 0 2457
2 23203 64.7723 208.3207 0007847 135.3694 224.6849 2.13101996 11739
Glonass 66
1 23204U 94050B 96047.02930676 .00000055 00000-0 00000+0 0 2620
2 23204 64.7627 208.2492 0015148 353.9991 5.9612 2.13102320 11795
Glonass 67
1 23205U 94050C 96045.03498608 .00000084 00000-0 00000+0 0 2468
```

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2 23205 64.7739 208.3030 0001339 8.2916 351.6984 2.13102405 11756
DMSP B5D2-7
1 23233U 94057A 96046.83454836 .00000108 00000-0 81856-4 0 6655
2 23233 98.8483 107.3031 0012645 164.3124 195.8442 14.12681082 75557
OKEAN 1-7
1 23317U 94066A 96045.82630959 .00000194 00000-0 25855-4 0 1318
2 23317 82.5443 172.5053 0027034 118.6983 241.6955 14.73997648 72367
ELEKTRO
1 23327U 94069A 96044.88261354 -.00000110 00000-0 00000+0 0 1236
2 23327 0.2701 248.6183 0003065 173.9384 114.3858 1.00271377 4754
RESURS 1-3
1 23342U 94074A 96046.13356803 .00001232 00000-0 21436-3 0 4477
2 23342 97.9833 106.0185 0001540 79.6106 280.5273 14.69816445 68734
Glonass 68
1 23396U 94076A 96046.28631422 .00000031 00000-0 00000+0 0 2099
2 23396 65.0360 88.4449 0030882 193.8516 166.1379 2.13102318 9627
Glonass 69
1 23397U 94076B 96044.11575443 .00000018 00000-0 00000+0 0 2130
2 23397 65.0222 88.5329 0013692 314.3134 45.6501 2.13102369 9577
Glonass 70
1 23398U 94076C 96043.53017550 .00000016 00000-0 00000+0 0 2268
2 23398 65.0130 88.5412 0004578 274.9795 85.0413 2.13102056 9579
LUCH (Altair-2)
1 23426U 94082A 96046.78547176 -.00000294 00000-0 00000+0 0 2583
2 23426 1.6969 270.0971 0003069 84.6410 168.6170 1.00278031 4271
RS-15
1 23439U 94085A 96043.86279173 -.00000039 00000-0 10000-3 0 1126
2 23439 64.8190 225.7599 0163573 221.0905 137.7605 11.27524238 46659
NOAA 14
1 23455U 94089A 96046.87140225 .00000128 00000-0 95255-4 0 4966
2 23455 98.9312 352.8069 0008479 226.4361 133.6108 14.11569010 58191
ODERACS II A
1 23471U 95004C 96047.13126322 .00186990 28720-4 17838-3 0 3294
2 23471 51.6368 287.9567 0003035 317.8735 42.2040 16.11373597 60053
Glonass 71
1 23511U 95009A 96045.36692442 -.00000053 00000-0 00000+0 0 1513
2 23511 64.7070 328.4901 0005719 230.8047 129.1686 2.13103249 7332
Glonass 72
1 23512U 95009B 96045.01573231 -.00000052 00000-0 00000+0 0 1621
2 23512 64.6952 328.5175 0007638 321.8540 38.1170 2.13102226 7326
Glonass 73
1 23513U 95009C 96045.30858173 -.00000053 00000-0 00000+0 0 1738
2 23513 64.7018 328.5181 0012065 207.6249 152.3357 2.13103041 7338
GMS 5
1 23522U 95011B 96046.61384689 -.00000299 00000-0 10000-3 0 1010
2 23522 0.5270 319.0165 0001999 134.0160 53.0528 1.00271378 3227
DMSP B5D2-8
1 23533U 95015A 96046.91037560 -.00000030 00000-0 72937-5 0 3971
2 23533 98.8364 50.9624 0007859 45.1725 315.0088 14.12724452 46361
Microlab 1
```

```
1 23547U 95017C 96046.19512281 .00000165 00000-0 63704-4 0 859
2 23547 69.9799 95.4814 0012469 339.7811 20.2823 14.45484057 45892
OFEQ 3
1 23549U 95018A 96047.25466868 .00022303 00000-0 59650-3 0 1997
2 23549 143.3653 206.1587 0233657 193.6034 165.8289 15.12884020 47877
GFZ-1
1 23558U 86017JE 96043.94088280 .00002458 00000-0 34249-4 0 1005
2 23558 51.6507 24.9184 0008090 122.0462 238.1315 15.61476145570433
ERS-2
1 23560U 95021A 96047.23469514 .00000003 00000-0 17441-4 0 1663
2 23560 98.5472 123.0592 0001162 58.9514 301.1791 14.32249307 43113
Spektr
1 23579U 95024A 96046.88282980 -.00114894 00000-0 -15351-2 0 2636
2 23579 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823 42370
GOES 9
1 23581U 95025A 96046.33114615 .00000071 00000-0 00000+0 0 1370
2 23581 0.0470 275.1862 0003836 10.4130 203.0851 1.00265901 2692
Helios 1A
1 23605U 95033A 96047.20077508 .00000092 00000-0 26614-4 0 1717
2 23605 98.1117 344.7190 0001521 40.1446 319.9870 14.63847121 32707
UPM SAT 1
1 23606U 95033B 96045.81392944 .00000102 00000-0 26667-4 0 1357
2 23606 98.0925 344.0333 0006325 212.9297 147.1499 14.67209513 32648
CERISE
1 23607U 95033C 96046.05837395 .00000638 00000-0 12270-3 0 659
2 23607 98.0938 344.1968 0005381 201.8337 158.2659 14.66926999 32667
TDRS 6
1 23613U 95035B 96046.45969796 .00000114 00000-0 00000+0 0 1332
2 23613 0.4270 83.6736 0003384 233.9381 202.3002 1.00276980 2150
Glonass 74
1 23620U 95037A 96044.15427155 .00000093 00000-0 00000+0 0 970
2 23620 64.8318 208.1671 0018559 161.8244 198.2360 2.13102556 4349
Glonass 75
1 23621U 95037B 96044.80034427 .00000087 00000-0 00000+0 0 1052
2 23621 64.8413 208.1367 0017899 173.4556 186.5609 2.13101886 4351
Glonass 76
1 23622U 95037C 96045.79730934 .00000074 00000-0 00000+0 0 1032
2 23622 64.8306 208.1109 0037035 162.2589 197.8590 2.13102266 4372
Prognoz-M2
1 23632U 95039A 96047.72701810 .00000352 00000-0 00000+0 0 365
2 23632 66.8240 253.8690 8734665 318.5520 26.4190 0.26358100 535
SICH-1
1 23657U 95046A 96045.19787802 .00000117 00000-0 14404-4 0 563
2 23657 82.5362 314.6844 0029316 90.1690 270.2883 14.73452053 24579
Soyuz TM-22
1 23665U 95047A 96046.88282980 -.00114894 00000-0 -15351-2 0 1557
2 23665 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823 25816
RADARSAT
1 23710U 95059A 96045.84076477 -.00000044 00000-0 00000+0 0 1011
2 23710 98.5780 54.2683 0001205 83.7982 276.3334 14.29963532 14619
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Glonass 77
1 23734U 95068A 96045.91474793 .00000072 00000-0 00000+0 0 613
2 23734 64.8382 208.0368 0018228 328.5268 31.3488 2.13101703 1347
Glonass 78
1 23735U 95068B 96047.07932296 .00000054 00000-0 00000+0 0 564
2 23735 64.8296 207.9832 0005649 204.8314 155.1246 2.13125286 1368
Glonass 79
1 23736U 95068C 96046.14925826 .00000068 00000-0 00000+0 0 445
2 23736 64.8242 208.0266 0006589 187.2591 172.7170 2.13102076 1349
Progress M-30
1 23744U 95070A 96046.88282980 -.00114894 00000-0 -15351-2 0 572
2 23744 51.6437 16.8006 0004890 352.7233 7.2083 15.57697823 9254
XTE
1 23757U 95074A 96044.19684132 .00000554 00000-0 17426-4 0 311
2 23757 22.9849 182.4674 0013312 5.3459 354.7158 14.97600393 6706
Gorizont 31
1 23775U 96005A 96045.82475608 .00000134 00000-0 00000+0 0 345
2 23775 1.4686 286.3520 0006576 273.3936 281.2478 1.00258487 214
1996005B
1 23776U 96005B 96029.00921427 .12303299 12826-4 88259-4 0 243
2 23776 51.6236 262.3386 0004734 331.6874 28.6897 16.52754420 590
1996005C
1 23777U 96005C 96026.14116828 .13925704 12407-4 11512-2 0 59
2 23777 51.6295 278.5026 0004191 56.6687 303.5124 16.38908937 124
1996005D
1 23778U 96005D 96043.20000000 -.00000067 00000-0 00000+0 0 30
2 23778 1.4990 285.7010 0011598 66.6110 146.2940 0.97675474 172
Palapa C-1
1 23779U 96006A 96047.20911705 -.00000378 00000-0 00000+0 0 157
2 23779 0.0994 285.6707 0068842 250.7660 168.1067 1.00279877 113
1996006B
1 23780U 96006B 96034.70000000 -.00006273 55668-5 00000+0 0 39
2 23780 21.9890 328.5190 8726775 181.1740 347.4370 0.74728460 21
N-STAR B
1 23781U 96007A 96046.33881771 -.00000325 00000-0 00000+0 0 133
2 23781 0.0945 275.7909 0008003 67.5726 59.2048 1.00271869 129
1996007B
1 23782U 96007B 96046.54354880 .00005365 00000-0 67973-3 0 70
2 23782 6.7272 58.3697 7364816 185.2312 157.1888 2.19434478 227
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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379. Re: NOAA APT

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Feb17.175454.22207@ke4zv.atl.ga.us>
Source record: 22946

In article <824470654.3535@ndavison.demon.co.uk> nigel@ndavison.demon.co.uk (Nigel Davison) writes:
>
>Could somebody please tell me what APT stands for, and also supply me
>with some info regarding the content of an NOAA APT signal, ie
>frequency content, and minimum audio bandwidth required for acceptable
>results.

APT stands for Automatic Picture Transmission. The signal is a 2400 Hz tone varied in amplitude to convey the luminance information of the picture. White level is 100% amplitude, black is 4% amplitude. The picture format is 120 lpm progressive scan. This signal is FM modulated with 15 kHz deviation (30 kHz channel). So the *audio* bandwidth of the receiver can be sharply restricted to just 2400 Hz, but the *IF* bandwidth needs to be about 35 kHz (allowing some slop for doppler).

>I know that I need 35 Khz IF BW but as we are all aware, common
>scanners do not have this feature. All I can do is use WFM and use a
>sound program so filter out the wanted and exclude the not wanted.

Murata makes suitable IF filters, DigiKey handles them. WBFM uses a 200 kHz filter, and the resulting SNR will be poor. For best results, you need to sacrifice either the NBFM or WBFM position on your scanner and replace its filter with the proper bandwidth filter. It is critically important that the IF limit the FM signal, otherwise incidental AM modulation will be introduced and picture quality will be severely degraded.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

380. Re: Broadcasting Radio Station Database for you.....

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: Roland S Geter PhD <roland@mycronet.com>
Message-ID: <4g4170$hl2@news1.goodnet.com>
Source record: 22947
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.swap

Hi Chuck,

Let's try to get the database over here on this provider, OK?

Thanks
Roland S Geter PhD
roland@mycronet.com

381. EME? help!?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-17 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4g5c8a$10h0@ns2-1.CC.Lehigh.EDU>
Source record: 22948

HEllllo out there in EME land!
i now have set up a semi-el-az rotor system, with one 11 element yagi
in a backissue of QST, (the one with the pic of a 7m EME dish mising a segment
or 2 with the guy working on it) said that i will be able to do EME with that
and at least 170W, due to the megastations
i have not heard anything for Feb 17. in the caption with the pic, said there
was EME the 17th and 18th
is it me, or is there no stations out there saturday?
or could it be the sun, which is only 10deg. above it?

thanks

david
|---|
| David Roseman | c002@lehigh.edu OUTTA ORDER!
SysOp of NODE 3 BBS	The Flying HAm - BBS	
Running OBV/2 Software	Technomage - BBS	
	N3SQE/1 - HAm V
	N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

382. Re: Antennas for satellites, advice

Newsgroup: rec.radio.amateur.space
Date: 1996-02-19 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Feb19.175956.1971@ke4zv.atl.ga.us>
Source record: 22949

In article <Pine.OSF.3.91.960214203453.6448A-100000@pogo.scs.unr.edu> Jim Barbre <jbarbre@pogo.scs.unr.edu> writes:
>On 6 Feb 1996, Jim Fellows wrote:
>> All that I have read so far in the "Satellite Experimenters HandBook" and other
>> publications recommend *switchable sense* circular polarity antennas. Well the
>> advice I got was to use either fixed sense, that being RHCP, or linearly
>> polarized antennas with more gain. The reasoning being for the former is that
>> almost all the non-LEO birds are RHCP and that *should* be sufficient. The
>> reasoning for the latter is that the approximate 3 dB loss between circular and
>> linear polarizations can be made up by higher gain arrays (stacked) and this
>> also would then work better for the weak signal terrestrial SSB work that I do.
>
>I work the high orbit birds (Oscar 10 and AO-13) exclusively. For my 70cm
>uplink I use fifty watts into a single, horizontally polarized yagi. It's
>from Rutland Arrays, is 14 feet long and (if I remember correctly) has 28
>elements. Several operators have commented to me on how good my signal
>sounded. I also use Aircom Plus cable and the special N-connectors which
>I get from SSB Electronics. I am NOT affilitated with either of these two
>companies, but I must say my experience with thier products has been
>good. It IS possible to work the high orbit birds using linear polarization.
>
>On the 2 meter downlink I use 2 8-element yagis (again Rutland Arrays)
>which I have phased for RHCP. I found that using only one 8-element yagi
>with a good mast-mounted preamp allowed me to work AO-13 with some
>difficulty, but I was unable to hear anything but the beacon on Oscar 10.
>Using 2 yagis phased for RHCP allows me to work both AO-13 and Oscar 10
>and gives a more-than-adequate downlink. I suppose if one were _always_
>on the birds that there would be a time when the ability to switch to
>LHCP would come in handy, but I do not believe that to be the case very
>often. Perhaps someone who has actually used LHCP on the downlink can
>elucidate as to just how often they have used it. Hope this hasn't
>confused you even further.

The real reason to use CP is to reduce *spin modulation* of the signal. When the satellite antennas are off-pointed from your location, this can become quite pronounced when using linear polarized antennas. The reason you may need to use LHCP is when the satellite is grossly off-pointed from your location the polarization sense effectively reverses, IE when the Bahn attitude is greater than 90 degrees off your location.

I use the KLM-40CX and KLM-22C for mode B operations. I rarely need more than 10 watts uplink power to match the beacon in strength (that's the maximum signal you should put to the birds) when off-pointing is not gross. When off-pointing is gross,

switching to LHCP allows me to continue to work the satellite
when use of the full 100 watts uplink power my station is
capable of generating won't do the trick using RHCP.

Use of linear antennas costs more than 3 db when the satellite
antennas are even slightly off pointed from your location.
The spin modulation (caused by cross polarization) can cause
fades much greater than 3 db, up to 30 db in some pathological
cases. This pogoing of signal strength can make you uncopyable.
Using the correct CP sense can almost eliminate the effects
of spin modulation.

Spin modulation is much worse on Oscar 10 than on Oscar 13
because Oscar 10's arrays were damaged post-separation when
the booster ran into it. That means that even when you are
on its boresight there will still be a spin modulation
component to the signal.

I used to use pairs of Cushcraft long boomers stacked for
linear polarization on Oscar 10. It was horrid. At signal
peaks, it was strong, but at signal dips it was nearly gone.
I had to run 100 watts to be copyable during the dips, which
made me stronger than the beacon during the peaks (not a
good thing). Switching to CP eliminated virtually all of
that and allowed me to reduce uplink power to a socially
acceptable level.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

383. ICOM Radio control via comport

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: Danie Brynard <bryd@kidd.co.za>
Message-ID: <4gbod1$har@igw01.kidd.co.za>
Source record: 22950

Is there a software package available that will tune an ICOM CI-V via the standard PC com ports or parallel ports ? (thus without having to put additional h/w into the PC like a KCT card etc)

danie zs6awk
BRYD@KIDD.CO.ZA

384. HELP! sat. how?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: gearloos@gnn.com
Message-ID: <4gc786$lof@news-e2a.gnn.com>
Source record: 22951

Hi and Thank You for reading this.
I have a Yeasu 736 with 144, 220, 440 installed
and I have adjusted the alc to give me a total 37 watts out on 2
meters and modified it for 9600 packet operation, Which I have
tested and seems to work ok.
A Cushcraft boomer 13 element,15.8db.gain anttenna
A Kantronics 9612 and kantronics kpc-3 packet controllers.
All this is fed through 50 feet of 9913 belden and a struthers
wattmeter which is on a piece of 9913 3 ft long from the radio.
The antenna is up 10 feet above the roof of a 20 ft tall building
for a total of about 30 ft.
How do I recieve/or transmit to any sats.voice or data.
what freqs...do I need some software...I have heard of Keps...but
how do I use them?
I am in the Los Angeles area....Sorry but I am really lost!!!
Thank You Again for any help.
73...de...ke6ott

385. DOVE activity increases

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: Robert D Houghton <rhought@cello.gina.calstate.edu>
Message-ID: <4gcji0$i02@cello.gina.calstate.edu>
Source record: 22952
Body handling: HTML body converted to readable text

I posted this message 8 hours ago via AOL and it hadn't yet arrived on this newsgroup so here goes again. My apologies if it gets duplicated.

I hav been monitoring DOVE for the last few days and until Saturday, had only seen short MBLCTL packets. Saturday, DOVE became more "verbose" in its MBLCTL packets and I captured the following. Maybe it means something to somebody who watches this newsgroup. (Times are Pacific Standard Time)

```
DOVE>MBLCTL [02/18/96 12:04:51]:
A
d
DOVE>MBLCTL [02/18/96 12:07:01]:
A
$
DOVE>MBLCTL [02/18/96 12:07:13]:
D
_F0
6
6B%

6PHTHDOVE"C:\MICROSAT\HT\PHTHDOVE.EXEdove
DOVE>MBLCTL [02/18/96 12:08:03]:
D
d
n*Je
DOVE>MBLCTL [02/18/96 12:08:13]:
D
vDLO----r-y-

DOVE>MBLCTL [02/18/96 12:08:17]:
D
*@Q@@
@'@o@
DOVE>MBLCTL [02/18/96 12:08:20]:
D
3^0:^0A^0H^0O^0V^0]^0
DOVE>MBLCTL [02/18/96 12:08:25]:
D
d^0k^0r^0y^0^0^0^0^0^0?^0F^0M^0T^0
DOVE>MBLCTL [02/18/96 12:08:29]:
D
d
DOVE>MBLCTL [02/18/96 12:08:33]:
D
```

```
0
!@DY
DOVE>MBLCTL [02/18/96 12:08:36]:
D
d
DOVE>MBLCTL [02/18/96 12:08:44]:
D
DOVE\KERNAL.EXE6m:!3.0 QCF (C) Copyright QUADRON SERVIC
DOVE>MBLCTL [02/18/96 12:08:47]:
D
E CORP 1986,1987 All Rights Reserved. K@K6m:!3.0 QCF (C) Copyright
QUADRON SERV
ICE CORP 1986,1987 All
DOVE>MBLCTL [02/18/96 12:08:52]:
D
Rights Reserved.
DQ@Q@Q@Q@
Pb%pR T Cz|.!JX@P
```

386. Re: LogSat ???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: rhough6007@aol.com
Message-ID: <4gdvli$7m7@newsbf02.news.aol.com>
Source record: 22953

What does the logging module do? Does it collect telemetry?

Thanks,

Bob KC6LVG

387. Re: HELP! sat. how?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2002962151110001@jake-6i.ip.realtime.net>
Source record: 22954

In article <4gc786$lof@news-e2a.gnn.com>, gearloos@gnn.com (Gearloos) wrote:

> Hi and Thank You for reading this.
> I have a Yeasu 736 with 144, 220, 440 installed
> and I have adjusted the alc to give me a total 37 watts out on 2
> meters and modified it for 9600 packet operation, Which I have
> tested and seems to work ok.
> A Cushcraft boomer 13 element,15.8db.gain anttenna
> A Kantronics 9612 and kantronics kpc-3 packet controllers.
> All this is fed through 50 feet of 9913 belden and a struthers
> wattmeter which is on a piece of 9913 3 ft long from the radio.
> The antenna is up 10 feet above the roof of a 20 ft tall building
> for a total of about 30 ft.
> How do I recieve/or transmit to any sats.voice or data.
> what freqs...do I need some software...I have heard of Keps...but
> how do I use them?
> I am in the Los Angeles area....Sorry but I am really lost!!!
> Thank You Again for any help.
> 73...de...ke6ott

Do two things:

1. Go to your nearest han store and get a copy of The Satellite
Experimeters Handbook (or order from ARRL)

2. Visit and study the info on the AMSAT web page
http://www.amsat.org/amsat/AmsatHome.html

Have fun.

Ron W5RKN

--
Ron W5RKN

388. ARLK011 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk011.1996@arrl.org>
Source record: 22955
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK011
ARLK011 Keplerian data

ZCZC SK11
QST de W1AW
Keplerian Bulletin 11 ARLK011
From ARRL Headquarters
Newington, CT February 20, 1996
To all radio amateurs

SB KEP ARL ARLK011
ARLK011 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-75
1 99975U 96053.87524525 .00002860 00000-0 85524-5 0 19
2 99975 28.4683 286.8337 0004610 282.5511 317.4008 15.91070731 12
Mir
1 16609U 86017A 96051.56657852 .00002205 00000-0 35992-4 0 4232
2 16609 51.6475 353.3361 0005270 17.4588 342.6590 15.57577148571678
HST
1 20580U 90037B 96051.10996581 .00000356 00000-0 20041-4 0 07997
2 20580 28.4689 257.5362 0006178 20.3131 339.7690 14.91015396120948
AO-10
1 14129U 83058B 96046.56186910 -.00000124 00000-0 10000-3 0 4034
2 14129 26.3643 223.9075 5983094 351.0706 1.5442 2.05879267 67343
RS-10/11
1 18129U 87054A 96051.01283475 .00000033 00000-0 18987-4 0 01878
2 18129 82.9235 235.8728 0012662 117.8483 242.3959 13.72362323433967
UO-11
1 14781U 84021B 96050.98956126 .00000098 00000-0 24328-4 0 8632
2 14781 97.7911 47.0239 0012791 105.5803 254.6816 14.69427673640296
RS-12/13
1 21089U 91007A 96051.07616360 .00000056 00000-0 43850-4 0 08812
2 21089 82.9249 276.9381 0028277 199.2861 160.7223 13.74066414252819
AO-13
1 19216U 88051B 96050.48301693 .00000195 00000-0 62416-4 0 01524
2 19216 57.3523 134.1917 7376506 32.3892 356.5789 2.09725180027346
```

```
UO-14
1 20437U 90005B 96051.14357228 -.00000030 00000-0 52383-5 0 01647
2 20437 98.5531 136.3459 0010405 186.3176 173.7876 14.29911936317186
RS-15
1 23439U 94085A 96050.86961729 -.00000039 00000-0 10000-3 0 01253
2 23439 64.8162 214.4258 0163594 219.8522 139.0295 11.27524036047442
AO-16
1 20439U 90005D 96051.17585673 -.00000005 00000-0 14744-4 0 09771
2 20439 98.5660 138.4059 0010824 186.9814 173.1214 14.29966810317204
DO-17
1 20440U 90005E 96051.13982620 -.00000000 00000-0 16764-4 0 09782
2 20440 98.5654 138.9432 0010947 186.0405 174.0653 14.30108096317227
WO-18
1 20441U 90005F 96051.19714487 -.00000007 00000-0 14025-4 0 09665
2 20441 98.5668 138.9513 0011597 186.8683 173.2341 14.30078381317230
LO-19
1 20442U 90005G 96051.13189113 .00000003 00000-0 17866-4 0 09809
2 20442 98.5699 139.3370 0011627 186.7704 173.3331 14.30185145317246
FO-20
1 20480U 90013C 96051.10978786 -.00000056 00000-0 -55423-4 0 08607
2 20480 99.0427 98.3406 0541324 32.1336 331.1558 12.83231919282742
AO-21
1 21087U 91006A 96051.01441112 .00000094 00000-0 82657-4 0 06980
2 21087 82.9387 49.1677 0034049 173.1670 186.9953 13.74566170253771
UO-22
1 21575U 91050B 96051.16892070 .00000020 00000-0 21155-4 0 6671
2 21575 98.3676 120.9923 0006847 264.9742 95.0660 14.37012382241112
KO-23
1 22077U 92052B 96051.14883629 -.00000037 00000-0 10000-3 0 05629
2 22077 66.0782 76.6000 0007643 329.1625 30.8932 12.86295842165628
KO-25
1 22828U 93061F 96051.14091736 -.00000055 00000-0 -44956-5 0 04443
2 22828 98.5899 128.9649 0009355 200.0985 159.9830 14.28129921093261
IO-26
1 22826U 93061D 96051.20205022 -.00000001 00000-0 17310-4 0 4536
2 22826 98.5942 128.9744 0008144 218.3683 141.6898 14.27795287125166
AO-27
1 22825U 93061C 96051.12671493 -.00000019 00000-0 99980-5 0 04741
2 22825 98.5941 128.7568 0007843 217.6928 142.3704 14.27687377125147
PO-28
1 22829U 93061G 96051.15594322 .00000001 00000-0 17738-4 0 04529
2 22829 98.5909 129.0309 0009244 203.2870 156.7894 14.28110969125188

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
February 24, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

389. Increased activity from DOVE

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: rhough6007@aol.com
Message-ID: <4ge4fo$9fg@newsbf02.news.aol.com>
Source record: 22956
Body handling: HTML body converted to readable text

I have been monitoring DOVE for several weeks now and until yesterday I would only receive short MBLCTL frames on each pass. (It is my understanding that this is some sort of diagnostic mode that sends binary data.)

Yesterday, these MBLCTL frames became much more "verbose" with long strings every few seconds. Below is a sample of what I saw yesterday. Times are Pacific Standard Time (UTC -8).

```
DOVE>MBLCTL [02/18/96 12:04:51]:
A
d
DOVE>MBLCTL [02/18/96 12:07:01]:
A
$
DOVE>MBLCTL [02/18/96 12:07:13]:
D
_F0
6
6B%

6PHTHDOVE"C:\MICROSAT\HT\PHTHDOVE.EXEdove
DOVE>MBLCTL [02/18/96 12:08:03]:
D
d
n*Je
DOVE>MBLCTL [02/18/96 12:08:13]:
D
vDLO----r-y-

DOVE>MBLCTL [02/18/96 12:08:17]:
D
*@Q@@
@'@o@
DOVE>MBLCTL [02/18/96 12:08:20]:
D
3^0:^0A^0H^0O^0V^0]^0
DOVE>MBLCTL [02/18/96 12:08:25]:
D
d^0k^0r^0y^0^0^0^0^0^0?^0F^0M^0T^0
DOVE>MBLCTL [02/18/96 12:08:29]:
D
d
DOVE>MBLCTL [02/18/96 12:08:33]:
```

```
D
0
!@DY
DOVE>MBLCTL [02/18/96 12:08:36]:
D
d
DOVE>MBLCTL [02/18/96 12:08:44]:
D
DOVE\KERNAL.EXE6m:!3.0 QCF (C) Copyright QUADRON SERVIC
DOVE>MBLCTL [02/18/96 12:08:47]:
D
E CORP 1986,1987 All Rights Reserved. K@K6m:!3.0 QCF (C) Copyright
QUADRON SERV
ICE CORP 1986,1987 All
DOVE>MBLCTL [02/18/96 12:08:52]:
D
Rights Reserved.
DQ@Q@Q@Q@
Pb%pR T Cz|.!JX@P
```

390. Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: tedwards@Glue.umd.edu
Message-ID: <4ge3e6$ao9@hertz.isr.umd.edu>
Source record: 22957

Obviously hams haven't done it, but has there ever been moon-earth-moon communication?

-Thomas

391. * SpaceNews 19-Feb-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-02-20 00:00:00 UTC
From: magliaco@tolip.njin.net
Message-ID: <4gdmiv$fqm@pilot.njin.net>
Source record: 22958
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.info

From: magliaco@tolip.njin.net (John Magliacane)
Subject: * SpaceNews 19-Feb-96 *
Date: 20 Feb 1996 18:47:43 -0500
Organization: Rutgers University
Message-ID: <4gdmiv$fqm@pilot.njin.net>

SB NEWS @ AMSAT $SPC0219
* SpaceNews 19-Feb-96 *

BID: $SPC0219

=========
SpaceNews
=========

MONDAY FEBRUARY 19, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* CHINESE LAUNCH FAILS *
========================
A Chinese "Long March 3B" rocket crashed during launch on 14-Feb-96
destroying an Intelsat VII A2 (TVRO) communications satellite, according
to industry sources. The Long March rocket just barely cleared the tower
before it started veering sideways, and then crashed to the earth. At that
point the uplink was immediately cut. It is not clear whether the drop of
the uplink was caused by interruption of power or the censor's finger on
"the button".

[Info via Gary Bourgois, WB8EOH]

* W0CY - SILENT KEY *
====================
Another sad note. Jim McKim, W0CY, became a Silent Key 14-Feb-96. Jim
was born in 1915 and first licensed in 1933. He had been involved in
satellites since the launch of Sputnik I in 1957. A Life Member of AMSAT,
with a Life Membership Number of 7, as well as a life member of ARRL and
QCWA, Jim was known as "Mr. Ham Radio" all over central Kansas. W0CY was
an ardent supporter of AMSAT. Among his activities for the organization
was his stewardship of the of the Mid-America Section of the 75 Meter AMSAT
Net since its inception in the 1970's.

Jim McKim was also active in the Central States VHF Society and was an avid
VHF'er. He was especially fond of the six meter band. His first love was
CW and he was still able to copy it to the end.

The heating and air conditioning business, which he headed, designed and installed the systems in the Eisenhower Library and Museum complex in Abilene, KS. Jim had also been an amateur radio equipment dealer in Salina, Kansas. His satellite activities were featured in the December 1986/January 1987 issue of Smithsonian Air & Space magazine in an article entitled: "Homebuilt Satellites." This article, by Nancy Shute, captures the essence of Jim's activity on satellites and the AMSAT 75 Meter Net. He was also featured in an article by Jim White WD0E in the May/June 1994 issue of the AMSAT Journal. W0CY's booming voice will be missed by all on the 75 Meter AMSAT Net and the bands above 50 MHz.

[Info via the AMSAT News Service]

* MIR NEWS *
============
Yuriy Gidzenko and Thomas Reiter carried out a 3 hour, 2 minute spacewalk on 08-Feb-96, starting around 1307 UTC from the Kvant-2 airlock. The walk was reportedly shorter than planned due to a pressurization problem in the suit of EO-20 mission commander Gidzenko. The Cosmonauts recovered some samples which had been exposed to space on the exterior of the Spektr module (the ESEF or European Space Exposure Facility) to study the effects of radiation, vacuum and debris impacts. Launch of the EO-21 crew, Yuriy Ivanovich Onufrienko and Yuriy Vladimirovich Usachyov (callsign Skif-1 and Skif-2) will take place on 21-Feb-96.

[Info via Jonathan's Space Report #275]

* STS-75 LAUNCH *
=================
Just a reminder that space shuttle "Columbia" is scheduled for launch this week on 22-Feb-96.

* RS-12 NEWS *
==============
RS-12's recent switch to "Mode KT" allows its 2-meter downlink to be received and relayed through any satellite with an uplink passband within RS-12's VHF downlink passband. Such satellites include RS-10 operating in "Mode A", and FO-20, operating in "Mode JA". Careful planning can yield some interesting "dual-hop" contacts when these satellites are properly aligned in orbit.

* THANKS! *
===========
Thanks to all who sent messages of appreciation to SpaceNews, especially:

KA3HPQ F6HLG KB9BNR

* FEEDBACK/INPUT WELCOMED *
===========================
Comments and input for SpaceNews should be directed to the editor (John, KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews

WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

392. Radio Database Program LW, MW, SW coverage for YOU.....

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: Charles Bolland <chuck@mail.flinet.com>
Message-ID: <4gduns$sio@news.flinet.com>
Source record: 22959
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

FRIENDS,

If you would like a free copy of a radio database program that covers longwave, mediumwave, and shortwave with at least 4,000 of records, send your NAME, POSTAL ADDRESS, and EMAIL address to chuck@flinet, and I will return the program to you via EMAIL.

The program is not up to date! It is a program used during 1994 and hasn't be updated since. However, many of the records are still current for stations that do not change every quarter.

The program is good until June 6, 1996. After that it will not function.

Hope to hear from you and don't forget your Postal Address for registration and future information via mail..

All addresses will be kept confidential!

Chuck

chuck@flinet.com

393. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: JOEBOO <joeboo@crown.net>
Message-ID: <312ABA93.6E85@crown.net>
Source record: 22960

Who would they be bouncing their signals to? There are not too many people on the moon to talk to.

JOHN

394. Parallel port driver to tune ICOM rig's ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: Danie Brynard <bryd@kidd.co.za>
Message-ID: <4getu3$1cm@igw01.kidd.co.za>
Source record: 22961

Is there a driver + hw available that will control the az/al rotators + tune ICOM radio's via the PC PARALLEL PORT for software like Instant Track or WISP ?

Danie zs6awk
BRYD@KIDD.CO.ZA

395. (no subject)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: Danie Brynard <bryd@kidd.co.za>
Message-ID: <4gets1$1cm@igw01.kidd.co.za>
Source record: 22962

Is there a driver + hw available that will control the az/al rotators +
tune ICOM radio's via the PC PARALLEL PORT for software like Instant
Track or WISP ?

Danie zs6awk
BRYD@KIDD.CO.ZA

396. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4gf4sg$ot4@service2.uky.edu>
Source record: 22963

In article <4ge3e6$ao9@hertz.isr.umd.edu>, tedwards@Glue.umd.edu (Thomas Grant Edwards) says:
>
>Obviously hams haven't done it, but has there ever been moon-earth-moon
>communication?
>
>-Thomas
>
I would like to point out that quite a few hams do eme communication all the time. I live about 1.5miles from Bill Maxim(N4AR?) and he does (or did) eme on 2mtrs. When he fires up(mostly cw) for eme operations, I just turn my radios off. There are articals in most of the ARRL yearly handbooks showing how to do it. Power bdgets, tranmitter/receiver requirments, and most important, antenna requirements. The nice thing about eme is that you can reach anyone who can see the moon at the same time you do(assuming you both have tied up a fortune in radio gear and land for the antenna's<g>).

397. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-21 00:00:00 UTC
From: cv282@FreeNet.Carleton.CA
Message-ID: <Dn5GJv.4pE@freenet.carleton.ca>
Source record: 22964

Thomas Grant Edwards (tedwards@Glue.umd.edu) writes:
> Obviously hams haven't done it, but has there ever been moon-earth-moon
> communication?
>
> -Thomas
>

As far as I knew hams have done plenty of EME. You just need A LOT of
power and a large antenna array. If you take a look at the 2 Meter band you
will see that 144.0-144.05 is set aside for EME CW. And 144.10 to 144.20 is
for EME and SSB.

--

□
cv282@freeNET.carleton.CA
purdon@ott.ve2sux.ampr.org
□

398. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: JOEBOO <joeboo@crown.net>
Message-ID: <312C1673.2939@crown.net>
Source record: 22867

JOEBOO wrote:
>
> Who would they be bouncing their signals to? There are not too many
> people on the moon to talk to.
>
> JOHNWhat I should have said to clarify my original post was that bouncing
from the moon to the earth and back is silly, there isn't anybody to
hear it and reply. This is, of course, assuming there isn't two stations
on the moon at the same time :)

JOHN

399. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2202961635070001@maria-5n.ip.realtime.net>
Source record: 22868

In article <4gglhq$d4s@news.cais.com>, fwhitehurst@ezdial.com (David Whitehurst) wrote:

> Can anyone please tell me why so few hams are into satellites (AMSAT)
> on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
> hardly anyone in my area (tidewater area of southeast Virginia) is into it!
> -David. :(

That's strange. I get the opposite feeling working the digital satellites (UO-22, KO-23, KO-25). When the satellite is over the East coast, the queue is usually full, while over the West coast, the queue is often nearly empty.

Which satellites do you refer to? On what do you base your data.

BTW, I get the same feeling with FO-20.

Ron W5RKN

--
Ron W5RKN

400. Radio Propagation & Space Weather Forecasting Course

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: oler@holly.cc.uleth.ca
Message-ID: <4gh7c5$e19@holly.cc.uleth.ca>
Source record: 22869
Cross-posted to: rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.amateur.space

NOTICE: There are still lots of seats available for the Internet Space Weather and Radio Propagation Forecasting Course, scheduled to begin on 18 March. An enrollment form is included at the end of this announcement for those who want to enroll. Enrollment forms must be postal mailed by interested participants no later than 04 March to be accepted.

CORRECTION TO PREVIOUS ANNOUNCEMENT:

We would like to correct a mistake in our previous posted announcement that stated that no more than 60 people will be accepted for this course. We WILL accept more than 60 people for the course. If more than 60 enrollment forms are received, everyone who enrolls will be accepted. But we will stop actively advertising the course and will discourage investigators from enrolling to take this course after 60 people have enrolled.

INTERNET SPACE WEATHER AND RADIO PROPAGATION FORECASTING COURSE ANNOUNCEMENT

The response to our questionaire has been sufficient to justify going ahead with the Internet Space Weather and Radio Propagation Forecasting Course. People with almost any type of computer system will be able to take this course (see below).

Course Start-Date

The course is scheduled to begin on 18 March 1996. Persons interested in enrolling in this course MUST SEND US THE APPROPRIATE ENROLLMENT FORM AND PAYMENT FOR THE COURSE NO LATER THAN 04 MARCH 1996 TO BE ACCEPTED. That is, the enrollment forms must be postmarked no later than 04 March. This is required so that we have time to receive the enrollments and to distribute all required computer software and make certain everyone is ready to receive the course material before the course start-date. A printable enrollment form with mailing instructions has been appended below.

Course Prerequisites

There are no prerequisites to take this course. If you are interested, sign and send the enrollment form. This course will not be a difficult one for most people to handle. It will be visually-oriented with minimal math involved and will gradually increase in detail and complexity, building on the framework previously taught and established.

By the time the course is completed, everyone who takes the course should be able to forecast space environment and radio propagation conditions with accuracies comparable to professional forecasters.

One-Time Course

There are currently no scheduled plans to offer this course again in the future, UNLESS there is sufficient interest in the Internet community to justify offerring it again.

So, if you are interested in taking this course, this is the time to sign up. Don't wait for the next opportunity, because there might not be one.

Course Curriculum Reading Software

The following FREE software will be required to take this course. This software is available for most computer platforms, including:

* DOS
* Windows (3.x / NT / 95)
* Macintosh
* SDK
* UNIX systems (HP, SGI, and Sun supported)

The software is the ADOBE ACROBAT READER. This software is free of charge and can be downloaded at your convenience via FTP or WWW from Adobe (ftp.adobe.com/pub/adobe/Acrobat or http://www.adobe.com) or via our FTP system at: solar.uleth.ca in the subdirectories of "pub/solar/Software/Acrobat". Our FTP system is now connected to the Internet using a high-speed T1 line, so those who may have had slow downloads previously should notice a significant improvement in transfer speeds.

The use of the Adobe Acrobat Reader software has several significant advantages over other delivery methods. These include:

* Ability to incorporate complete graphical figures and high-resolution images into the lesson material for high-quality visually-oriented lessons.
* WWW-style links to other sections of the lesson material, allowing cross-references or bookmarks to be included.
* Support for imbedded digital video movies (AVI, MOV, MPEG, etc) if we should choose to insert movies of solar flares, etc.
* Wide compatability amongst most available computer platforms.
* Lessons can include links to WWW sites if you have Internet WWW access (not a requirement for the course).
* Lessons can be printed out on paper for those who would rather take the course on paper.
* There are security features available that are attractive.
* Compression features to reduce the disk-space requirements and download times.

Available Optional Course Material

This course will make use of a number of different IBM or compatible software products (designed for MSDOS 3.3 or higher systems or Windows systems running in DOS mode). The available software which can be used as part of the course curriculum includes the following, which can be ordered as part of the course when filling out the Course Enrollment Form appended to this announcement. This software is optional and will not be required to successfully complete the course. But it will certainly provide greater hands-on experience:

1. SKYCOM PRO Version 2.0 Ionospheric Signal Analyst Software (normally sold for $110.00 to $135.00 USD).
2. Professional Dynamic Auroral Oval Simulator (normally sold for $100.00 USD).
3. BCAST Solar and Geophysical Database Manager (normally sold for $50.00 USD).
4. Extended Database containing sunpot numbers from the year 1818, solar flux values from the year 1947, and geomagnetic data from the year 1932 (normally sold for $50.00 USD).
5. IMPACT - Simple Computer Aided Coronal Mass Ejection Impact Assessment Software (valued at $50.00 USD).

Also available as part of the course curriculum, intended to be indirectly used as tools for the course, are our subscribable E-Mail Internet Services FOR ONE YEAR that include:

1. Daily Summaries of Solar and Geophysical Data (including all of the critical solar indices, geomagnetic indices, and statistics on solar flares, sunspot numbers, solar flux values, proton and electron fluences, neutron monitor and PCA statistics, etc).
2. Daily Summaries of Ionospheric Data (including ionospheric data from observatories around the world).
3. Daily Summaries of Auroral Activity (summarizing auroral activity for the last 24 hours and giving forecasts for the next 3 days).
4. Weekly Solar Terrestrial Forecasts and Reviews (which include complete summaries of activity in graphical formats as well as 10-day forecasts of geomagnetic activity, HF propagation conditions, auroral activity and potential satellite anomalies.
5. All Alerts and Warnings (warnings and alerts for major solar flares, geomagnetic storms, proton and PCA events, satellite anomalies and auroral activity).

These additional optional materials are not required to take the course, but will help you in developing your forecasting skills during and after you have completed the course.

Number of "Seats" Available

(Notice that this couse will be conducted entirely through the Internet via FTP or WWW in the convenience of your home or office. It does not require that you fly out and physically attend a class. Those who are interested in the course but do not have Internet access may also

arrange to purchase the course on-disk. Contact us for pricing.)

Enrollment will be on a first-come first-served basis. Although 60 seats are officially available, we will accept anyone who enrolls even if the number of seats exceeds 60. We will, however, stop advertising this course after the 60th seat has been taken. If you are concerned about the speed of the postal system delivering your enrollment form, we can reserve a seat (or seats) for you if you send an e-mail message stating your intent to enroll in this course to: Oler@Solar.Uleth.CA or COler@Solar.Stanford.Edu. Include an appropriate enrollment form in your message.

Method of Course Delivery

Lessons will be available for download via FTP or WWW on a weekly basis by all individuals taking the course. If you are away one week, the older material will remain on-line so you can catch up at your convenience. We now have a high-speed T1 line installed which has resulted in significantly faster FTP and WWW transfers. The transfer of course material using this method will therefore be more than adequate.

Course Assignments

There will be course assignments that can be completed and returned to us if desired. However, we are not going to enforce this. If you are too busy to complete course assignments, we certainly won't hold that against you. Whether you decide to work on the assignments or "hand them in" will be entirely up to you. The assignments are only intended to help hone your skills and test your knowledge.

We Will Help

If parts of the course are particularly difficult to grasp, send us e-mail and we will try to clarify and explain the concepts using e-mail correspondence.

Revised Course Outline

The current course outline follows below. The order of the material listed below may not necessarily be the order in which they appear in the course curriculum.

COURSE OUTLINE FOR THE
INTERNET SPACE WEATHER AND RADIO PROPAGATION FORECASTING COURSE

Over 150 Topics Covered

Goal: To learn how to accurately forecast space weather and radio propagation conditions using information available on the Internet, through radio observations, and through studies using supplied computer software.

Upon completion of this course, each student should be able to formulate space-weather and radio propagation forecasts with accuracies comparable to professional forecasters.

Supplied: o SKYCOM PRO Version 2.0 HF Ionospheric Signal Analyst
o Professional Dynamic Auroral Oval Simulator
o BCAST Solar and Geophysical Database Manager
o IMPACT - Simple Computer Aided Coronal Mass Ejection Impact Assessment Program
o Extended Database of sunspot numbers, solar flux and geomagnetic data.
o Subscription to All STD Solar and Geophysical E-Mail Products (including alerts and warnings) for one year.

Total Value of the Supplied Material: over $540.00USD

The following topics and subtopics are currently scheduled to be included as part of the course curriculum. There will probably be many other subtopics included that are not listed here.

o The Sun
* Basics of the Sun
* Sunspots
- Types of Sunspots
- Sunspot Magnetic Fields
* Solar Radiation and Radio Emissions
* Solar Cycles
* Techniques for Modelling Solar Cycles
* Sources of Information and Imagery

o Interplanetary Space
* The Solar Wind
* Magnetic Fields
* Heliospheric Current Sheet
* Solar Sector Structures

o The Earth
* Magnetosphere
- The quiet magnetosphere
- The disturbed magnetosphere
- Understanding and Deriving Magnetic Indices
K-Indices
A-Indices
Auroral Electrojet (AE) Index
DST Index
- Magnetic Storms
Sudden Storm Commencements (SSCs)
Gradual Storm Commencements
- Geomagnetically Induced Currents (GICs)
Effects on Electrical Hydro Systems
Effects on Other Long Conductors
* Ionosphere

- Formation of Ionospheric Layers
- Factors Affecting Ionospheric Layers

o Solar Disturbances
* Transient Solar Coronal Mass Ejections (CMEs)
- Types and Structures of Coronal Mass Ejections
- Understanding the Importance of CME Structures
- Inferring CME Structures from Available Solar Data
- Coronal Mass Ejection Detection Methods
- Using IMPACT (software) to Aid in CME Disturbance Predictions
- Solar Cycle Dependencies
* Solar Flares
- Basic Nature of Flares
- Types of Flares
- Flare Rating Systems
- Significance of Proton Flares
- Ground Level Events (GLEs)
- Fast Transit Events
- Interpreting Magnetograms
- Determining Magnetic Shear and Flare Susceptability
- Solar Flare (and Proton Flare) Prediction Techniques
- Solar Flare Related Coronal Mass Ejection Prediction Techniques
- Sources of Solar Flare Information
* Solar Coronal Holes
- Coronal Hole Basics
- Recurrence
- Solar Cycle Correlations
- Associations with Near-Relativistic Electrons
- Coronal Hole Related Disturbance Prediction Techniques
* Filament Eruptions
- Filaments and Prominences
- Eruptive and Non-Eruptive Activity
- Filament-Associated Coronal Mass Ejections
- Filament-Related Disturbance Prediction Techniques
* Possible Lunar Influences
- Interaction with the Geotail

o Auroral Activity
* Basic Theory of the Northern/Southern Lights
* Behavioral Characteristics of the Auroral Ovals
* Sensitivity to Solar Disturbances
* Affects on Satellite Health and Radio Communications
* Mathematical Models of the Auroral Zones
* Auroral Activity Prediction Techniques
* Information Sources

o Conditions Affecting Satellite Health
* Satellite Orbits
- Geosynchronous
- Sun synchronous
- Polar

- Properties of Lagrangian Orbital Points
* Atmospheric Drag
* Surface Charging Anomalies
* Deep Dialectric Charging Anomalies
* Interplanetary Shocks
* Magnetopause Crossings

o Postulated Sun/Earth Climate Connections
* Possible Long-Term Climatic Trends
- Rainfall
- Temperatures
- Atmospheric Pressure
- Storm Tracks
- Ozone Correlations
* Possible Short-Term Meteorological Trends
- Pressure and Winds
- Lightning
- Storm Systems
- Ozone Responses

o Radio Propagation
* Basic Theory (Non-Technical)
- Characteristics and Components of Radio Signals
- Understanding Plasmas
- Importance of Electron Collisions
- Appleton/Hartree Contributions
- Signal Polarization and Coupling
- Ionospheric Absorption
Deviative Absorption
Non-Deviative Absorption
- Fading
- Multipathing
- Travelling Ionospheric Disturbances
- Solar Related Disturbances
- Structure of the Ionosphere
Ionospheric Layers
Importance of Sporadic-E
Effects of Spread-F
Solar-Cycle Dependencies
Models of the Ionosphere
x Simple Mathematical Models
x Numerical Maps
x CCIR
x URSI
x The International Reference Ionosphere (IRI)
x Others
* Probing the Ionosphere
- Probing Techniques
- Probing Instruments
- Sources of Ionosonde Information
* Basic Ray-Tracing Concepts

- Ordinary vs Extraordinary Signals
- Becoming Familiar with Ray-Tracing Software
* Ray-Tracing in Three-Dimensions
- Ray-Tracing Software Considerations
- Preparing for 3D Ray-Tracings
- Performing 3D Ray-Tracings
- Studying 3D Ray-Tracing Results
* Vertical Radio Signal Propagation
- Signal Reflection Behavior
- Critical Frequencies
- Ray-Tracing Vertically-Incident Signals
* Oblique Radio Signal Propagation
- Signal Refraction/Reflection Characteristics
- Effects of Geomagnetic Activity
- Effects of Solar Activity
- Ray-Tracing Obliquely Incident Radio Signals
- Determination of Maximum Usable Frequencies
Simple Empirical Methods
Ray-Tracing Techniques
- Effects of Sporadic-E
- Non-Great-Circle (NGC) Propagation
Responsible Conditions
Compensation Methods
Ray-Tracing Techniques to Analyze NGC Propagation
- Chordal-Hop and Inter-Layer Ducting Propagation
Advantages and Disadvantages
Analysis using Ray-Tracing Techniques
Detailed Ducting Analyses
- Searching for and Exploiting Exotic Propagation Paths
Properties of Exotic Paths
x Auroral-Related Non-Great-Circle Propagation
Searching for Exotic Paths using 3D Ray-Tracing Techniques
Determining the Most Reliable Exotic Radio Paths
* Ionospheric Disturbances
- Solar Related Disturbances
Solar Flares and Related Coronal Mass Ejections
Coronal Holes and High Speed Solar Wind Streams
Filament Related Coronal Mass Ejections
Impact of Flare Related Radio Noise Bursts
- Short Wave Fadeouts
- Sudden Phase Anomalies
- Sudden Frequency Deviations
- Devastating Effects of Polar Cap Absorption
- Disturbances and their Effects on Satellite Communications
* Radio Propagation Prediction Methods
- Short-Term Forecasting Techniques
- Medium-Term Forecasting Techniques
- Long-Term Forecasting Techniques
- Sources of Forecasting Information

o Applied Forecasting Techniques
* Climatology
* Pattern Recognition
* Compiling Necessary Information
* Exploiting Databases
* Computer Related Aids
* Studying Real-Life Examples
* Developing Experience and "Intuition"

o Field Experience
* We present you with some specific historic real-life scenarios. Using the information and techniques studied in this course, you are asked to develop your own space-weather and radio-propagation predictions. The actual real-life impacts are then studied and compared with your forecasts.
* We present you with several hypothetical (possible future) examples and ask you to develop your own forecasts.

o Course Completed

+-+-+-+-+-+-+-+-+-+-+-> Cut Here for Enrollment Form <+-+-+-+-+-+-+-+-+-+-+-+

INTERNET SPACE WEATHER AND RADIO PROPAGATION FORECASTING COURSE
ENROLLMENT FORM

I am interested in taking the Internet Space Weather and Radio Propagation Forecasting Course, currently scheduled to begin March 18, 1996. I have filled out the necessary information below.

I AM INTERESTED IN TAKING THE FOLLOWING COURSE VARIANT:

[ ] - The Full Course without the accompanying computer software or subscribable e-mail services for $150.00USD.

[ ] - The Full Course WITH all accompanying computer software, but WITHOUT the STD E-Mail subscriptions to all Daily Solar and Geophysical Products, all Weekly Products and all Alerts and Warnings for one year for $200.00 USD.

[ ] - The Full Course WITHOUT the accompanying computer software, but WITH all STD E-Mail subscriptions to all Daily Solar and Geophysical Products, all Weekly Products and all Alerts and Warnings for one year for $200.00 USD.

[ ] - The Full Course WITH all accompanying computer software AND WITH the STD E-Mail subscriptions to all Daily Solar and Geophysical Products, all Weekly Products and all Alerts and Warnings for one year for $250.00 USD.

CHOOSE ONE OF THE FOLLOWING:

[ ] - I need the computer software postal mailed to me on 3.5" high-density disks to the address written on the *REVERSE* side of this order form for an additional $40.00USD which includes shipping and handling.

[ ] - I expect the Solar Terrestrial Dispatch to notify me via e-mail of the Internet FTP and WWW procedures to obtain the computer software.

CHOOSE ONE OF THE FOLLOWING:

[ ] - Please inform me of the FTP/WWW procedures to obtain the FREE ADOBE ACROBAT READER software over the Internet, required to read the course material.

[ ] - Please ship me the ADOBE ACROBAT READER software on 3.5" HD disks (for IBM or compatible systems only) for an additional $10.00 USD.

TYPE OF COMPUTER AND OPERATING SYSTEM THAT WILL BE USED TO TAKE THIS COURSE:

_____

MY E-MAIL ADDRESS IS:_____

MY BACKUP E-MAIL ADDRESS IS: _____
(if available)

MY VOICE TELEPHONE NUMBER IS: _____

MY FAX TELEPHONE NUMBER IS: _____

TOTAL AMOUNT INCLUDED FOR ENROLLMENT, INCLUDING ANY ADDITIONAL AMOUNTS REQUESTED FOR SHIPPING SOFTWARE, ETC, IN UNITED STATES CURRENCY ONLY:

$_____._____ U.S. DOLLARS

I have remitted a check or money order (IN U.S. FUNDS) for the above amount to the "Solar Terrestrial Dispatch" at the following address:

Solar Terrestrial Dispatch
P.O. Box 357
Stirling, Alberta
T0K 2E0
Canada

FAX: 403-756-3008

I understand that course material (lessons) will be made available on a weekly basis for anonymous FTP and WWW from the Solar Terrestrial Dispatch and that I will be notified via e-mail of the FTP/WWW and other procedures required to obtain the lesson material and read it on my computer. I also understand that there will be no refunds for the course should I be dissatisfied with the course or the included software or services.

By signing below, I agree that I will not share copies of this course with any other individual(s) through any means without the expressed permission of the Solar Terrestrial Dispatch. FAILURE TO SIGN AND DATE THIS FORM WILL VOID YOUR ENROLLMENT APPLICATION.

Date: _____, Signed: _____

Please Print Your Signed Name Here: _____

+-+-+-+-+-+-+-+-+-+-+-+-> End of Enrollment Application <-+-+-+-+-+-+-+-+-+-+-+-+

401. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4ghs9q$ie8@service2.uky.edu>
Source record: 22870

In article <4ge3e6$ao9@hertz.isr.umd.edu>, tedwards@Glue.umd.edu (Thomas Grant Edwards) says:
>
>Obviously hams haven't done it, but has there ever been moon-earth-moon
>communication?
>
>-Thomas
>
Ok ok. I always knew that I could not spell, but I guess I have just
proved that I can not(or at least do not) read all that well either!
Sorry

402. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@biggulp.callamer.com>
Message-ID: <Pine.OSF.3.91.960222181226.19665B-100000@biggulp.callamer.com>
Source record: 22871

That's most unusual David. I would has asked the very same thing from
the aspect of where are all the guys out here in California!! Cliff W6HDO

On 22 Feb 1996, David Whitehurst wrote:

> Can anyone please tell me why so few hams are into satellites (AMSAT)
> on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
> hardly anyone in my area (tidewater area of southeast Virginia) is into it!
> -David. :(
>
>
>

403. 90's failed Pegasus launch

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: n2oto@aol.com
Message-ID: <4giavv$bfr@newsbf02.news.aol.com>
Source record: 22872

Hello all-

Back in the early 1990's there was a Pegasus launch of several military microsats that failed to achive orbit.

These microsats had a very short life and were of no use to the military.

The military gave permission to us hams to use these microsats.

Eventually the sats burnt up in the atmosphere.

Does anyone remember the names of these microsats and where I can find info on them?

Thanks,
Rupert E. Lubkemeier, N2OTO, FN30cr

404. Re: ELTs, Re: E-mail from the south pole - was Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Allen Wallace <allen@dtint.dtint.com>
Message-ID: <4gip9u$l1e@itchy.itsnet.com>
Source record: 22873

In article <4gi0ol$om9@paperboy.ids.net> Philip Chien, kc4yer@amsat.org writes:
>Most aircraft in the U.S. are required to have Emergency Locator
>Transmitters (ELTs). These are simple highly protected radios which
>operate on 121.75 Mhz.

Actually, they run on 121.5 Mhz and also 243.0 Mhz.

Some new types also run on 403 or 406 (can't remember)!

405. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960222132447.18608C-100000@qni.com>
Source record: 22874

David,
I can only think that the hams out east might not have as much money to
spend on the hobby as the ones out west can.
Going by the price of the antennas, radio, amps, feedline and computer
Or else they are very quite about it...
Here in the KC area I know only a handfull of ops
there must be more but they are not talking..
We even had a Satellite net on one of the 2M repeaters
they talked mostly about the tvro stuff.. I was the only ham sat op that
checked in..
I even was able to gateway the repeater to the sat <AO-13> a couple of times
for them to get som dx check ins :->
TTYL
Gary Watts de N0OXV
Kansas City Mo
81 GL!100I

On 22 Feb 1996, David Whitehurst wrote:

> Can anyone please tell me why so few hams are into satellites (AMSAT)
> on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
> hardly anyone in my area (tidewater area of southeast Virginia) is into it!
> -David. :(
>
>
>

406. Re: Radio Database Program LW, MW, SW coverage for YOU.....

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Per Stangeland <pstangel@telepost.no>
Message-ID: <4gihej$3q6@nms.telepost.no>
Source record: 22875
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

Charles Bolland <chuck@mail.flinet.com> wrote:
>FRIENDS,
>
>If you would like a free copy of a radio database program that covers
>longwave, mediumwave, and shortwave with at least 4,000 of records, send
>your NAME, POSTAL ADDRESS, and EMAIL address to chuck@flinet, and I will
>return the program to you via EMAIL.
>
>The program is not up to date! It is a program used during 1994 and
>hasn't be updated since. However, many of the records are still current
>for stations that do not change every quarter.
>
>The program is good until June 6, 1996. After that it will not function.
>
>Hope to hear from you and don't forget your Postal Address for
>registration and future information via mail..
>
>All addresses will be kept confidential!
>
>Chuck
>
>chuck@flinet.com
>
>
My address is:
Per Stangeland
Luftfartsverket
Luftveien 16
N-3440 Royken
Norway.

Best Regards Per

407. Problems with Meteor 3-5? - metprob.gif (0/1)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: jwhac4ca@mindspring.com
Message-ID: <312cfad7.789437@nntp.mindspring.com>
Source record: 22876

Has anybody else noticed an instability in Meteor 3-5 since it was
turned on again (~2/20)? The clock appears to be off or something. If
you have time, dowload the attached gif of the 2/22 23:02 pass. I've
also notice an increase in the "banding" that's been discussed at
length on the wxsat mailer. I don't think there's a problem with my
system, as I still receive NOAA APT images with "straight edges."
73 - John (AC4CA)

408. Problems with Meteor 3-5? - metprob.gif (1/1)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: jwhac4ca@mindspring.com
Message-ID: <312cfce0.1331986@mindspring.com>
Source record: 22877
Body handling: Inline uuencoded payload not displayed: metprob.gif

[Inline uuencoded payload not displayed: metprob.gif]

409. Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: fwhitehurst@ezdial.com
Message-ID: <4gglhq$d4s@news.cais.com>
Source record: 22965

Can anyone please tell me why so few hams are into satellites (AMSAT)
on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
hardly anyone in my area (tidewater area of southeast Virginia) is into it!
-David. :(

410. ELTs, Re: E-mail from the south pole - was Re: National Geographic: email at north pole

Newsgroup: rec.radio.amateur.space
Date: 1996-02-22 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4gi0ol$om9@paperboy.ids.net>
Source record: 22966

In article <4g3574$blu@harry.lloyd.com> Norman Davis,
ndavis@spider.lloyd.com writes:
>
> I'm curious. What is a standard Hiking ELT and what frequency does it
>operate on.

well, this actually probably belongs in one of the aviation groups ...
however

Most aircraft in the U.S. are required to have Emergency Locator
Transmitters (ELTs). These are simple highly protected radios which
operate on 121.75 Mhz. The radios have a large amount of protection and
would be expected to survive most aircraft crashes. There's a switch
which is tripped by the shock of a very hard landing (euphemism for
crash). The carrier can be detected and tracked using normal radio
location techniques, but since they're VHF can only be heard within a
fairly short line-of-sight range.

Enter satellites. The U.S., Soviet Union (now Commonwealth of
Independent States), Canada, and France (did I forget anybody?) entered a
joint international rescue program - COPSA/SARASAT (SARASAT = Search and
Rescue Satellite COPAS is the Russian acronym) many years ago as a
cooperative effort. Other countries have expressed an interest and
joined after the organization was started.

U.S. NOAA weather satellites and Russian Cosmos navigation satellites
carry transponders which monitor this frequency. By listening to the
doppler shift the location of the ELT can be determined within about
50-100 miles where normal mobile radios in search and rescue teams can
zoom in on the signal.

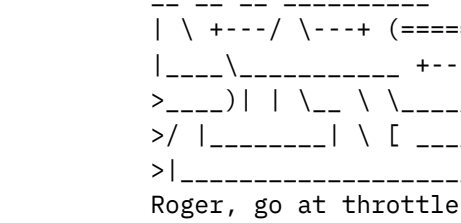
In the early days there were plenty of unusual 'events' - rescue workers
ended up going to warehouses to find a unit which was accidentally
activated, aircraft with rough landings would have activated units, etc.

While the system was originally intended for aviators and mariners it has
been used for other applications. A race car driver in South Africa was
able to use one to call for help when he had an accident, and units are
available for hikers, and others who are separated from civilization and
might need emergency help.

Off-the-shelf units can be purchased from aircraft and marine dealers.
Haven't the faintest idea what they cost though. There are heavy fines
for using an ELT in the case of a non-emergency though - for obvious
reasons.

The expedition in the artic region which used an ELT combined with the amateur UO-11 spacecraft (there - finally got this message back to amateur spacecraft) was just one unusual application.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

411. Help w/ICOM IC-820H Wideband Mod

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: Ken Keyseear <keyseear@radix.net>
Message-ID: <4gjabu$7cc@news1.radix.net>
Source record: 22878

Slightly off topic, but I know this is where my fellow IC-820H owners are likely to hang out!

Can anyone send me or point me to the mod for the IC-820H that opens up the receiver PLL to 136-174? I saw a UK ham's review of the 820 awhile back that referred to this mod...

Thanks!

Ken Keyseear WB4U
<keyseear@radix.net>

412. Re: Parallel port driver to tune ICOM rig's ?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dn84Bq.6Gp@pe1chl.ampr.org>
Source record: 22879

In <4getu3$1cm@igw01.kidd.co.za> Danie Brynard <bryd@kidd.co.za> writes:

>Is there a driver + hw available that will control the az/al rotators +
>tune ICOM radio's via the PC PARALLEL PORT for software like Instant
>Track or WISP ?

ICOM radio's are controlled via a serial port. Use a MAX-232 to convert
the RS232 levels to TTL. Just connect the IN and OUT (TTL side) together
and to the ICOM port.

For the rotators, it depends on your make&model.
You could build the AMSAT-DL tracker and control it from a parallel port.
It is also possible to use the control lines of a serial port for that;
for a while I used the RTS/DTR lines to control the rotators via an
AMSAT-DL interface, and used RXD/TXD of the same port to control the radios.

Rob

+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

413. Re: 90's failed Pegasus launch

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: n2oto@aol.com
Message-ID: <4gkt3o$691@newsbf02.news.aol.com>
Source record: 22880

Hello Alan-

These military microsats were real. I believe they belonged to the Navy.

If I remember correctly, there were four. They were called something what sounds like 'litesats'.

The sats were short lived. 1,2,3 weeks or so.

The DOD told AMSAT that if there were any Hams that could transmit into the sats, they were welcome to play with them.

They were not retuned to ham bands, but operated at 350 Mhz!

I remember getting the Kep elements from the AMSATnet on 80m.

To my memory, no one used the sats, so they burned up virgins.

-Rupert, N2OTO
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
>>>> Never heard of them.

How did they re-tune them to amateur bands? Why would the military have made their (probably secret) capabilities available to amateurs?

Sounds more like the microsats that were launched starting around then with mostly amateur radio packages aboard. These were mostly educational satellites, and most (if not all) are still up.

There are still some being built for future missions.

Alan
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

414. Re: bincancel:5 large binaries:AR164:@@NCM

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: red@redpoll.mrfs.oh.us
Message-ID: <ARMM-Report-164.a@redpoll.mrfs.oh.us>
Source record: 22881
Cross-posted to: alt.retromod,comp.os.os2.utilities,rec.games.video.sega,rec.radio.amateur.space

Binary posts do not belong in unmoderated discussion groups.

I run a program that searchs for, and issues advisory cancels for,
large binaries in the akr, biz, comp, misc, news, rec, and sci
hierachies.

I have issued 5 cancels for large binary files (average size 586,827
characters - total size 2,934,136 characters) posted to 3 different
unmoderated discussion groups in the comp and rec hierarchies as
follows:
3 comp.os.os2.utilities
1 rec.radio.amateur.space
1 rec.games.video.sega

This pointer is being posted to each affected group listed above.

If you want to see exactly which file was deleted from a particular
group, or the criteria that I used to select it, read the full report
in news.admin.net-abuse.announce. Look for AR164 as in the
subject of this pointer. The full report can also be found in
alt.nocem.misc and alt.retromod.

There has been a long-standing consensus among news administrators that
binaries belong in binaries newsgroups, and not elsewhere. There also
seems to be a consensus supporting the cancellation of large binaries in
discussion groups as long as appropriate protocols are followed.

In my opinion, the best way to distribute binary files is via ftp or
the web. With the ready availablity of ftpmail servers, even uucp
sites can retrieve binaries from ftp sites.

However, if you really must post a binary to Usenet, please post it to
an appropriate binaries newsgroup such as alt.binaries.misc. Then, if
you like, post something in the appropriate discussion group telling
people where to find the binary in the binaries group (a pointer to
the binary). This will permit news administrators and users to decide
for themselves whether to receive the binary files.

Please direct public feedback to news.admin.net-abuse.misc and private
feedback to red@redpoll.mrfs.oh.us. Thanks.

Best wishes,
Dick
--
Richard E. Depew, Munroe Falls, OH red@redpoll.mrfs.oh.us (home)
It's over, and can't be helped, and that's one consolation, as they

always say in Turkey, when they cut the wrong man's head off''
-- Charles Dickens

415. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4glb4j$ff7@superb.csc.ti.com>
Source record: 22882

I think he said Moon-Earth-Moon, not EME.

Ken K5MBV

416. Picosat?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: "Drew Nichols- Drew"@gremlin
Message-ID: <4glqsg$d91@doc.zippo.com>
Source record: 22883

Has anyone heard of the picosats? When are they supposed to be launched?
Email Drew@gremlin.greenville.lib.sc.us

417. Picosat?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: "Drew Nichols- Drew"@gremlin
Message-ID: <4glqu6$dc4@doc.zippo.com>
Source record: 22884

Has anyone heard of the picosats? When are they supposed to be launched?
Email Drew@gremlin.greenville.lib.sc.us

418. Your methods on rs-12

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: Bill.White@f7.n3821.z1.fidonet.org
Message-ID: <180_9602241345@woodybbs.com>
Source record: 22885

Hello all,
I am preparing a club lecture on the EZSATS, and I would be
interested in the radios, antennas, software,etc. that you use
to work rs-12 (also rs-10 and rs-15).
I am working RS-12 from Arkansas. I have 13 states confirmed
since 31 Dec '95. I've had some good luck with an HW-8 qrp xmtr
(2.5 watts DC input).
Also if you need Ark on RS-12, I'll be glad to help.
Thanks in advance------------Bill N5XYN
--
|Fidonet: Bill White 1:3821/7
|Internet: Bill.White@f7.n3821.z1.fidonet.org
|
| Standard disclaimer: The views of this user are strictly his own.

419. Why so little amateur space activity

Newsgroup: rec.radio.amateur.space
Date: 1996-02-23 00:00:00 UTC
From: tom_boza@ccm.ch.intel.com
Message-ID: <4gkono$169v@chnews.ch.intel.com>
Source record: 22886

COST, the ratio of $/per QSO!!!

I have been an amateur radio operator for 30+ years and now have setup a "modest" satellite station. In my 30 + years, I have had the big HF tower, KW, and fancy HF equipment, however setting up a satellite station was the most $$$$$$ which I have ever put into the hobby.

Its one thing to spend money, but for the amount which I have invested per the amount of QSOs I have made, its really not worth it for the average guy. HF or two meters is a much better return in investment. Im just lucky I have the extra $$$$$$ to do it!!!

Another factor is "HIGHER Technology!" Satellite operating is not a "plug-n-play" operation. Its getting there, but not yet. It takes someone who understands the technolog to pull it all together. This is what drove me to spend the $$$$$. I enjoy the higher technology.

WB7ASR...

420. NORAD Two-Line Orbital Element Set: Space Shuttle (96053.95886834)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4gm405$a88@blackbird.afit.af.mil>
Source record: 22887

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

Note: The Celestial BBS will cease operations around mid-March 1996. It will be replaced before then with a new WWW site for distributing the current selection of data and software. Data will continue to be available via anonymous ftp at archive.afit.af.mil.

```
STS 75
1 23801U 96012A 96053.95886834 .00569104 00000-0 16252-2 0 24
2 23801 28.4683 286.1918 0004155 278.2384 81.7755 15.90777235 22
```

--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

421. Re: GEO Orbital Locations of US SIGINT Satellites [check them out!!]

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4gmd61$hbu@news.injersey.com>
Source record: 22888
Cross-posted to: sci.space.policy,sci.astro.amateur,alt.politics.org.cia,alt.politics.org.nsa,rec.radio.amateur.space

John Pike (johnpike@fas.org) wrote:
: At the 1995 World Radio Conference, the US registered the following
: satellites as operating in the 17.8-21.2 GHz downlink and 30-31 GHz
: uplink bands.

: station longitude

: US CSID-A1 E 000
: US CSID-A2 E 044
: US CSID-A3 E 075
: US CSID-A4 E 082
: US CSID-A5 E 092
: US CSID-A6 E 110
: US CSID-E1 W 010
: US CSID-E2 W 013
: US CSID-E3 W 024
: US CSID-E4 W 030
: US CSID-W1 W 141
: US CSID-W2 W 144

: The US also registered

: US CSID-P non-GSO [63 degrees, 39400-1000 km, 8 satellites]

Can you identify which specific objects these are?

--
JRespler@InJersey.com
Jay.Respler@bytewise.org Voice 908-431-1464
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

422. NORAD Two-Line Orbital Element Sets (TLE761)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4gm3m4$a71@blackbird.afit.af.mil>
Source record: 22889

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

Note: The Celestial BBS will cease operations around mid-March 1996. It will be replaced before then with a new WWW site for distributing the current selection of data and software. Data will continue to be available via anonymous ftp at archive.afit.af.mil.

```
- Current Two-Line Element Sets #761 -
Alouette 1
1 00424U 62049A 96054.23854842 .00000060 00000-0 60366-4 0 1769
2 00424 80.4524 37.1589 0024455 334.1239 25.8702 13.67862047666627
ATS 1
1 02608U 66110A 96053.29829400 -.00000322 00000-0 10000-3 0 9562
2 02608 14.6346 354.0702 0008487 72.7968 287.0874 1.00392802 23702
ATS 3
1 03029U 67111A 96051.27589567 -.00000128 00000-0 10000-3 0 4586
2 03029 14.8961 1.0484 0010910 265.6117 236.7184 1.00273086103586
Starlette
1 07646U 75010A 96051.55348929 -.00000102 00000-0 31102-4 0 9504
2 07646 49.8281 252.9117 0206220 201.9669 157.2290 13.82190536 62696
LAGEOS
1 08820U 76039A 96053.82276088 -.00000001 00000-0 10000-3 0 1737
2 08820 109.8637 346.4815 0043863 153.5531 206.7293 6.38664590206466
ETS-2
1 09852U 77014A 96039.30677794 -.00000283 00000-0 10000-3 0 611
2 09852 13.0710 34.4343 0003287 131.4435 228.6545 1.00022438 16346
GOES 2
1 10061U 77048A 96049.97623591 .00000035 00000-0 10000-3 0 6432
2 10061 12.1927 38.5012 0010952 142.7568 141.9326 1.00267339 13248
IUE
1 10637U 78012A 96051.08170488 -.00000230 00000-0 10000-3 0 2366
2 10637 35.5839 85.0014 1349063 53.7543 7.7406 1.00267396 18752
GPS BI-01
```

```
1 10684U 78020A 96051.15393201 -.00000052 00000-0 10000-3 0 4280
2 10684 64.9579 27.3825 0056221 168.3255 191.7788 1.98069979117079
GPS BI-02
1 10893U 78047A 96053.74407338 .00000014 00000-0 10000-3 0 2213
2 10893 63.2315 264.6954 0229634 12.6705 347.9410 2.01626492130482
GOES 3
1 10953U 78062A 96051.32520872 -.00000141 00000-0 10000-3 0 6203
2 10953 11.1829 41.2994 0002690 288.3453 194.6868 1.00277917 17870
SeaSat 1
1 10967U 78064A 96052.85107429 -.00000061 00000-0 24306-4 0 4662
2 10967 107.9891 294.0609 0002449 262.5934 97.4929 14.38087524924726
GPS BI-03
1 11054U 78093A 96053.73238720 .00000015 00000-0 10000-3 0 3841
2 11054 62.9008 263.5476 0045361 179.2612 180.7816 1.93505206126425
Nimbus 7
1 11080U 78098A 96051.55858454 -.00000088 00000-0 -42116-4 0 5663
2 11080 98.9630 279.4081 0008433 287.1323 72.8907 13.83696194874903
GPS BI-04
1 11141U 78112A 96051.13270074 -.00000050 00000-0 10000-3 0 285
2 11141 64.9444 29.6086 0049226 27.2889 332.9532 1.92894733 15606
GPS BI-05
1 11690U 80011A 96052.18216925 -.00000050 00000-0 10000-3 0 9948
2 11690 65.2838 28.8579 0147805 193.0895 166.4923 2.00570418131856
GPS BI-06
1 11783U 80032A 96053.84911539 .00000021 00000-0 10000-3 0 1298
2 11783 62.3566 257.5345 0226266 29.8167 331.4793 2.03456577116487
GOES 5
1 12472U 81049A 96049.01432917 -.00000136 00000-0 10000-3 0 9156
2 12472 7.9739 51.4657 0004955 44.9810 315.1926 1.00205037 11894
Cosmos 1383
1 13301U 82066A 96050.91818284 .00000049 00000-0 39881-4 0 4745
2 13301 82.9287 220.4978 0026407 204.0727 155.9196 13.68072725681203
LandSat 4
1 13367U 82072A 96053.18854325 .00000209 00000-0 56221-4 0 8505
2 13367 98.0959 107.5307 0007816 134.2545 225.9240 14.57173822723647
DMSP B5D2-1
1 13736U 82118A 96052.87303276 .00000020 00000-0 26942-4 0 9559
2 13736 98.6266 243.1172 0008756 12.8090 347.3313 14.25770824684490
IRAS
1 13777U 83004A 96053.52119044 .00000353 00000-0 27281-3 0 2378
2 13777 98.9639 241.4682 0013859 59.9091 300.3459 13.99247351337198
Cosmos 1447
1 13916U 83021A 96054.11736684 .00000047 00000-0 32918-4 0 5707
2 13916 82.9451 276.1493 0038967 111.0216 249.5118 13.74335769647935
TDRS 1
1 13969U 83026B 96052.20334977 -.00000185 00000-0 00000+0 0 5512
2 13969 8.7899 44.8098 0003562 279.5119 160.8725 1.00435158 20215
GOES 6
1 14050U 83041A 96050.18422387 -.00000274 00000-0 10000-3 0 4916
2 14050 6.8034 54.7743 0001857 354.1625 89.1422 1.00290815105008
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OSCAR 10
1 14129U 83058B 96046.56186910 -.00000124 00000-0 10000-3 0 4034
2 14129 26.3643 223.9075 5983094 351.0706 1.5442 2.05879267 67343
LandSat 5
1 14780U 84021A 96052.54562908 .00000013 00000-0 13341-4 0 4272
2 14780 98.3518 110.2617 0001717 321.2128 38.8960 14.57040477636940
UoSat 2
1 14781U 84021B 96050.98956126 .00000098 00000-0 24328-4 0 8632
2 14781 97.7911 47.0239 0012791 105.5803 254.6816 14.69427673640296
GPS BI-09
1 15039U 84059A 96051.20887914 -.00000058 00000-0 10000-3 0 3952
2 15039 64.6043 23.9486 0082665 18.6094 341.6711 1.92302255 85162
Cosmos 1574
1 15055U 84062A 96051.25010947 .00000004 00000-0 -11373-4 0 7706
2 15055 82.9564 332.9206 0026749 313.1698 46.7224 13.73631542584799
GPS BI-10
1 15271U 84097A 96049.81869893 .00000044 00000-0 10000-3 0 1156
2 15271 62.0460 258.1775 0159359 357.1754 2.7866 2.00609244 82876
Cosmos 1602
1 15331U 84105A 96050.97820837 .00000146 00000-0 14345-4 0 4543
2 15331 82.5326 223.7660 0020154 344.1344 15.9238 14.84723036615437
NOAA 9
1 15427U 84123A 96053.77976222 .00000113 00000-0 83336-4 0 5956
2 15427 98.9618 118.5639 0014216 282.7359 77.2221 14.13763273577327
GPS BI-11
1 16129U 85093A 96052.06028502 -.00000054 00000-0 10000-3 0 7070
2 16129 65.2776 27.4290 0156073 85.2321 276.5284 1.89367867 19707
Mir
1 16609U 86017A 96052.20817420 .00001663 00000-0 28798-4 0 4247
2 16609 51.6471 350.1205 0005366 18.5134 341.6053 15.57579988571779
SPOT 1
1 16613U 86019A 96052.18305122 .00000090 00000-0 62356-4 0 9035
2 16613 98.6181 122.6179 0000752 349.1132 11.0005 14.20089338203704
Cosmos 1766
1 16881U 86055A 96050.15978762 .00000093 00000-0 83367-5 0 3698
2 16881 82.5200 282.3026 0020400 14.1730 346.0052 14.83708763516197
EGP
1 16908U 86061A 96052.87879217 -.00000083 00000-0 10000-3 0 667
2 16908 50.0113 354.5834 0011345 77.6336 282.5767 12.44413724101926
NOAA 10
1 16969U 86073A 96053.83455470 .00000014 00000-0 24140-4 0 5158
2 16969 98.5186 54.2341 0013207 336.2505 23.8062 14.24973966490179
MOS-1
1 17527U 87018A 96051.19656843 -.00000044 00000-0 00000+0 0 3856
2 17527 98.9644 115.7151 0016858 292.9162 67.0223 14.00434298458477
GOES 7
1 17561U 87022A 96050.53945798 .00000010 00000-0 10000-3 0 7767
2 17561 2.8285 70.4572 0003974 339.2914 166.2688 1.00347631 16117
Kvant-1
1 17845U 87030A 96054.06880384 .00002945 00000-0 45802-4 0 5443
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2 17845 51.6474 340.8030 0005662 24.6286 335.5356 15.57592345506174
DMSP B5D2-3
1 18123U 87053A 96053.73004974 -.00000018 00000-0 12987-4 0 3338
2 18123 98.7723 245.9031 0013413 222.9316 137.0816 14.15431546448167
RS-10/11
1 18129U 87054A 96053.56461595 .00000050 00000-0 38208-4 0 1788
2 18129 82.9233 233.9859 0012804 111.3765 248.8753 13.72362663434319
Meteor 2-16
1 18312U 87068A 96053.14855789 .00000054 00000-0 35368-4 0 4616
2 18312 82.5536 84.1291 0011458 179.3698 180.7476 13.84071753430125
Meteor 2-17
1 18820U 88005A 96053.72125673 .00000056 00000-0 36859-4 0 8609
2 18820 82.5448 138.9653 0015132 250.3497 109.6032 13.84751906407544
DMSP B5D2-4
1 18822U 88006A 96054.02587065 .00000027 00000-0 30228-4 0 1923
2 18822 98.3890 251.5371 0006096 349.9860 10.1195 14.23181426418196
Glonass 34
1 19163U 88043A 96051.27290255 .00000017 00000-0 10000-3 0 551
2 19163 65.2100 89.8190 0008120 163.1578 196.9458 2.13102274 59720
Glonass 36
1 19165U 88043C 96050.39116449 .00000026 00000-0 10000-3 0 4618
2 19165 65.1950 89.8029 0001859 326.9081 33.1599 2.13102058 60321
METEOSAT 3
1 19215U 88051A 96049.91645904 -.00000140 00000-0 10000-3 0 2416
2 19215 3.0248 68.4446 0003578 148.5382 211.8530 0.96948023 16023
AO-13
1 19216U 88051B 96053.34389388 -.00000105 00000-0 31234-3 0 1546
2 19216 57.3482 133.6304 7378410 32.6028 356.5940 2.09731873 27406
OKEAN 1
1 19274U 88056A 96049.98922192 .00000255 00000-0 28714-4 0 696
2 19274 82.5112 23.1612 0020203 150.9579 209.2763 14.82449719411714
Meteor 3-2
1 19336U 88064A 96053.61065506 .00000051 00000-0 10000-3 0 4614
2 19336 82.5388 248.2001 0016738 159.9449 200.2328 13.16976501364268
Glonass 39
1 19503U 88085C 96051.82843627 -.00000053 00000-0 10000-3 0 3535
2 19503 65.6281 328.6778 0006185 148.4977 211.6088 2.13101865 57846
NOAA 11
1 19531U 88089A 96053.74846488 -.00000028 00000-0 10065-4 0 4053
2 19531 99.1920 68.8207 0011259 203.2669 156.7995 14.13081933382141
TDRS 2
1 19548U 88091B 96051.67632807 -.00000215 00000-0 10000-3 0 1820
2 19548 2.2565 72.7957 0005481 183.6351 222.3826 1.00270066 14351
Glonass 40
1 19749U 89001A 96053.27406533 -.00000004 00000-0 10000-3 0 5738
2 19749 65.1558 89.2873 0006677 253.1073 106.8816 2.13101442 55385
Glonass 41
1 19750U 89001B 96051.45217021 .00000015 00000-0 10000-3 0 4774
2 19750 65.1807 89.3999 0006514 224.1493 135.8771 2.13101886 55360
GPS BII-01
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1 19802U 89013A 96051.48197929 -.00000003 00000-0 10000-3 0 1856
2 19802 55.2846 115.3389 0022395 189.4635 170.5660 2.00566802 51357
Akebono
1 19822U 89016A 96053.74579555 .00010358 00000-0 52529-3 0 6682
2 19822 75.0918 190.7483 3758390 193.2399 153.3921 7.90136637157567
Meteor 2-18
1 19851U 89018A 96050.38993913 .00000042 00000-0 24376-4 0 4598
2 19851 82.5171 15.7971 0013646 316.1024 43.9053 13.84405877352390
MOP-1
1 19876U 89020B 96053.12451154 -.00000077 00000-0 10000-3 0 1818
2 19876 1.7454 71.2331 0019366 278.1433 82.2782 0.97108903 5498
TDRS 3
1 19883U 89021B 96048.47962365 -.00000288 00000-0 00000+0 0 1820
2 19883 0.0329 287.2651 0002745 44.1069 306.9554 1.00268291197893
GPS BII-02
1 20061U 89044A 96051.82028462 -.00000033 00000-0 10000-3 0 1912
2 20061 54.2869 291.2407 0151244 218.9728 139.9777 2.00562677 49106
Nadezhda 1
1 20103U 89050A 96053.85130436 .00000007 00000-0 -84559-5 0 6824
2 20103 82.9586 193.7215 0038308 16.6894 343.5511 13.73862703332842
GPS BII-03
1 20185U 89064A 96054.15306849 -.00000028 00000-0 10000-3 0 2070
2 20185 55.0851 115.7256 0036619 321.5376 38.2354 2.00554789 47726
GMS 4
1 20217U 89070A 96052.18925347 -.00000389 00000-0 10000-3 0 3121
2 20217 1.5512 75.5916 0000866 61.1421 201.8476 1.00263494 24245
INTERCOSMOS 24
1 20261U 89080A 96050.85019531 .00000042 00000-0 11957-4 0 4772
2 20261 82.5947 346.3107 1241436 310.8246 39.1408 12.47322822291153
GPS BII-04
1 20302U 89085A 96053.19214385 .00000016 00000-0 10000-3 0 1952
2 20302 53.2861 231.0626 0017348 184.4889 175.4768 2.00562817 46503
Meteor 3-3
1 20305U 89086A 96053.84514238 .00000044 00000-0 10000-3 0 5032
2 20305 82.5428 204.3080 0006850 224.1186 135.9319 13.04418810303165
COBE
1 20322U 89089A 96050.53439549 .00000358 00000-0 25628-3 0 1900
2 20322 98.9488 67.7336 0009482 9.0916 351.0426 14.03458735320283
Kvant-2
1 20335U 89093A 96054.06880384 .00002945 00000-0 45802-4 0 5183
2 20335 51.6474 340.8030 0005662 24.6286 335.5356 15.57592345355185
GPS BII-05
1 20361U 89097A 96051.20960350 -.00000035 00000-0 10000-3 0 366
2 20361 55.9262 57.9427 0083672 130.5273 230.2281 2.00563462 35941
COSMOS 2054 (Altair-1)
1 20391U 89101A 96053.09607069 -.00000154 00000-0 00000+0 0 2920
2 20391 3.6366 64.1134 0001985 288.5915 177.0926 1.00271600 22835
SPOT 2
1 20436U 90005A 96053.23263629 .00000169 00000-0 10000-3 0 356
2 20436 98.7116 128.8137 0002635 8.3651 351.7404 14.20041194315388
```

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UO-14
1 20437U 90005B 96050.72372588 -.00000052 00000-0 -34265-5 0 1628
2 20437 98.5531 135.9335 0010499 187.3652 172.7376 14.29911725317121
UO-15
1 20438U 90005C 96051.23056226 -.00000042 00000-0 45867-6 0 9586
2 20438 98.5480 134.5714 0009343 191.4176 168.6792 14.29224440317075
PACSAT
1 20439U 90005D 96052.78520746 -.00000029 00000-0 58079-5 0 9618
2 20439 98.5658 139.9886 0010888 182.1610 177.9527 14.29966670317435
DO-17
1 20440U 90005E 96052.11933356 .00000019 00000-0 24331-4 0 9613
2 20440 98.5656 139.9074 0010962 182.8649 177.2485 14.30108393317366
WO-18
1 20441U 90005F 96050.70738083 -.00000005 00000-0 15023-4 0 9655
2 20441 98.5668 138.4693 0011572 188.3643 171.7348 14.30078373317163
LO-19
1 20442U 90005G 96052.25126827 -.00000005 00000-0 14941-4 0 9619
2 20442 98.5698 140.4392 0011666 183.2963 176.8143 14.30185152317409
GPS BII-06
1 20452U 90008A 96053.60116435 .00000003 00000-0 10000-3 0 1314
2 20452 54.0278 171.4761 0060825 87.2040 273.4735 2.00561743 44490
MOS-1B
1 20478U 90013A 96051.52697506 .00000090 00000-0 10000-3 0 8953
2 20478 99.1221 122.4325 0000755 144.3902 215.7309 13.94868319228153
DEBUT
1 20479U 90013B 96050.14790806 -.00000047 00000-0 -36070-4 0 9601
2 20479 99.0459 97.7487 0541462 33.7463 329.6907 12.83336887282636
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2 20491 99.0703 160.1754 0470135 209.1697 148.2384 13.02992640286578
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2 20496 43.1023 161.0131 0010750 357.8174 2.2632 15.35359466335572
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2 20508 82.9562 328.2935 0044269 329.1352 30.7200 13.73504743300058
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1 20510U 90018A 96051.15419255 .00000106 00000-0 11367-4 0 4780
2 20510 82.5237 335.4753 0019118 350.6775 9.4072 14.78574656322237
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1 20533U 90025A 96054.00076467 -.00000045 00000-0 10000-3 0 1708
2 20533 54.6421 291.8485 0051219 75.5072 285.1149 2.00552605 43279
PegSat
1 20546U 90028A 96050.91558951 .00004096 00000-0 77602-4 0 8982
2 20546 94.1225 285.0974 0063836 101.3134 259.5303 15.46217355326722
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1 20619U 90045A 96052.70374125 -.00000057 00000-0 10000-3 0 2717
2 20619 65.2288 327.9401 0024325 203.6896 156.2447 2.13102268 44829
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1 20620U 90045B 96048.12969929 -.00000053 00000-0 10000-3 0 2684
2 20620 65.2152 328.0884 0007666 41.2183 318.8671 2.13102477 44762
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2 20621 65.2366 327.9501 0012764 199.8336 160.1566 2.13101827 44881
Kristall
1 20635U 90048A 96054.06880384 .00002945 00000-0 45802-4 0 3119
2 20635 51.6474 340.8030 0005662 24.6286 335.5356 15.57592345326018
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2 20638 52.9922 104.6237 0014267 132.4125 227.8076 15.07355984314716
Meteor 2-19
1 20670U 90057A 96050.56934473 -.00000096 00000-0 -99302-4 0 9597
2 20670 82.5446 82.0923 0014111 226.2920 133.7078 13.84143319285338
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1 20712U 90065A 96052.85359080 -.00000120 00000-0 -19315-4 0 2230
2 20712 18.0830 298.4404 7180229 290.1028 9.9895 2.35654865 40374
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1 20724U 90068A 96051.33463896 -.00000003 00000-0 00000+0 0 74
2 20724 54.9244 113.4018 0124468 180.0891 179.9839 2.00564763 39084
Feng Yun1-2
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2 20788 98.8143 63.4464 0015545 95.1451 265.1494 14.01392456279961
Meteor 2-20
1 20826U 90086A 96051.83557038 .00000061 00000-0 41556-4 0 9702
2 20826 82.5239 17.7040 0014230 122.3347 237.9190 13.83625645272612
GPS BII-09
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1 20959U 90103A 96052.28512171 -.00000009 00000-0 10000-3 0 9755
2 20959 55.1170 115.4001 0106598 232.3981 126.6988 2.00565615 38332
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2 20978 98.6091 125.7960 0079443 150.1538 210.4208 14.32626613273194
Glonass 47
1 21006U 90110A 96051.03682024 .00000019 00000-0 10000-3 0 8326
2 21006 65.1404 88.6897 0058110 187.5558 172.4368 2.13102646 40494
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2 21007 65.1609 88.7007 0034310 178.5030 181.5711 2.13101118 40527
Glonass 49
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2 21087 82.9389 48.8451 0033927 172.1844 187.9846 13.74566203253831
RS-12/13
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2 21140 0.3067 68.5039 0001279 237.2526 72.2609 1.00275879 20448
Nadezhda 3
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2 21152 82.9222 231.2075 0041283 304.9932 54.7358 13.73530284247917
Glonass 50
1 21216U 91025A 96051.05569904 -.00000051 00000-0 10000-3 0 4804
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Glonass 51
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2 21217 64.9606 327.4823 0008909 231.0197 128.9317 2.13101574 38055
Glonass 52
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2 21218 64.9538 327.4656 0007080 253.7025 106.2718 2.13102615 38055
GRO
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2 21225 28.4631 289.5050 0002624 314.3508 45.6880 15.43671464151633
Meteor 3-4
1 21232U 91030A 96051.19380305 .00000051 00000-0 10000-3 0 8701
2 21232 82.5380 96.2209 0014705 92.3271 267.9525 13.16470430232010
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2 21263 98.5661 76.0901 0011912 251.1434 108.8446 14.22598368248045
OKEAN 3
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2 21397 82.5228 247.1116 0024609 54.2788 306.0697 14.76453614254304
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1 21552U 91047A 96054.05620354 -.00000048 00000-0 10000-6 0 9456
2 21552 56.1525 53.5743 0068891 247.0029 112.2588 2.00572240 33964
ERS-1
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2 21574 98.5479 129.9164 0001089 74.2893 285.8411 14.32249695240983
UO-22
1 21575U 91050B 96051.16892070 .00000020 00000-0 21155-4 0 6671
2 21575 98.3676 120.9923 0006847 264.9742 95.0660 14.37012382241112
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1 21576U 91050C 96053.16954094 .00000009 00000-0 17553-4 0 7629
2 21576 98.3589 121.0328 0003108 275.1121 84.9715 14.36424359241296
TUBSAT-A
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2 21577 98.3573 120.5753 0005618 264.9820 95.0725 14.36509192241176
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TDRS 4
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Meteor 3-5
1 21655U 91056A 96051.06014670 .00000051 00000-0 10000-3 0 8680
2 21655 82.5494 43.8916 0014680 102.2269 258.0492 13.16845075217128
UARS
1 21701U 91063B 96052.51424179 -.00000093 00000-0 12976-4 0 7412
2 21701 56.9839 217.5459 0005801 104.1576 256.0075 14.96485902242892
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2 21798 98.9509 71.0272 0012300 191.8465 168.2416 14.13946163218623
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1 21853U 92005A 96051.44848927 .00000014 00000-0 10000-3 0 723
2 21853 65.0940 88.3650 0007683 191.8751 168.1526 2.13102220 31614
Glonass 54
1 21854U 92005B 96054.08262176 -.00000010 00000-0 10000-3 0 2564
2 21854 65.0945 88.2507 0015169 10.6340 349.4608 2.13103843 31651
Glonass 55
1 21855U 92005C 96053.21021547 -.00000004 00000-0 00000+0 0 2427
2 21855 65.0944 88.2924 0008474 216.2323 143.7757 2.13101955 31629
JERS-1
1 21867U 92007A 96051.82218927 .00000784 00000-0 70229-4 0 8039
2 21867 97.6945 130.7346 0002030 122.9960 237.1423 14.98635573220281
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1 21890U 92009A 96054.01564147 .00000023 00000-0 10000-3 0 7630
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2 21930 55.7156 353.2603 0030121 182.9596 177.0251 2.00562019 28249
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1 21987U 92031A 96051.86904625 .00000615 00000-0 18676-4 0 5229
2 21987 28.4333 251.7156 0010014 206.2055 153.8041 15.19662351205812
SAMPEX
1 22012U 92038A 96053.82220169 .00000307 00000-0 24505-4 0 6977
2 22012 81.6705 241.0901 0117208 188.0887 171.8449 14.91590957198037
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1 22014U 92039A 96053.26614369 .00000005 00000-0 00000+0 0 6678
2 22014 54.8556 173.2408 0065578 309.1143 50.2631 2.00561410 20087
Glonass 56
1 22056U 92047A 96051.23188561 -.00000052 00000-0 00000+0 0 1586
2 22056 64.7950 327.6477 0005765 288.6981 71.2699 2.13103163 27675
Glonass 57
1 22057U 92047B 96051.99714336 -.00000054 00000-0 00000+0 0 1374
2 22057 64.8138 327.6470 0009195 324.2598 35.7176 2.13102524 27664
Glonass 58
1 22058U 92047C 96053.81372170 -.00000063 00000-0 10000-3 0 839
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KO-23
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2 22077 66.0783 78.7166 0007535 329.4477 30.6087 12.86295822165495
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2 22108 54.0773 232.3836 0116783 156.9483 203.5802 2.00556917 25192
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2 22161 62.9860 179.6079 0830868 8.0332 353.3010 13.21881128162866
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1 22231U 92079A 96053.41564855 .00000006 00000-0 10000-4 0 6671
2 22231 54.6776 174.3649 0033957 279.0741 80.5162 2.00552304 23848
GPS BIIA-17
1 22275U 92089A 96048.56906236 -.00000019 00000-0 10000-3 0 6969
2 22275 54.6249 172.0610 0052406 253.1144 106.2703 2.00574492 23157
TDRS 5
1 22314U 93003B 96053.28046411 -.00000301 00000-0 10000-3 0 6172
2 22314 2.3846 70.5093 0002537 244.7682 251.3799 1.00272752 11421
GPS BIIA-18
1 22446U 93007A 96051.13419040 -.00000028 00000-0 10000-3 0 6655
2 22446 54.2779 292.1310 0088977 359.5211 0.5336 2.00563699 22198
Glonass 59
1 22512U 93010A 96053.32729563 -.00000005 00000-0 10000-3 0 7702
2 22512 65.1007 88.1431 0008122 194.0383 165.9987 2.13101931 23224
Glonass 60
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2 22513 65.0975 88.2181 0007630 210.3732 149.6559 2.13102503 23370
Glonass 61
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2 22514 65.1237 88.1882 0011002 198.6531 161.3709 2.13102034 23392
ASTRO-D
1 22521U 93011A 96050.52114530 .00000929 00000-0 59223-4 0 4739
2 22521 31.1027 101.6426 0056487 70.1542 290.5200 15.02749403164607
UFO F1
1 22563U 93015A 96044.87271907 -.00000036 00000-0 00000+0 0 4882
2 22563 25.5645 290.5927 0008309 296.6375 63.3404 0.99252858 14866
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1 22581U 93017A 96050.27995488 -.00000089 00000-0 10000-3 0 5066
2 22581 55.2125 352.8265 0061847 35.8285 324.5757 2.00564296 21233
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RADCAL
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2 22698 89.5410 277.5003 0091833 347.4326 12.4572 14.21366128137874
GPS BIIA-21
1 22700U 93042A 96051.37418835 .00000013 00000-0 10000-3 0 5106
2 22700 54.2309 233.1373 0048138 355.1584 4.7848 2.00571639 19388
NOAA 13
1 22739U 93050A 96052.90435982 .00000043 00000-0 48999-4 0 27
2 22739 99.0287 7.4507 0009806 187.0061 173.0969 14.10956756130653
GPS BIIA-22
1 22779U 93054A 96050.97250091 -.00000027 00000-0 10000-3 0 5755
2 22779 54.4219 292.1622 0016685 263.8356 96.0491 2.00563490 18138
Meteor 2-21
1 22782U 93055A 96054.10228409 .00000051 00000-0 33207-4 0 4645
2 22782 82.5455 78.3543 0021475 304.5286 55.3845 13.83048682125224
UFO F2
1 22787U 93056A 96042.99429382 -.00000079 00000-0 00000+0 0 6191
2 22787 4.2540 326.1041 0051962 263.2146 342.9526 1.00287821 7565
SPOT 3
1 22823U 93061A 96054.25999612 -.00000044 00000-0 00000+0 0 5177
2 22823 98.7174 129.8845 0001729 121.7285 238.4074 14.20032836124922
STELLA
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2 22824 98.5906 127.8283 0005473 215.7691 144.3124 14.27103624125038
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IO-26
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HEATHSAT
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2 22827 98.5918 131.3675 0008242 195.4398 164.6526 14.27926790125537
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2 22828 98.5902 126.0713 0009175 210.5176 149.5462 14.28130214 92841
PO-28
1 22829U 93061G 96054.16863266 .00000002 00000-0 18259-4 0 4462
2 22829 98.5905 131.9930 0009258 193.5629 166.5303 14.28111294125618
KO-25
1 22830U 93061H 96050.72623804 -.00000011 00000-0 12877-4 0 4645
2 22830 98.4847 118.9163 0011393 174.5324 185.5982 14.28104004125122
JIANBING-93 P/L(1)
1 22870U 93063H 96054.23487394 .01047853 10208-4 17989-3 0 4551
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METEOSAT 6
1 22912U 93073B 96050.82949074 -.00000109 00000-0 10000-3 0 4115
2 22912 0.3156 288.0439 0002532 12.0049 137.5931 1.00269211 6675
HST Array
1 22920U 90037C 96051.54350885 .00004370 00000-0 29998-3 0 4318
2 22920 28.4685 186.7708 0003303 304.8574 55.1690 15.03578063121690
Meteor 3-6
1 22969U 94003A 96054.17905817 .00000051 00000-0 10000-3 0 2348
2 22969 82.5589 341.6408 0014985 158.8030 201.3713 13.16734843 99910
TUBSAT-B
1 22970U 94003B 96050.32417561 .00000051 00000-0 10000-3 0 2257
2 22970 82.5566 344.2719 0015413 167.4464 192.7045 13.16826703 99418
GPS BIIA-24
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2 23027 55.0823 354.6475 0063684 203.9555 155.7451 2.00573179 14332
Glonass 62
1 23043U 94021A 96051.76037339 -.00000054 00000-0 00000+0 0 3147
2 23043 64.6858 328.0052 0004142 200.9785 159.0416 2.13102906 14503
Glonass 63
1 23044U 94021B 96053.05069139 -.00000059 00000-0 00000+0 0 2880
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Glonass 64
1 23045U 94021C 96053.69677045 -.00000063 00000-0 00000+0 0 2977
2 23045 64.6671 327.9420 0011581 28.9849 331.1181 2.13102098 14547
GOES 8
1 23051U 94022A 96052.39613324 -.00000272 00000-0 00000+0 0 4751
2 23051 0.2279 265.0582 0002167 43.3081 269.2183 1.00256968 14199
MSTI 2
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2 23101 97.0867 246.4244 0013015 42.4763 317.7501 15.52898871101031
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2 23179 82.9472 322.5831 0038272 86.9608 273.5929 13.75677226 80842
Glonass 65
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Glonass 67
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1 23317U 94066A 96054.24396382 .00000162 00000-0 21139-4 0 1331
2 23317 82.5449 164.7643 0027685 92.1495 268.2899 14.73999765 73609
ELEKTRO
1 23327U 94069A 96053.84670419 -.00000121 00000-0 00000+0 0 1263
2 23327 0.2395 250.9209 0002373 171.8402 110.0669 1.00271325 4843
RESURS 1-3
1 23342U 94074A 96054.11417627 .00000086 00000-0 22448-4 0 4512
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2 23426 1.6859 269.7459 0003023 97.5313 260.3258 1.00270059 4347
RS-15
1 23439U 94085A 96052.46610881 -.00000039 00000-0 10000-3 0 1149
2 23439 64.8161 211.8435 0163630 219.5538 139.3350 11.27524055 47620
NOAA 14
1 23455U 94089A 96053.81789307 .00000101 00000-0 80347-4 0 5067
2 23455 98.9317 359.7203 0008805 204.2098 155.8660 14.11570261 59174
ODERACS II A
1 23471U 95004C 96054.13310707 .00218971 36335-4 17157-3 0 3508
2 23471 51.6363 249.8997 0003493 329.7872 30.2952 16.14192329 61183
Glonass 71
1 23511U 95009A 96052.40583531 -.00000056 00000-0 00000+0 0 1539
2 23511 64.7042 328.2481 0005458 230.0160 129.9744 2.13103021 7487
Glonass 72
1 23512U 95009B 96051.11614921 -.00000053 00000-0 00000+0 0 1644
2 23512 64.6930 328.3033 0007559 324.1496 35.8354 2.13102042 7459
Glonass 73
1 23513U 95009C 96053.28600343 -.00000061 00000-0 00000+0 0 1759
2 23513 64.7009 328.2410 0011918 207.4991 152.4766 2.13103008 7505
GMS 5
1 23522U 95011B 96046.61384689 -.00000299 00000-0 10000-3 0 1010
2 23522 0.5270 319.0165 0001999 134.0160 53.0528 1.00271378 3227
DMSP B5D2-8
1 23533U 95015A 96053.85118696 .00000004 00000-0 25605-4 0 4073
2 23533 98.8372 57.8108 0007822 27.9877 332.1715 14.12725467 47342
Microlab 1
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1 23547U 95017C 96050.48549635 .00000236 00000-0 83970-4 0 866
2 23547 69.9794 85.5257 0012826 333.7499 26.2980 14.45487020 46514
OFEQ 3
1 23549U 95018A 96053.91951788 .00016436 00000-0 42993-3 0 2046
2 23549 143.3662 246.6309 0233996 249.3647 108.1830 15.13113551 48882
GFZ-1
1 23558U 86017JE 96052.38864785 .00002301 00000-0 32390-4 0 1029
2 23558 51.6519 342.3490 0006693 139.2045 220.9448 15.61527123571752
ERS-2
1 23560U 95021A 96053.24267500 -.00000015 00000-0 10478-4 0 1681
2 23560 98.5469 128.9795 0001194 62.4687 297.6623 14.32249732 43973
Spektr
1 23579U 95024A 96054.06880384 .00002945 00000-0 45802-4 0 2702
2 23579 51.6474 340.8030 0005662 24.6286 335.5356 15.57592345 43496
GOES 9
1 23581U 95025A 96051.32370037 .00000062 00000-0 00000+0 0 1412
2 23581 0.0341 289.1510 0003325 0.8902 200.7632 1.00267361 2746
Helios 1A
1 23605U 95033A 96053.21591818 .00000103 00000-0 28701-4 0 1734
2 23605 98.1127 350.6421 0001383 42.5032 317.6279 14.63848472 33589
UPM SAT 1
1 23606U 95033B 96051.88350199 .00000104 00000-0 27022-4 0 1377
2 23606 98.0939 350.0299 0006541 188.0332 172.0769 14.67211311 33539
CERISE
1 23607U 95033C 96051.85628363 .00000179 00000-0 40610-4 0 689
2 23607 98.0901 349.9142 0004956 192.7790 167.3288 14.66925783 33516
TDRS 6
1 23613U 95035B 96053.53084292 .00000108 00000-0 00000+0 0 1375
2 23613 0.4430 83.8058 0003172 237.9667 230.8774 1.00280062 2229
Glonass 74
1 23620U 95037A 96051.19311116 .00000023 00000-0 00000+0 0 996
2 23620 64.8356 207.9282 0018578 162.3144 197.7170 2.13102599 4498
Glonass 75
1 23621U 95037B 96051.83920970 .00000027 00000-0 00000+0 0 1076
2 23621 64.8471 207.9030 0017842 173.5486 186.4377 2.13101869 4509
Glonass 76
1 23622U 95037C 96051.42838474 .00000024 00000-0 00000+0 0 1054
2 23622 64.8299 207.9230 0036987 162.3107 197.7815 2.13102265 4498
Prognoz-M2
1 23632U 95039A 96054.72701810 -.00000063 00000-0 00000+0 0 374
2 23632 67.1080 253.6170 8729228 318.5510 331.3800 0.26375000 545
SICH-1
1 23657U 95046A 96053.21117328 .00000184 00000-0 24754-4 0 580
2 23657 82.5356 307.3105 0029634 66.3485 294.0824 14.73454595 25754
Soyuz TM-22
1 23665U 95047A 96054.06880384 .00002945 00000-0 45802-4 0 1623
2 23665 51.6474 340.8030 0005662 24.6286 335.5356 15.57592345 26932
RADARSAT
1 23710U 95059A 96051.85833588 -.00000044 00000-0 00000+0 0 1035
2 23710 98.5797 60.2010 0001105 80.9771 279.1540 14.29964196 15474
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Glonass 77
1 23734U 95068A 96051.54583215 .00000025 00000-0 00000+0 0 640
2 23734 64.8347 207.8437 0018286 328.0265 31.8249 2.13101882 1469
Glonass 78
1 23735U 95068B 96054.11745243 .00000045 00000-0 00000+0 0 594
2 23735 64.8331 207.7460 0005890 205.1615 154.7773 2.13124877 1511
Glonass 79
1 23736U 95068C 96053.18812762 .00000037 00000-0 00000+0 0 469
2 23736 64.8253 207.7903 0006610 188.6381 171.3158 2.13102122 1491
Progress M-30
1 23744U 95070A 96053.49138942 .54973737 00000-0 57553+0 0 646
2 23744 51.6533 343.6989 0013362 34.6441 325.4459 15.55758865571981
XTE
1 23757U 95074A 96052.72494064 .00000600 00000-0 21230-4 0 334
2 23757 22.9842 124.4393 0013623 106.9591 253.2404 14.97604224 7988
Gorizont 31
1 23775U 96005A 96053.82872925 .00000126 00000-0 00000+0 0 371
2 23775 1.4543 286.0229 0006607 270.9506 292.9835 1.00261948 290
1996005B
1 23776U 96005B 96029.00921427 .12303299 12826-4 88259-4 0 243
2 23776 51.6236 262.3386 0004734 331.6874 28.6897 16.52754420 590
1996005C
1 23777U 96005C 96026.14116828 .13925704 12407-4 11512-2 0 59
2 23777 51.6295 278.5026 0004191 56.6687 303.5124 16.38908937 124
1996005D
1 23778U 96005D 96043.20000000 -.00000067 00000-0 00000+0 0 30
2 23778 1.4990 285.7010 0011598 66.6110 146.2940 0.97675474 172
Palapa C-1
1 23779U 96006A 96052.67002510 -.00000380 00000-0 00000+0 0 220
2 23779 0.0779 286.1670 0069944 249.1954 341.0681 1.00299487 170
1996006B
1 23780U 96006B 96034.70000000 -.00006273 55668-5 00000+0 0 39
2 23780 21.9890 328.5190 8726775 181.1740 347.4370 0.74728460 21
N-STAR B
1 23781U 96007A 96046.33881771 -.00000325 00000-0 00000+0 0 133
2 23781 0.0945 275.7909 0008003 67.5726 59.2048 1.00271869 129
1996007B
1 23782U 96007B 96052.89680074 .00003916 00000-0 52755-3 0 119
2 23782 6.7601 55.9695 7364989 190.0992 136.6035 2.19487733 366
1996008B
1 23785U 96008B 96053.87844838 .00215962 -11525-5 76013-3 0 144
2 23785 26.0052 266.9457 3244851 204.9159 135.1847 9.08956789 435
1996009A
1 23787U 96009A 96054.22064408 .00000012 00000-0 10000-4 0 114
2 23787 82.5788 187.0974 0009200 13.3688 346.7649 12.63859442 523
1996009B
1 23788U 96009B 96053.90670832 .00000012 00000-0 10000-4 0 89
2 23788 82.5723 187.2958 0004580 2.6229 357.4886 12.62962771 481
1996009C
1 23789U 96009C 96052.95742228 .00000012 00000-0 10000-4 0 83
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2 23789 82.5808 187.9114 0003938 304.3704 55.7020 12.62369949 366
1996009D
1 23790U 96009D 96052.71656291 .00000012 00000-0 10000-4 0 106
2 23790 82.5805 188.0686 0004629 315.2374 30.8228 12.62383576 336
1996009E
1 23791U 96009E 96052.16242703 .00000012 00000-0 10000-4 0 71
2 23791 82.5742 188.4164 0006455 259.8460 82.3365 12.61466978 263
1996009F
1 23792U 96009F 96052.71656291 .00000012 00000-0 10000-4 0 85
2 23792 82.5837 188.0721 0010231 244.7899 85.5089 12.60714687 338
1996009G
1 23793U 96009G 96050.34169661 .00000012 00000-0 10000-4 0 50
2 23793 82.5716 189.5759 0043469 241.9356 109.8342 12.54992188 34
1996010B
1 23795U 96010B 96053.82099336 .07462763 12648-4 12040-3 0 187
2 23795 51.6056 263.2977 0003164 295.4214 64.6476 16.48143374 574
1996010C
1 23796U 96010C 96051.07380848 .12626906 12430-4 10548-2 0 67
2 23796 51.6041 278.7639 0005661 46.0070 314.1909 16.38788332 122
1996010D
1 23797U 96010D 96053.53855215 .00007540 00000-0 22964-2 0 106
2 23797 48.5709 281.7357 7319957 0.5964 0.0731 2.23161324 73
1996011A
1 23798U 96011A 96054.20469428 .00048431 12106-4 14294-3 0 72
2 23798 51.6502 340.2172 0025868 117.8091 242.5547 15.92609815 268
1996011B
1 23799U 96011B 96054.25000000 .02757661 12201-4 47942-3 0 116
2 23799 51.6012 339.5286 0011945 64.6293 25.0009 16.31846213 273
1996005E
1 23800U 96005E 96053.36007398 .00000715 00000-0 41485-3 0 25
2 23800 47.3258 274.7552 7315946 7.1149 359.3708 2.22296545 72
STS 75
1 23801U 96012A 96053.95886834 .00569104 00000-0 16252-2 0 24
2 23801 28.4683 286.1918 0004155 278.2384 81.7755 15.90777235 22
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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423. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: macino@mail.fwi.com
Message-ID: <4gn3fn$p4l@news.ios.com>
Source record: 22890

In <Pine.OSF.3.91.960222181226.19665B-100000@biggulp.callamer.com>, Clifford Buttschardt <cbuttsch@biggulp.callamer.com> writes:
>That's most unusual David. I would has asked the very same thing from
>the aspect of where are all the guys out here in California!! Cliff W6HDO
>
>On 22 Feb 1996, David Whitehurst wrote:
>
>> Can anyone please tell me why so few hams are into satellites (AMSAT)
>> on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
>> hardly anyone in my area (tidewater area of southeast Virginia) is into it!
>> -David. :(
>>
>>
>>
Is it possibly that 'joe average' amateur doesn't have an understanding of what it takes to do it? If you look at some of the elaborate arrays shown and discussed in QST, etc. I think it moves joe away. I got into a form of it a couple of weeks ago. Just using a DOS based program that was on the QRZ CD-ROM to track MIR a 10 watt ICOM beater mobile rig and a 20 year old Ringo Ranger mounted at 14' I worked MIR.

The interesting part is that I like most guys, thought you needed all that super elaborate equipment to get started, just not true. One of our local guys worked MIR a couple of years ago with an HT while being 'John Deere mobile'. The guy was out plowing and gave it a shot, and was successful. So, locally (Northern Indiana) there are by proportion, quite a few folks doing it.

I think another point about 'feasibility' might me a reason. Although there are a lot of hams on the coasts, 'line of site communications might be a little tough if you have mountains, hills, skyscrapers, etc. in the way. I've found that 'contacts' with a low flyer like MIR are much more frequent when the 'bird' is 200 - 300 miles away, and travelling away from me. (I consider a 'R0MIR Busy' to my signal back as an acknowledgement that I've made contact. But we are 'flatlanners' around here, so we have a very wide horizon. Also, (this will draw some fire) 8,9, and 0 district hams seem to be a little more inventive. Scan through QST, the antenna compendiums, software programs and authors and you will find a very disproportionate numbers of 8's, 9's, and 0's. It might be the Midwest way of working with what you have, I don't know. Anyway, we do tend to experiment and not get too caught up in minor setbacks. My very humble opinion.

424. Re: 90's failed Pegasus launch

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: n2oto@aol.com
Message-ID: <4gngpd$38c@newsbf02.news.aol.com>
Source record: 22891

Thanks for the information via email.

Can anyone add anything to this?

-Rupert E. Lubkemeier, N2OTO

>>
>>>>>>

>I believe they were simply called Microsat - 1-7. Orbital Sciences built
the satellites as
well, and they presented a paper about the program at the AIAA/USU Small
Satellite Conference
(#6, held Sept. 1992)

As I recall, the military did conduct a few experiments with the
spacecraft before giving
up on them - they were used for communications relay as I recall.

If you can't find the proceedings or other papers about the spacecraft,
drop me an email
and I'll see if I can find it.

Best Regards,

Darby G. Cooper, KB0VFE
Asst. Director
Iowa Space Grant Consortium
Iowa State University
Ames,IA
dgcooper@iastate.edu
>>
>>>>>>>

>They were 7 satellites for DARPA, the Defence Advanced Research Projects
Agency. They were called Microsats, built by DSI, Inc. (now CTA Space
Systems). There was a problem with the Pegasus launch, and the orbit
height and inclination were not what had been planned. Regardless, the
satellite were used by DARPA and at the end of their life by the Navy in
Annapolis.

Eric
--
Eric Rosenberg WD3Q, EI4VPS, YJ0AER, J20BY, etc.
Washington, DC
ericr@access.digex.net wd3q@amsat.org

>>>
>>>>>>

425. ARLK012 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-02-24 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk012.1996@arrl.org>
Source record: 22892
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK012
ARLK012 Keplerian data

ZCZC SK12
QST de W1AW
Keplerian Bulletin 12 ARLK012
From ARRL Headquarters
Newington, CT February 24, 1996
To all radio amateurs

SB KEP ARL ARLK012
ARLK012 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-75
1 23801U 96012A 96054.58376157 .00000520 00000-0 00000+0 0 41
2 23801 28.4694 281.5210 0004905 282.7779 63.7021 15.90926998 117
Mir
1 16609U 86017A 96054.19711406 .00002788 00000-0 43714-4 0 05104
2 16609 51.6468 340.1503 0005554 26.8073 333.3206 15.57592563572085
AO-10
1 14129U 83058B 96046.56186910 -.00000124 00000-0 10000-3 0 4034
2 14129 26.3643 223.9075 5983094 351.0706 1.5442 2.05879267 67343
RS-10/11
1 18129U 87054A 96054.00206429 .00000048 00000-0 35633-4 0 01822
2 18129 82.9233 233.6624 0012858 110.4311 249.8226 13.72362662434373
UO-11
1 14781U 84021B 96053.98573639 .00000102 00000-0 25059-4 0 08783
2 14781 97.7915 49.8839 0012954 96.7587 263.5082 14.69428485640732
RS-12/13
1 21089U 91007A 96054.06169806 .00000032 00000-0 17400-4 0 08762
2 21089 82.9229 274.7222 0028444 190.8283 169.2268 13.74066292253221
AO-13
1 19216U 88051B 96054.29748082 -.00000319 00000-0 39814-3 0 1551
2 19216 57.3436 133.4307 7378884 32.6851 356.5878 2.09735061 27420
UO-14
1 20437U 90005B 96054.15247230 -.00000009 00000-0 13446-4 0 01813
2 20437 98.5525 139.2999 0010447 176.7687 183.3564 14.29912393317613
```

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RS-15
1 23439U 94085A 96053.88521284 -.00000039 00000-0 10000-3 0 01245
2 23439 64.8161 209.5483 0163563 219.3151 139.5803 11.27524077047787
AO-16
1 20439U 90005D 96054.18464243 -.00000021 00000-0 85236-5 0 09698
2 20439 98.5659 141.3656 0010943 177.9252 182.1986 14.29966778317632
DO-17
1 20440U 90005E 96054.07834827 .00000025 00000-0 26379-4 0 09726
2 20440 98.5655 141.8351 0010971 176.6657 183.4605 14.30108693317642
WO-18
1 20441U 90005F 96054.20569625 -.00000027 00000-0 64985-5 0 09823
2 20441 98.5660 141.9099 0011712 177.7250 182.3995 14.30078365317668
LO-19
1 20442U 90005G 96054.14021767 -.00000028 00000-0 58796-5 0 09731
2 20442 98.5697 142.2988 0011779 177.2461 182.8780 14.30185013317679
FO-20
1 20480U 90013C 96054.15034200 -.00000022 00000-0 20919-4 0 08748
2 20480 99.0421 100.8065 0541327 25.2424 337.4118 12.83232113283132
AO-21
1 21087U 91006A 96053.99886667 .00000094 00000-0 82657-4 0 06965
2 21087 82.9385 46.9577 0034169 164.5549 195.6655 13.74566257254183
UO-22
1 21575U 91050B 96054.16297151 .00000016 00000-0 19604-4 0 06809
2 21575 98.3671 123.9018 0006742 254.4988 105.5457 14.37012698241543
KO-23
1 22077U 92052B 96054.49210398 -.00000037 00000-0 10000-3 0 5582
2 22077 66.0779 69.5999 0007901 327.7222 32.3308 12.86295877166056
KO-25
1 22828U 93061F 96051.70141030 -.00000043 00000-0 18390-6 0 04460
2 22828 98.5897 129.5157 0009390 198.1598 161.9258 14.28130036093341
IO-26
1 22826U 93061D 96054.14532696 .00000009 00000-0 21327-4 0 04677
2 22826 98.5940 131.8686 0008085 209.0439 151.0290 14.27795662125586
AO-27
1 22825U 93061C 96054.14029669 .00000030 00000-0 29929-4 0 04688
2 22825 98.5940 131.7208 0007709 208.4209 151.6551 14.27687929125575
PO-28
1 22829U 93061G 96053.74825739 .00000002 00000-0 18312-4 0 04659
2 22829 98.5905 131.5795 0009259 194.8095 165.2816 14.28111260125556

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
February 27, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

426. Re: GEO Orbital Locations of US SIGINT Satellites [check them out!!]

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: John Pike <johnpike@fas.org>
Message-ID: <4goeck$i49@clarknet.clark.net>
Source record: 22893
Cross-posted to: sci.space.policy,sci.astro.amateur,alt.politics.org.cia,alt.politics.org.nsa,rec.radio.amateur.space

jrespler@nj5.injersey.com (Jay Respler) wrote:

>Can you identify which specific objects these are?

0 - They are all classified signals intelligence satellites.

1 - No, I can't "identify which specific objects these are" -- this is the whole point of my posting -- I am hoping that some of the folks who have been doing optical tracking of GEO sats will take a peak at these locations and let us know what -- if anything -- they see.

2 - I will leave it as an exercise for others to try to get a handle on the extent to which there is a hazard of confusing these SIGINT birds with other vanilla satellites in similar orbits. However, I take it from the other thread on unidentied GEO sats that this is not too difficult, if one actually knows what one is doing.

3 - It is almost certainly the case that at least some of these locations are currently un-occupied, based on the precedent of MILSTAR, where they registered about twice as many slots as they had satellites.

4 - At least some of these satellites should be pretty readily visible, compared to other GEO objects. Apart from the two MILSTARs, some of these puppies are the largest objects in GEO -- about 5 metric tons or so, and the rest of them are not small, massing about half this.

--
John Pike
Federation of American Scientists http://www.fas.org/pub/gen/fas/
CyberStrategy Project http://www.fas.org/pub/gen/fas/cp/
Intelligence Reform Project http://www.fas.org/pub/gen/fas/irp/
Military Analysis Network http://www.fas.org/pub/gen/fas/man/
Space Policy Project http://www.fas.org/pub/gen/fas/spp/

427. Have Cool Toys Need Teacher-Playmate(Microwave gear and security junk)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: ando1@ix.netcom.com
Message-ID: <4gpf4o$550@cloner3.netcom.com>
Source record: 22894
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space,clair.local.georgia,rec.radio.swap

I have in my possession a bunch of microwave amps and related
gear,dishes,signal sources,wave guid,satelite stuff attenuators and the
list goes on. I know very little about this stuff but Im sure it could
be fun if someone near Atlanta could help me.Amps are Varian from
35-200 amp 8-18gig.lets play,
J.B.
FOR SALE- OR TRADE::OR FOR FUN
Varian VZX6983G5GLM 8-12.4 ghz 53db gain 200watt Xband amp (new)
$16,000.
Varian VZM6993051505 12-18ghz 53db gain 200watt KU band amp
(new)$13,000.
Varian VZX6981KADEH 8-12.4ghz 40db gain 20 watt Xband amp(1007
hrs.)$7,500.
L&R Communications low noise amp local controle & monitor
Scientific Atlanta Antenna Motor Controler Mod.# 8841A
Arbiter Systems Satelite Controled clock mod.#1026B
LAMDA LFS-44-48
Digital H7100A
Scientific Atlanta 3267260 mod.#4663R
" " Digital Processing Unit mod.#7325
" " Signal Source mod.#2180
" "Power Amp 3080 Pedestal
Datum Digital Clock
Texas Instruments XDS/22 Illuminator
12 Schlumberger Test Fixture Kit cases
Canoga Perkins fiber optics Bus Interface
Aerotech 1000 D.C. Permanent Magnet Servo Motor
560sq.ft. S.C.I.F.(secure compartemented information facility)3
rooms,all electronic filters,etc...
Frequency West mod.MO-109XB-17 serial 320 1435omhz
Midwest Microwave mod1044 Step Athenuator D.C. 8.0ghz
Dishes,300' wave guid,and alot more 404-923-5726

428. Re: GEO Orbital Locations of US SIGINT Satellites [check them out!!]

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: thomsona@netcom.com
Message-ID: <thomsonaDnC49o.G7y@netcom.com>
Source record: 22895
Cross-posted to: sci.space.policy,sci.astro.amateur,alt.politics.org.cia,alt.politics.org.nsa,rec.radio.amateur.space

In article <4gmd61$hbu@news.injersey.com> jrespler@nj5.injersey.com (Jay Respler) writes:
>John Pike (johnpike@fas.org) wrote:
>: At the 1995 World Radio Conference, the US registered the following
>: satellites as operating in the 17.8-21.2 GHz downlink and 30-31 GHz
>: uplink bands.
>
>: station longitude
>
>: US CSID-A1 E 000
>: US CSID-A2 E 044
>: US CSID-A3 E 075
>: US CSID-A4 E 082
>: US CSID-A5 E 092
>: US CSID-A6 E 110
>: US CSID-E1 W 010
>: US CSID-E2 W 013
>: US CSID-E3 W 024
>: US CSID-E4 W 030
>: US CSID-W1 W 141
>: US CSID-W2 W 144
>
>: The US also registered
>
>: US CSID-P non-GSO [63 degrees, 39400-1000 km, 8 satellites]
>
>
>Can you identify which specific objects these are?
>
>

As you are aware, Rainer Kracht has observed uncatalogued geosynchronous
satellites at 13 and 28 degrees west. Those locations correspond to US
CSID-E2 and possibly -E3 or -E4 in the above list. He thinks, based on
older filings, that the one at 28 west is a Chalet/Vortex SIGINT satellite.

429. Icom IC-970/H modification for 9600 Bd Satellites, Help !

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: r.serna@eworld.com
Message-ID: <4gq47b$8hh@hp5.online.apple.com>
Source record: 22896

Dears Friends:
Hi have interested in the modification for the Icom IC-970/H
for 9600Bd and the KPC-9612 of Kantronics,please send me information
and diagrams.

My adress is:

Ramon Serna EA3CFC
PO.Box-115
E08.750-Molins de Rei
Barcelona

E.Mail: R.Serna@eworld.com
R.Serna@eworld.com

430. Wiretapping and Telephone Bugging Web Page tscm.com

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: jmatk@tscm.com
Message-ID: <jmatk-2502961535330001@jmatk.tiac.net>
Source record: 22897
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.space,uk.radio.amateur,alt.radio.scanner,alt.radio.scanner.uk

Finally the tools and test equipment page is finished, and we have updated
our frequency tables/lists.

Check out our updated tool and TSCM test equipment list.

http://www.tscm.com/

http://www.tscm.com/tmde.html <--- TSCM Test Equipment
http://www.tscm.com/tools.html <--- TSCM Hand Tools
http://www.tscm.com/stu.html <--- Secure Telephones and Scramblers

Upcoming Topics to watch for in March... Any interest??

Wired Microphones and Pinhole devices... tons of pictures
The Computer Audio/Video Threat... tons of pictures
Join us for a real world TSCM sweep...

Feel free to suggest topics...

James M. Atkinson "...Shaken, not Stirred..."
TSCM.COM
127 Eastern Avenue #291
Gloucester, MA 01931-8008
URL: http://www.tscm.com/ E-Mail: jmatk@tscm.com
The First, The Largest, The Most Popular, and the Most
Complete TSCM Counterintelligence Site on the Internet

431. AO 27 is its Transponder on during weekends ??

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: deepblue@halcyon.com
Message-ID: <deepblue.171.000D9BF2@halcyon.com>
Source record: 22898

Has anybody been working with the AO 27 Sat. ??
is it turned on ?

Thanks

Fred

432. Re: Picosat?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-25 00:00:00 UTC
From: rargyle@cc.weber.edu
Message-ID: <25FEB199622060148@cc.weber.edu>
Source record: 22899

In article <4glqu6$dc4@doc.zippo.com>, Drew Nichols- Drew@gremlin writes...
>Has anyone heard of the picosats? When are they supposed to be launched?
>Email Drew@gremlin.greenville.lib.sc.us

I believe no launch date has been set as yet. for more info, check
http://aa.stanford.edu:80/~ssdl/projects/squirt2

--
/_/\ /_/\ bob argyle rargyle@cc.weber.edu http://137.190.32.131
={ 0.0 }= =(0.0)= Send a REAL revolution to Washington!
> ^ < > " < Fidel Castro for President '96
|m/ \m| |m/ \m| The ultimate Washington outsider.
Tabbie & Willie this .sig void for the sarcasm impaired.

433. Re: Icom IC-970/H modification for 9600 Bd Satellites, Help !

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2602960656200001@jake-5d.ip.realtime.net>
Source record: 22900

In article <4gq47b$8hh@hp5.online.apple.com>, r.serna@eworld.com (R.Serna) wrote:

> Dears Friends:
> Hi have interested in the modification for the Icom IC-970/H
> for 9600Bd and the KPC-9612 of Kantronics,please send me information
> and diagrams.
>
> My adress is:
>
> Ramon Serna EA3CFC
> PO.Box-115
> E08.750-Molins de Rei
> Barcelona
>
> E.Mail: R.Serna@eworld.com
> R.Serna@eworld.com

Icom IC-970 9600 baud FSK Mods

The following describes mods for 9600 baud FSK for an Icom IC-970. The mods require NO soldering or cutting on the IC-970, and are thus easily reversible.

Icom suggested mods for 9600 were:
• TX mod input at collector of Q59 on the main unit.
• RX Main at DET output in J29 (main unit).
• RX Sub at TSAOS output in J9 (main unit).

I made slight mods to Icom's mods:
• TX mod input at collector of Q59 on the main unit. This is available at the top of R60 with a micro clip. Ground is at the top of R51 with a micro clip. These resistors are about 3" back from the front of the Main unit and 2" from the right. The micro clips were attached to a length of RG-174 mini coax. No mods to board! The leads of the resistors appear to be painted. Scrape the paint off with a small, sharp knife (a small mod).
• RX Main output at TSAOM at J29 (main unit). Available on P85 (tone squelch option socket) under the top cover.
• RX Sub output at TSAOS at J9 (main unit). Available on P87 (tone squelch option socket) under the top cover.

Two lengths of RG-174 mini coax were connected to a 6-pin headers with the center conductor on pin 3 and ground on pin 4. The headers were covered with heat-shrink tubing. The headers plug into P85 (MAIN) and P87 (SUB).

The three coax cables were routed to the back-right of the IC-970 case. The two TVJ hole covers were removed and replaced by two dual RCA jack boards. These boards were attached with a small bolt through the hole for the TVJ screws. The coax was attached to three of these jacks.

Ron Parsons W5RKN
9001 Laurel Grove Dr.
Austin, TX 78758
(512) 836-2514
w5rkn@amsat.org

--
Ron W5RKN

434. Re: Moon-Earth-Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: Tom Clark <clark@tomcat.gsfc.nasa.gov>
Message-ID: <4grfk9$atg@post.gsfc.nasa.gov>
Source record: 22901

tedwards@Glue.umd.edu (Thomas Grant Edwards) wrote:
>Obviously hams haven't done it, but has there ever been moon-earth-moon
>communication?
>
>-Thomas

Despite the sarcastic replies, the Arecibo Radar running in EME mode has enough sensitivity to get earth-moon-earth-moon-earth echoes. So the answer is yes, with one extra hop!

73 de Tom, W3IWI

435. propogation question

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: MandD@ix.netcom.com
Message-ID: <4gsuvp$i5a@cloner3.netcom.com>
Source record: 22902

I am not in ham radio but thought maybe someone out there could answer
a question for me.
I am an RF tech working in satellite communications.
Can someone give me a good definition of PROPOGATION...(propogation
delay, RF propogation or whatever)
We were having a discussion one day at work and cant agree on
it....Yes, I guess we got a liitle to much time on our hand.
Your definition would be greatly apreciated.
Please Email me if you can help.
Thanks in advance,

Mike
MANDD@ix.netcom.com

436. Re: GEO Orbital Locations of US SIGINT Satellites [check them out!!]

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: rhyolite95@aol.com
Message-ID: <4gtkt7$9q2@newsbf02.news.aol.com>
Source record: 22903
Cross-posted to: sci.space.policy,sci.astro.amateur,alt.politics.org.cia,alt.politics.org.nsa,rec.radio.amateur.space

I have been listening to a satellite in the vicinity of the west coast of africa that is transmitting russian telephone conversations in the range of 266.8375 to 266.9875 MHz. Also some Columbian AM radio station being relayed at 254.100 plus more telco above and below +/- 12 khz. What izzit????????

437. Space Shuttle STS75

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: DUPERRAY Francoise <d0003689@worldnet.fr>
Message-ID: <3132A9A1.1B64@worldnet.fr>
Source record: 22904

Hello all,

Does somebody heard the space shuttle transmission on HF bands (20 or 40 mtrs) in Europe?
Could somebody provide me the frequencies of US clubs which re-transmit earth-Space Shuttle conversations ?
Thanks for your help.
73.
Olivier, F5RDS, Paris.

438. NORAD Two-Line Orbital Element Set: Space Shuttle (96057.08376157)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4gtfr6$juq@blackbird.afit.af.mil>
Source record: 22905

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

Note: The Celestial BBS will cease operations around mid-March 1996. It will be replaced before then with a new WWW site for distributing the current selection of data and software. Data will continue to be available via anonymous ftp at archive.afit.af.mil.

```
STS 75
1 23801U 96012A 96057.08376157 .00002214 -70004-5 00000+0 0 172
2 23801 28.4679 262.8091 0005606 324.0142 335.3681 15.92071135 512
1996012B
1 23805U 96012B 96057.28599684 .06529896 00000-0 41810-1 0 74
2 23805 28.4898 261.3230 0073420 173.0332 187.1818 15.67298817 548
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

439. * SpaceNews 26-Feb-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-02-26 00:00:00 UTC
From: magliaco@pilot.njin.net
Message-ID: <4gt9fb$f7e@pilot.njin.net>
Source record: 22906
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@pilot.njin.net (John Magliacane)
Subject: * SpaceNews 26-Feb-96 *
Date: 26 Feb 1996 16:42:03 -0500
Organization: Rutgers University
Message-ID: <4gt9fb$f7e@pilot.njin.net>

SB NEWS @ AMSAT $SPC0226
* SpaceNews 26-Feb-96 *

BID: $SPC0226

=========
SpaceNews
=========

MONDAY FEBRUARY 26, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* MIR NEWS *
============
The following is a message from crews 20 and 21 aboard the Russian
spacestation Mir, dated 23-Feb-96:

Hello Folks!
Today, at 1720 Moscow time, our follow-up crew docked to the Mir-station.
We are now 5 onboard: 3 Juris, 1 Sergei and 1 Thomas. After finishing the
initial checks and procedures, we already have had some time to celebrate
their docking and, of course, to celebrate the imminent weekend.

Well, as we have mentioned before, this will be our (i.e. Juri's, Sergei's
and Thomas') last TGIF-message. But we certainly will introduce this habit
to the new crew.

We are looking forward to the next Friday, not only because we will be
together with our wifes, children and friends again, but also because we
will be able to take our famous TGIF-drinks in the old fashioned way in
gravity! However, for today we still would like to ask you to have a few
drinks for the five of us too (it might be a tough night ahead...).
Thanks a lot for all the TGIF drinks you took extra for Juri, Sergei
and myself during the last half year. We hope, no one of you became
addicted.

Many greetings, 73's
Juri, Juri, Juri, Sergei and Thomas.

[Info via Jan, ZS6BMN]

* STS-75 NEWS *
==========
Two Italian astronauts are currently onboard the Space Shuttle Columbia in mission STS-75. They are Umberto Guidoni, 40 years of age from A.S.I., and Maurizio Cheli, 36 years of age from E.S.A. Both are involved in an Italian experiment that deploys a satellite from the Space Shuttle from a 20 km tether. The tether produces electrical energy as it sweep through the earth's magnetic flux lines while in orbit.

The tethered satellite is a product of Alenia Space in Italy.

[Info via IW2BSF]

* WEBERSAT NEWS *
==========
WEBERSAT (WO-18) is currently sending telemetry, photos, weekly whole orbit data (WOD), and light spectra of the Sun or Earth, on Mondays.

The satellite's digipeater continues in operation using an uplink on 145.900 MHz. Using a terminal program connected to your TNC/PSK modem, try connecting to yourself using the following TNC command:

cmd: c yourcall via weber-1

If you're successful, try a few CQs and see who is listening...Enjoy!

Photo 10/14 of Southern Chad is the current image. It has very good contrast with very few clouds and land features clearly visible. Use WW1.3 to convert the photo to a GIF image, then use your favorite graphics program to size it, and adjust the contrast and brightness slightly.

The satellite continues to have a weak and relatively steady tone of about 1200 Hz in the downlink signal, which can cause reception problems with some modems. If this problem occurs, a ground-based solution is to adjust the IF-shift of the receiver to suppress the carrier into the skirts of the IF filter. Night reception seems to be better than in the daytime.

WOD collection and broadcast will adhere to the following schedule:

17 February/Week1: Array currents, Ch# 26 27 28 29 2A 2B
24 February/Week2: User requested channels, Ch# ?? ?? ?? ?? ?? ??
3 March/Week3: BCR, 21 22 29 2F 33 36
10 March/Week4: Temperatures and impact detector, Ch# 14 2F 30 35 3B 40
17 March/Week1: Array currents, Ch# 26 27 28 29 2A 2B

Check your local BBS, an issue of SpaceNews, or AMSAT bulletin for the current status of your favorite satellite.

[Info via Tom Davis, IK3WVJ]

* DARC FUNDS PHASE IIID *
==========
In 1991, the Deutscher Amateur Radio Club (DARC) signed an agreement with AMSAT-DL in order to support the project Phase-3D with 150,000 DM per year

over a period of six years to a total sum of 900,000 DM. The DARC is the national German amateur radio organization within the IARU and represents nearly 60,000 German HAMs.

In the same year, the DARC General Assembly agreed to provide a major support to Phase-3D, which is beeing considered to be an important project for the entire Amateur Radio Service. This project demonstrates the state of the art of Amateur Radio as a means for technical development and self education. Additonally, Phase-3D will enforce the usage of the ham radio microwave bands, which are under high pressure from other services. These are the main reasons why the DARC General Assembly decided to support the Phase-3D Project with about $ 10 per member.

In recent years, it turned out that the decision to support Phase-3D was very wise because there are many threats against the Amateur Radio Service, and those threats extend beyond Europe. DARC welcomes other national IARU member societies to support AMSAT groups with donations for Phase-3D.

DARC's first payment was completed for the year 1990, and the last (sixth) for 1995 completed the total sum to 900,000 DM, which is approximately $600,000 US. DARC is proud that it could help to realize Phase-3D with this substantial contribution.

[Info via Norbert Notthoff, DF5DP (DARC Staff Satellites And Space Projects)]

* LUSAT GLITCH *
================
Chuck, W9ODI reports that there is a corrupt directory header on the LUSAT OSCAR-19 satellite. The header belongs to file 48CD, dated 24-Dec-95. Corrupt directory headers cause confusion to groundstation software, such as PB, WiSP, and SatLink. A solution to the problem is to delete the PFHDIR.HOL file and request a new LUSAT directory when accessing the satellite. Just remember not to request a directory that goes back to 1995, or you may pick up the bad header again.

[Info via W9ODI]

* OSCAR-13 NEWS *
=================
N QST *** AO-13 TRANSPONDER SCHEDULE *** 1996 Jan 01 - Apr 01
Mode-B : MA 0 to MA 140 | *** P R O V I S I O N A L
Mode-BS : MA 140 to MA 240 |
Mode-B : MA 240 to MA 256 | Alon/Alat 220/0
Omnis : MA 250 to MA 140 | Move to attitude 180/0, Apr 01

Continuous up-to-date information about AO-13 operations is always available on the beacons, 145.812 MHz or 2400.664 MHz, in CW at 0 & 30 minutes past the hour, RTTY at 15 & 45 minutes past the hour and 400 bps PSK otherwise. These bulletins are also posted to Internet, ANS, Packet, PacSats etc, and many international newsletters.

Internet users wanting the latest AO-13 information should always check:
ftp://ftp.amsat.org/amsat/satinfo/ao13/
http://www.amsat.org/amsat/

Telemetry is archived at:
ftp://ftp.amsat.org/amsat/satinfo/ao13/telemetry/

The active command stations are listed below, and constructive feedback
about operations is always welcome.

Peter DB2OS @ DB0FC.#NDS.DEU.EU
James G3RUH @ GB7DDX.#22.GBR.EU
Graham VK5AGR

They may also be reached via Internet (callsign@amsat.org) and KO-23.
Please remember to state clearly a return address.

[Info via James Miller, G3RUH]

* THANKS! *
==========
Thanks to all who sent messages of appreciation to SpaceNews, especially:

GJ3YLI G4CMT I4WRM KC5NVK F6HCC

* FEEDBACK/INPUT WELCOMED *
==========================
Comments and input for SpaceNews should be directed to the editor (John,
KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

440. Radio Telescope info?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: davep+@pitt.edu
Message-ID: <4gt9dh$89d@usenet.srv.cis.pitt.edu>
Source record: 22907

Hey folks!
I don't know if this is the right newsgroup, but I saw a guy on TV
that had an amature radio telescope setup linked into a few PC's
looking for intelligent signals, is there any info out there on how to
set up a rig like this?

Any help would be appreciated!
Dave Powell
davep+@pitt.edu

441. A0-27 INFo

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: mfp@aros.net
Message-ID: <4gtpdu$kt5@news.aros.net>
Source record: 22908

What is the status of the FM transponder on A0-27? What's the schedule when the FM transponder is on???

Any info will be appreciated...
KB7YJJ

442. Re: propogation question

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: RusAnd@virginia.k12.mn.us
Message-ID: <NEWTNews.825431773.19152.Russ@RAnderson.virginia.k12.mn.us>
Source record: 22909

a definition from a arrl manual is "the means by which radio waves travel from one place to another."

443. Re: Picosat?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: Darby G Cooper <dgcooper>
Message-ID: <4gv89l$mm3@news.iastate.edu>
Source record: 22910

There are several spacecraft programs that use the name
or could be called "picosats"

Orbital Sciences (OSC) has a formal spacecraft named
PicoSat that is designed to ride as a secondary payload
in the very tip of the Pegasus/Taurus nose cone. It is
offered as a commercial spacecraft available to anyone with
the money to buy it.

Arizona State University is constructing a very small
spacecraft (<10 lbs) that rides as a secondary in the
Pegasus avionics bay, and then is ejected.

See their web at http://enws229.eas.asu.edu/asusat/asusat.shtml

These programs are in addition to the SQUIRT effort
at Stanford that Bob Argyle mentioned.

--
Darby G Cooper
dgcooper@iastate.edu

444. [Q] Frequency of Jupitor emissions

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: gherbst@msn.com
Message-ID: <NEWTNews.825458061.6693.Postmaster@GGHERB.MONSANTO.COM>
Source record: 22911
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna

Hi All:

Anyone know what frequence emissions from Jupitor may
be picked up on. Also, is there equipment that can
be bought or built cheaply to do such. As I recall I thought
I saw mentioned in a trade rag 18Mhz - 22Mhz...

Thanks,

Gary-

445. Keplerian Data?

Newsgroup: rec.radio.amateur.space
Date: 1996-02-27 00:00:00 UTC
From: gilmore@mi.net
Message-ID: <4gvkkf$i4b@scratchy.mi.net>
Source record: 22912

Where has the Keplerian Data go? I havn't seen it here for the last month. Where else can it be obtained, if not here?

Greg

446. Re: [Q] Frequency of Jupitor emissions

Newsgroup: rec.radio.amateur.space
Date: 1996-02-28 00:00:00 UTC
From: "David W. Knisely" <dk84538@ltec.net>
Message-ID: <4h0qd2$p2u@iac2.ltec.net>
Source record: 22913
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna

Hi there. The Decameter radio bursts do not stay on a particular frequency. They are quite broad banded and move in frequency as time goes on. 22 Mhz is a good place to look, but it also has some broadcast stations on when the ionosphere is refractive to those freqencies. It is best heard on a broad band AM shortwave receiver with a directional antenna (like a Yagi or a loop) pointed at Jupiter. The emissions are very irregular, and seem to be most often observed when the moon IO is in certain positions around the planet.

David Knisely, Prairie Astronomy Club, Inc.

447. Kenwood TS-790A mods

Newsgroup: rec.radio.amateur.space
Date: 1996-02-28 00:00:00 UTC
From: pmarkham@sun.lssu.edu
Message-ID: <4h0n7l$pgn@onramp.freeway.net>
Source record: 22914

I am looking for sources of mods for the Kenwood TS-790A. So far the only one found is a "cross band repeater" mod. TIA

Pete, wa4hei

448. NORAD Two-Line Orbital Element Set: Space Shuttle (96057.91709491)

Newsgroup: rec.radio.amateur.space
Date: 1996-02-28 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4h079s$pl8@blackbird.afit.af.mil>
Source record: 22915

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (334) 409-9280, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

Note: The Celestial BBS will cease operations around mid-March 1996. It will be replaced before then with a new WWW site for distributing the current selection of data and software. Data will continue to be available via anonymous ftp at archive.afit.af.mil.

```
STS 75
1 23801U 96012A 96057.91709491 .00002215 -70038-5 00000+0 0 207
2 23801 28.4689 256.5650 0005704 336.1229 70.5096 15.92464997 658
1996012B
1 23805U 96012B 96058.30426995 .00461488 00000-0 32764-2 0 167
2 23805 28.4690 253.9857 0068413 186.9609 172.9950 15.68395756 704
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

449. Updated Elements File for Home Planet v2.1

Newsgroup: rec.radio.amateur.space
Date: 1996-02-28 00:00:00 UTC
From: Adam Humphrey <Adam_C_Humprey@non-hp-om.cv.hp.com>
Message-ID: <313489CA.5A43@non-hp-om.cv.hp.com>
Source record: 22916

I am currently running Home Planet v2.1 on my PC. I would like to track the current space shuttle and Mir space station. In the software documentation it mentioned that most current elements file was posted weekly in this news group. I was unable to find it. Could someone please point me in the right direction or e-mail me this file? It would be appreciated.

Adam Humphrey
Adam_Humphrey@non-hp-om.cv.hp.com

450. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-29 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4h2u03$lsb@news.mcn.net>
Source record: 22817

In article <4gn3fn$p4l@news.ios.com>, macino@mail.fwi.com wrote:
>In <Pine.OSF.3.91.960222181226.19665B-100000@biggulp.callamer.com>, Clifford Buttschardt <cbuttsch@biggulp.callamer.com> writes:
>>That's most unusual David. I would has asked the very same thing from
>>the aspect of where are all the guys out here in California!! Cliff W6HDO
>>
>>On 22 Feb 1996, David Whitehurst wrote:
>>
>>> Can anyone please tell me why so few hams are into satellites (AMSAT)
>>> on the east coast compared to out in california,etc.???? Maybe I'm wrong, but
>>> hardly anyone in my area (tidewater area of southeast Virginia) is into it!
>>> -David. :(

There are many more satellites & modes to choice from than in days past. More operators are spread between many satellites, so it just seems like there are fewer operators. Just check out the satellites on field day and you will hear lots of hams.

73 de KB7ADL

451. Re: Why so little Amateur Space Activity???

Newsgroup: rec.radio.amateur.space
Date: 1996-02-29 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4h3bd8$12l@paperboy.ids.net>
Source record: 22818

In article <4gglhq$d4s@news.cais.com> David Whitehurst,
fwhitehurst@ezdial.com writes:
> Can anyone please tell me why so few hams are into satellites (AMSAT)
>on the east coast compared to out in california,etc.???? Maybe I'm
wrong, but
>hardly anyone in my area (tidewater area of southeast Virginia) is into
it!

Same as any other activity which is spread primarily by word-of-mouth. A very large percentage of AMSAT's members find out about amateur satellites through AMSAT booths at hamfests. Which requires a local AMSAT member who's interested enough to help out and run the booth, and try to elmer others in to amateur satellites.

The best way for you to find others in your area is to get them interested! If you want to run an AMSAT booth at an upcoming hamfest contact Martha at HQ and get the info from her on what to do.

Statistcially ham radio is much more popular in certain areas, and less popular in others - it isn't even. I believe that there are bunches of hams in Ohio and Michigan.

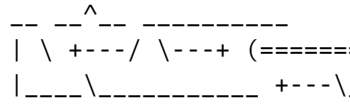
Lower latitude hams have an advantage for the shuttle on low inclination missions, but most of the hams who contact the shuttle are not otherwise active on the satellites.

For obvious reasons surburan areas where there aren't many deeds which restrict outdoor antennas have more hams and more AMSAT members than densly populated city apartments and condos.

Texas is the area where AMSAT has the most volunteer area coordinators. In most other areas there's a shortage, and always a need for more AMSAT members who want to volunteer to help the cause.

Obviously there are certain states, primarily low population areas, where there are very few active satellite folks (as anybody who has 4 states to go to get a WAS can attest)

Not sure why specifically your area doesn't have many AMSAT members, or for that reason how many hams are in your area. But in the Northen Virginia, DC metro area there are *many* active AMSAT members, including many of the key people involved in Phase 3-D and SAREX.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET


```
>____)| | \__ \ \______//___
>/ |________| \ [ _____\
>|____________________\ \_______/
```
Roger, go at throttle up CHR$(32) the final frontier

452. JV FAX question

Newsgroup: rec.radio.amateur.space
Date: 1996-02-29 00:00:00 UTC
From: flegler@pilot.msu.edu
Message-ID: <4h4urr$1vjm@msunews.cl.msu.edu>
Source record: 22819

I just read the article on the JVFAX APT adapter in the Feb. issue of QST. I'm completely new to this field. What bands are these transmissions on, VHF, UHF, or HF? Thanks and 73 Stan K8RPA, flegler@pilot.msu.edu

453. Keps for tethered satellite on shuttle? anyone?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: mack@ncifcrf.gov
Message-ID: <DnLy64.MD6@ncifcrf.gov>
Source record: 22820

Saw the following posting about the 20km long tethered satellite
link to the Shuttle, which should be visible from the ground. I thought
if I had the keps, I could predict when it would go overhead. Anyone
know?

Joe Mack
NA3T
mack@ncifcrf.gov

>Sender: rxparra@am.tsd.itg.ti.com
>Date: Fri, 01 Mar 1996 12:14:00 -0600
>From: Rene Parra <rxparra@am.tsd.itg.ti.com>
>Organization: Texas Instruments
>Mime-Version: 1.0
>To: Gerardo Eric Parra <geparra@leland.stanford.edu>,
> Ivan Omar Parra <ioparra@leland.stanford.edu>,
> "Mario Z. Parra" <ao648@rgfn.epcc.edu>
>Cc: btb6@MIT.EDU, btb-alum@MIT.EDU, 103750.2343@compuserve.com,
> "Richard's Mailing List" <payton-base@am.tsd.itg.ti.com>,
> bombers@MIT.EDU, gcandela@u.Arizona.EDU, bb-eng@am.tsd.itg.ti.com
>Subject: [Fwd: Tethered Satellite Will Be Visible]
>
>This is something worth getting up for early in the morning!!
>
>--
>=-=
>_ _/ _ _/ _ _/ ,- / Texas Instruments
> / / __/ / __/ Telecom Systems-MS 2201
>_/ ____/ ____/ _/ 12501 Research Blvd.
>Texas Instruments Intelligent Peripheral Austin, Texas 78759
>=-=
>Rene X. Parra |"Live each season as it passes;
>AIN-IP Platform Development Team | breathe the air, drink the drink,
>Work: (512)250-4365 | taste the fruit, and resign
>Fax: (512)250-7104 | yourself to the influences
>email: rxparra@tsd.itg.ti.com | of each." - Henry David Thoreau
>=-=
>
>Content-Type: message/rfc822
>Content-Transfer-Encoding: 7bit
>Content-Disposition: inline
>
>Return-Path: <GHERNAND@ZR1.jsc.nasa.gov>
>Received: from am.tsd.itg.ti.com by jennet.tsd.itg.ti.com (5.x/SMI-SVR4)
> id AA03016; Fri, 1 Mar 1996 09:23:17 -0600

>Received: from robin.itg.ti.com (robin.itg.ti.com [128.247.31.238]) by
>am.tsd.itg.ti.com (8.6.5/8.6.5) with ESMTP id JAA04884 for
><rxparra@tsd.itg.ti.com>; Fri, 1 Mar 1996 09:25:05 -0600
>Received: from dragon.ti.com (ti.com [192.94.94.61]) by robin.itg.ti.com
>(8.7.3/8.6.11) with ESMTP id JAA04933 for <rxparra@tsd.itg.ti.com>; Fri, 1
>Mar 1996 09:23:22 -0600 (CST)
>Received: from joy.jsc.nasa.gov (joy.jsc.nasa.gov [139.169.137.12]) by
>dragon.ti.com (8.6.13/) with SMTP id IAA13858 for
><rxparra@tsd.itg.ti.com>; Fri, 1 Mar 1996 08:57:20 -0600
>Received: from jsc-ems-hub03.jsc.nasa.gov by joy.jsc.nasa.gov (4.1/25-eef)
> id AA25812; Fri, 1 Mar 96 09:08:37 CST
>Received: from Microsoft Mail (PU Serial #1437)
> by jsc-ems-hub03.jsc.nasa.gov (PostalUnion/SMTP(tm) v2.1.8c for Windows
>NT(tm))
> id AA-1996Mar01.085347.1437.240988; Fri, 01 Mar 1996 09:01:16 -0600
>From: GHERNAND@ZR1.jsc.nasa.gov (Hernandez Gus CAPT SMC/TELH)
>To: cag235a@prodigy.com ('Bianchin, Brian'),
> coclin.dean@mail.ndhm.gtegsc.com ('Coclin, Dean'),
> falkenth@leland.Stanford.EDU (Dietrich Lutz Falkenthal),
> Felicia_M._McCarthy@ittsheraton.com (Felicia M. McCarthy),
> geparra@leland.stanford.edu ('Parra, Eric'),
> HERNANDEZH%A1%WRJS01@MR (Hector R. Hernandez),
> hernandezh@js-vax.robins.af.mil ('Hernandez, Hector'),
> kerbermw%dfem%usafa@dfmail.usafa.af.mil ('Kerber,Marty(USAFA)'),
> lazaro_gonzalez@crd.lotus.com (Gonzalez, Lazaro),
> mmgardne@e4e.oac.uci.edu (Gardner, Mary),
> mmgardne@uci.edu (Mary GARDNER),
> MRLETBT@aol.com ('Tambeau, Elaine & Bob'),
> passavant.nancy@mail.ndhm.gtegsc.com (Nancy Passavant),
> rxparra@tsd.itg.ti.com (Parra, Rene)
>Message-Id: <1996Mar01.085347.1437.240988@jsc-ems-hub03.jsc.nasa.gov>
>X-Mailer: Microsoft Mail via PostalUnion/SMTP for Windows NT
>Mime-Version: 1.0
>Date: Fri, 01 Mar 1996 09:01:16 -0600
>Subject: Tethered Satellite Will Be Visible
>Content-Type: text/plain; charset="US-ASCII"
>Content-Length: 4229
>X-Mozilla-Status: 0001
>
>
>Hi Y'all here's an opportunity to see something really amazing.
>
>Gus,
>
> CAPE CANAVERAL, Fla. (AP) -- The satellite that broke free from space
>shuttle Columbia will be visible next week to people looking skyward in
>cities across
>the country.
> The satellite and its dangling 12-mile cord will be visible to the naked
>eye just before sunrise as it travels through the sky, from the West Coast

>to the East.
> "It should be an absolutely awesome sight because the 20 kilometers of
>tether, assuming that it's all strung out, will be definitely visible,"
>astronaut Jeffrey Hoffman said Tuesday from space shuttle Columbia.
> "It will be the only time for most people that they'll ever be able to
>see something in Earth orbit that's other than a point of light. They'll
>actually see a line moving through the sky," he said.
> Here is a list, provided by NASA, of some major cities over which the
>satellite will fly. The satellite is traveling in an elliptical orbit,
>between 200 and 250 miles above Earth.
> Times shown are local. The duration of each sighting will be from one to
>three minutes.
> ------
> ABILENE, Texas
> March 5, 6:28 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.; March 9,
>6:01a.m.
> ALBUQUERQUE, N.M.
> March 6, 5:47 a.m.; March 8, 4:47 a.m.; March 9, 5:01 a.m.
> ATLANTA
> March 6, 6:15 a.m.; March 8, 5:16 a.m.; March 9, 5:30 a.m.
> AUSTIN, Texas
> March 4, 6:08 a.m.; March 6, 5:14 a.m.; March 7, 5:31 a.m.; March 8, 5:47
>
>
>a.m.; March 9, 6:01 a.m.
> BATON ROUGE, La.
> March 6, 5:14 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.
> BIRMINGHAM, Ala.
> March 6, 5:15 a.m.; March 7, 5:32 a.m.; March 9, 4:30 a.m.
> BROWNSVILLE, Texas
> March 4, 6:06 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.; March 9, 6:01
>
>
>a.m.
> CHARLESTON, S.C.
> March 5, 5:57 a.m.; March 7, 5 a.m.; March 8, 5:16 a.m.; March 9, 5:30
>a.m.
> CHARLOTTE, N.C.
> March 6, 6:17 a.m.; March 8, 5:16 a.m.; March 9, 5:30 a.m.
> DALLAS
> March 7, 5:31 a.m.; March 8, 5:47 a.m.; March 9, 6:01 a.m.
> EL PASO, Texas
> March 5, 5:28 a.m.; March 6, 5:46 a.m.; March 8, 4:47 a.m.; March 9, 5:01
>
>
>a.m.
> FRESNO, Calif.
> March 8, 5:19 a.m.; March 9, 5:33 a.m.
> HONOLULU
> March 2, 5:56 a.m.; March 3, 6:19 a.m.

>HOUSTON
> March 4, 6:08 a.m.; March 6, 5:14 a.m.; March 7, 5:31 a.m., March 8, 5:47
>
>
>a.m., March 9, 6:01 a.m.
> HUNTSVILLE, Ala.
> March 6, 5:16 a.m.; March 7, 5:33 a.m.; March 9, 4:30 a.m.
> JACKSONVILLE, Fla.
> March 5, 5:56 a.m.; March 6, 6:15 a.m.; March 8, 5:16 a.m.; March 9, 5:30
>
>
>a.m.
> LAS VEGAS
> March 7, 5:04 a.m.; March 8, 5:19 a.m.
> LOS ANGELES
> March 7, 5:02 a.m.; March 8, 5:18 a.m.; March 9, 5:32 a.m.
> LUBBOCK, Texas
> March 5, 6:29 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.; March 9, 6:01
>
>
>a.m.
> MEMPHIS, Tenn.
> March 7, 5:32 a.m.; March 8, 5:48 a.m.
> MIAMI
> March 4, 5:34 a.m.; March 5, 5:55 a.m.; March 8, 5:16 a.m.; March 9, 5:30
>
>
>a.m.
> NATCHEZ, Miss.
> March 6, 5:14 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.
> NASHVILLE, Tenn.
> March 7, 5:33 a.m.; March 9, 4:30 a.m.
> NEW ORLEANS
> March 6, 5:14 a.m.; March 7, 5:31 a.m.; March 8, 5:48 a.m.
> NORFOLK, Va.
> March 8, 5:17 a.m.; March 9, 5:31 a.m.
> OKLAHOMA CITY
> March 8, 5:47 a.m.; March 9, 6:01 a.m.
> ORLANDO, Fla.
> March 5, 5:55 a.m.; March 6, 6:15 a.m.; March 8, 5:16 a.m.; March 9, 5:30
>
>
>a.m.
> PHOENIX, Ariz.
> March 6, 5:46 a.m.; March 7, 6:03 a.m.; March 8, 6:19 a.m.
> PORT ARANSAS, Texas
> March 4, 6:07 a.m.; March 7, 5:31 a.m.; March 8, 5:47 a.m.; March 9, 6:01
>
>
>a.m.

> SAN ANTONIO, Texas
> March 4, 6:07 a.m.; March 5, 6:27 a.m.; March 6, 5:14 a.m.; March 7, 5:31
>
>
>a.m.; March 8, 5:47 a.m.; March 9, 6:01 a.m.
> SAN BERNARDINO, Calif.
> March 7, 5:02 a.m.; March 8, 5:18 a.m.; March 9, 5:32 a.m.
> SAN DIEGO
> March 6, 4:46 a.m.; March 7, 5:02 a.m.; March 8, 5:18 a.m.; March 9, 5:32
>
>
>a.m.
> SAN FRANCISCO
> March 9, 5:33 a.m.
> TAMPA, Fla.
> March 5, 5:55 a.m.; March 6, 6:14 a.m.; March 9, 5:30 a.m.
> TUCSON, Ariz.
> March 6, 5:45 a.m.; March 7, 6:03 a.m.
> WEST PALM BEACH, Fla.
> March 4, 5:35 a.m.; March 5, 5:55 a.m.; March 8, 5:16 a.m.; March 9, 5:30
>
>
>a.m.
> WINSTON-SALEM, N.C.
> March 8, 5:16 a.m.; March 9, 5:30 a.m.
> YUMA, Ariz.
> March 6, 5:45 a.m.; March 7, 6:02 a.m.; March 8, 6:18 a.m.
>

454. NORAD Two-Line Orbital Element Set: Space Shuttle (96060.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4h66b5$31q@blackbird.afit.af.mil>
Source record: 22821

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

STS 75
1 23801U 96012A 96060.25042824 .00004511 -70460-5 60054-5 0 287
2 23801 28.4457 239.0860 0006823 7.5026 129.3250 15.93537261 1020
TSS
1 23805U 96012B 96060.02137397 .00458766 00000-0 31009-2 0 238
2 23805 28.4708 241.5623 0064802 207.7363 151.9791 15.69838398 979
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

455. Re: propogation question

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar1.133959.21431@ke4zv.atl.ga.us>
Source record: 22822

In article <4gsuvp$i5a@cloner3.netcom.com> MandD@ix.netcom.com writes:
>I am not in ham radio but thought maybe someone out there could answer
>a question for me.
>I am an RF tech working in satellite communications.
>Can someone give me a good definition of PROPOGATION...(propogation
>delay, RF propogation or whatever)

Well, I can't help you with a definition of propogation, but I can help with a definition of propagation. Radio propagation is the mechanism(s) by which radio signals get from point A to point B.

These mechanisms are limited by the speed of light in the medium through which they operate, hence there is propagation delay between point A and point B proportional to the distance of the path taken between the points divided by the speed of light for the medium.

There are different propagation mechanisms. The dominant one in any given situation depends on the frequency of operation and upon the medium(s) through which the signal must pass. The most basic mechanism is the direct ray path, called the line of sight path. In this case, the signal travels in a straight line between point A and point B. Signal strength decreases in proportion to the square of the distance between point A and point B. This is the most common mechanism at VHF and above, and is typical of satellite communications paths.

Other mechanisms include refraction, where the radio signal path is bent by variations in medium characteristics (ionospheric "skip" is an example of this), reflection where the signal is "bounced" coherently off a conductive surface (parabolic dishes reflect radio signals to a focal point, and reflections can occur from other objects, such as buildings), and scattter where the signal is incoherently dispersed by the medium. Reflection and scatter are related, with the difference being the size of the reflective surfaces in proportion to a wavelength. Surfaces large with respect to a wavelength yield coherent reflection while surfaces small with respect to a wavelength yield incoherent scattering of the signal.

Path mediums may also present signal absorption characteristics, where part of the signal is absorbed and transformed into heat. The ionospheric D layer is typical of this behavior at lower HF.

I'd point you to James Clerk Maxwell's equations for the basic behavior of EM radiation through space. All the various propagation mechanisms can be derived from these fundamental equations.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

456. Re: Radio Telescope info?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar1.135647.21627@ke4zv.atl.ga.us>
Source record: 22823

In article <4gt9dh$89d@usenet.srv.cis.pitt.edu> davep+@pitt.edu writes:
>Hey folks!
>I don't know if this is the right newsgroup, but I saw a guy on TV
>that had an amature radio telescope setup linked into a few PC's
>looking for intelligent signals, is there any info out there on how to
>set up a rig like this?

Point your webbrowser at seti1.setileague.org:80/homepg.html.

Gary

--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

457. Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: gherbst@msn.com
Message-ID: <NEWTNews.825700724.8612.Postmaster@GGHERB.MONSANTO.COM>
Source record: 22824
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

Gerhardt G. Herbst II, is the patent holder for "Cold Spot Module".
This product is for sale to an individual or manufacturer.

The "Cold Spot Module" is used to effectively reduce the operating
temperature of integrated circuits such as computer CPUs to maintain
reliability under extreme operating conditions. This module is protected
under a U.S. Utility Patent issued in October of 1995. A Utility patent
provides the strongest protection under U.S. law.

An independent North American Market Study was done on the product and the
potential market has been identified.

The product has not yet been introduced to the general public but is referenced
in the U.S. Patent catalog which is posted periodically. For an on-line reference
refer to:

http://www.uspto.gov

Search on Patent Number: 5457342

The title abstract is: Integrated circuit cooling apparatus

Note: A search on just the patent number will bring up the details.

Exclusive rights can be purchased reasonably with negotiable license term.

For further information, contact Gerhardt G. Herbst II.

Gerhardt G. Herbst II
133 Wynstay
Valley Park, MO 63088
Phone: (314) 861-0426
E-mail: gherbst@msn.com

458. Questions About The Argos Satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: dmart@cnj.digex.net
Message-ID: <4h7k0v$lmj@cnj.digex.net>
Source record: 22825

I am looking for information about a satellite called Argos. I saw in the February Issue of Popular Communications in the Washington Pulse article mention of a satellite called Argos. The frequency of 401.650Mhz is used. Any information about this one would be appreciated. What is its orbit? What modulation is used? For what purpose is the satellite designed? If any folks in the group can shed light on this one it would be appreciated.

Dave Marthouse
Internet: dmart@cnj.digex.net

459. Re: Space Shuttle STS75

Newsgroup: rec.radio.amateur.space
Date: 1996-03-01 00:00:00 UTC
From: william.r.jones.1@gsfc.nasa.gov
Message-ID: <4h7k8j$lsm@post.gsfc.nasa.gov>
Source record: 22826

In article <3132A9A1.1B64@worldnet.fr>, DUPERRAY Francoise <d0003689@worldnet.fr> says:
>
>Hello all,
>
>Does somebody heard the space shuttle transmission on HF bands (20 or 40
>mtrs) in Europe?
>Could somebody provide me the frequencies of US clubs which re-transmit
>earth-Space Shuttle conversations ?
>Thanks for your help.
>73.
>Olivier, F5RDS, Paris.

The Goddard Amateur Radio Club WA3NAN transmits the Shuttle
Air-to-Ground audio on 3860, 7185, 14295 and 21395 KHz SSB mode.
For listeners in the Washington, D.C./Baltimore MD area, Shuttle
audio is transmitted on 147.45 MHz FM.

Usually the transmission schedule coincides with the astronauts
wake periods. That is, the station is off the air during the
sleep periods. Also, being a volunteer organization, WA3NAN
operations are subject to the availability of operators.

Signal reports are encouraged. Send reports to:

WA3NAN
P.O. Box 86
Greenbelt, Md USA 20768-0086

More information, including the latest Keplerian orbital elements,
can be found on the GARC World Wide Web site at URL:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

follow the links to the shuttle_FAQ page.

Happy listening!

460. OSCARs and CORONA

Newsgroup: rec.radio.amateur.space
Date: 1996-03-02 00:00:00 UTC
From: thomsona@netcom.com
Message-ID: <thomsonaDnnp5H.J1v@netcom.com>
Source record: 22827
Cross-posted to: rec.radio.amateur.space,alt.politics.org.cia,sci.space.policy

Probably this is already widely known, but it's new to me...

The American Radio Relay League's "The Satellite Experimenter's Handbook" by Martin Davidoff (ISBN 0-87259-318-5) has a paper by William I. Orr in its first chapter on the history of the OSCAR amateur radio satellites. According to it, the first two OSCARs were launched as subsatellites on Discoverer 36 (12 December 1961) and on an unidentified spacecraft on 2 June 1962. Oscar I rode to orbit on a Thor-Able rocket and so did (according to the TRW Space Log, Vol. 27) Oscar II.

Cutting to the present, we find in Jonathan McDowell's "US Reconnaissance Satellite Programs, Part I" (Quest (ISSN 1065-7738)), Vol.4, No.2, Summer 1995) that Discoverer 36 was the cover for the KH-3 CORONA spysat Mission 9029 and that the KH-4 MURAL/CORONA Mission 9036 was launched on a Thor on 2 June 1962.

The ARRL book also reproduces a letter dated 3 November 1961 from Joseph V. Charyk, at the time dual-hatted as Under Secretary of the Air Force and the first D/NRO, to John Huntoon, ARRL General Manager:

"I am pleased to advise that the Air Force will undertake to place in orbit an OSCAR package in conjunction with a military space vehicle launching. Our Space Systems Division has been instructed to accomplish the OSCAR package launching at the earliest feasible date on a non-interference basis to the performance or mission of the launch carrier vehicle.... Please be assured of the complete cooperation by the Air Force toward successful accomplishment of this amateur experiment..."

Kinda neat, I think.

Since the CORONA vehicles were CIA satellites, it would be interesting to know how the Agency responded to the OSCAR proposals. Also, since subsequent spysats (KH-9) apparently carried ELINT subsatellites, there is the possibility (pretty speculative at this point) that the OSCARs were seen as a quick-and-dirty way of testing out the subsatellite idea.

461. Re: Fate of TSS?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-02 00:00:00 UTC
From: romanr@bga.com
Message-ID: <4h8jup$rjc@news2.realtime.net>
Source record: 22828
Cross-posted to: sci.space.shuttle,sci.space.tech,rec.radio.amateur.space

Where can I find Keps for the TSS?
Thanks in advance
roman
romanr@bga.com

462. TSS Rev 124 Orbital Data (fwd)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-02 00:00:00 UTC
From: Conrad.Weeseman@inter.NL.NET
Message-ID: <Pine.SUN.3.91.960302153344.10767A-100000@hatert.nijmegen.inter.nl.net>
Source record: 22829

Below is the rev 124 Earth-Fixed Greenwich (EFG) state vector for
TSS. This vector data comes from NASA GSFC and was provided
courtesy of the DOD C-Band Radar Network.

Vector format = 117
Satellite Name: TSS
Catalog Number: 23805 96012B
Epoch Date/Time: 96061.75326736111
03/01/1996 18:04:42.299 UTC
EFG E: -6810085 ft
F: -18273599 ft
G: 10560561 ft
Edot: 22204.93 ft/s
Fdot: -8354.70 ft/s
Gdot: -334.23 ft/s
ndot/2 (drag): 0.00412097673 rev/day^2
nddt/6: 7.21256E-07 rev/day^3
Bstar: 2.78168E-03 1/Earth Radii
Elset #: 15
Rev @ Epoch: 124.25503268492

Launch was 22-FEB-96 / 20:17:59.968 UTC

The following Keplerian elements were computed by VEC2TLE from this
vector using a 35.7 drag multiplier:

TSS
1 23805U 96012B 96061.75326736 .00412098 72126-6 27817-2 0 151
2 23805 28.4634 228.9813 0060683 233.4700 218.3414 15.71219223 1245

Satellite: TSS
Catalog number: 23805
Epoch time: 96061.75326736
Element set: 15
Inclination: 28.4634 deg
RA of node: 228.9813 deg
Eccentricity: 0.0060683
Arg of perigee: 233.4700 deg
Mean anomaly: 218.3414 deg
Mean motion: 15.71219223 rev/day
Decay rate: 4.12098e-03 rev/day^2
Epoch rev: 124
Checksum: 280

463. RS-15 ACTIVITY (or lack thereof)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-02 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <4ha7a2$ob3@cloner2.ix.netcom.com>
Source record: 22830

Hello all: I have been into the 1200 baud satellites (LO-19 mainly)
but still like to get on the analog birds as well (I'm confined to LEO's
because of my omnidirectional antennas - Eggbeaters). I have always been
a cw operator.
Lately, I've been trying RS-15, and have seen some, but not much
activity (it used to sound like Sweepstakes weekend every pass).
Additionally, the signals seem to be down in strength. Is the satellite
having some problems? Maybe my 10 meter receiver is dead (and I'm
screwing everyone up with my uplink?)?
Anyone have any comments?

Thanks and 73's de Bernie, KF0QS

464. Re: Fate of TSS?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-03 00:00:00 UTC
From: wallnerw@cts.com
Message-ID: <4hc9k1$p4l@news3.cts.com>
Source record: 22831
Cross-posted to: sci.space.shuttle,sci.space.tech,rec.radio.amateur.space

Roman Robles (romanr@bga.com) wrote:
: Where can I find Keps for the TSS?
: Thanks in advance
: roman
: romanr@bga.com

State Vectors and Keps for STS and TSS are available at shuttle.nasa.gov and
are included in tle.766 at www.mindspring.com/~tkelso/

Good luck.
Bill

465. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-04 00:00:00 UTC
From: paul@laughton.com
Message-ID: <4hdlvj$kvv@sun.sirius.com>
Source record: 22832
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

gherbst@msn.com wrote:

>Gerhardt G. Herbst II, is the patent holder for "Cold Spot Module".
>This product is for sale to an individual or manufacturer.

>The "Cold Spot Module" is used to effectively reduce the operating
>temperature of integrated circuits such as computer CPUs to maintain
>reliability under extreme operating conditions. This module is protected
>under a U.S. Utility Patent issued in October of 1995. A Utility patent
>provides the strongest protection under U.S. law.

>An independent North American Market Study was done on the product and the
>potential market has been identified.

>The product has not yet been introduced to the general public but is referenced
>in the U.S. Patent catalog which is posted periodically. For an on-line reference
>refer to:

>http://www.uspto.gov

>Search on Patent Number: 5457342

>The title abstract is: Integrated circuit cooling apparatus

>Note: A search on just the patent number will bring up the details.

>Exclusive rights can be purchased reasonably with negotiable license term.

>For further information, contact Gerhardt G. Herbst II.

> Gerhardt G. Herbst II
> 133 Wynstay
> Valley Park, MO 63088
> Phone: (314) 861-0426
> E-mail: gherbst@msn.com

I wonder how Mr Herbst slipped this one past the prior art
investigation? This technology has been around since the early 70's -
at least. For example, IBM and Amdahl main frames made extensive use
of it.

466. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-04 00:00:00 UTC
From: gherbst@msn.com
Message-ID: <NEWTNews.825958328.26555.Postmaster@GGHERB.MONSANTO.COM>
Source record: 22833
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

Paul,

That's a very blatent claim you make. This patent went through with only one need for clarification from the PTO. Obviously know one else sought such a patent which is evidence by the PTO issuing me patent # 5457342.

Those companies you mention have devices that are similar with respect to cooling only if you care to follow the patents mentioned on my abstract. However, NONE have developed the device I have NOR do they have a patent on such a device. As such, I am the sole owner to pursue development of this product or companies under infringement.

Gaerhardt G. Herbst

467. * SpaceNews 04-Mar-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-03-04 00:00:00 UTC
From: magliaco@email.njin.net
Message-ID: <4hfhtc$irs@pilot.njin.net>
Source record: 22834
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@email.njin.net (John Magliacane)
Subject: * SpaceNews 04-Mar-96 *
Date: 4 Mar 1996 14:56:28 -0500
Organization: Rutgers University
Message-ID: <4hfhtc$irs@pilot.njin.net>

SB NEWS @ AMSAT $SPC0304
* SpaceNews 04-Mar-96 *

BID: $SPC0304

=========
SpaceNews
=========

MONDAY MARCH 4, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* CELESTIAL BBS SHUTDOWN *
==========================
After over 10 years of near continuous operation, the Celestial BBS operated
by Dr. T.S. Kelso will be shut down sometime around mid-March. Dr. Kelso
will be moving again and since there has been very little activity lately
on the system, there is little point in establishing a new line for the BBS
at the new residence. Of course, the orbital elements will continue to be
provided via the Internet and Dr. Kelso will establish a WWW site to
distribute the software at this location before the move. Dr. Kelso would
like to take this opportunity to thank each and every supporter of his
Celestial BBS these many years and looks forward to seeing everyone on the
new Internet site in the near future!

[Info via Dr. T.S. Kelso, relayed by Donald Roland]

* STS-76 LAUNCH VISIBILITY *
============================
The launch of Atlantis on the morning of 21-Mar-96 will provide a rare
opportunity for shuttle watchers in the eastern United States. Space
Shuttle Atlantis will launch at night into a high inclination orbit for
its nine day Mir rendezvous mission. Viewers from Florida to Boston
might be able to see the Shuttle as it streaks up the coast.

Usually, the Space Shuttle can only be seen by reflected sunlight when
it is already in orbit. However, on this particular mission, viewers can
watch the Shuttle *during* the launch when its main engines will be bright

enough to be seen from hundreds of miles away! The Shuttle will be visible for only a few minutes after launch and only while the engines are running. MECO (main engine cut off) usually occurs at about T+8 minutes into the flight. Shortly after MECO, viewers in the Northeastern United States and Canada may also see a flash or two from the separation of the external tank.

If you want to try to watch the Shuttle launch, try to find a location with a clear unobstructed view of the horizon because Atlantis will not get very high in the sky. It will rise from the south-east and travel north. Look roughly south-east a few mintes after launch for a bright, fast moving streak low in the sky. Binoculars are not needed.

The launch is scheduled for 3:34 am EST on March 21, 1996. Don't worry about launch delays keeping you up all night. Since this is a MIR rendezous mission, the launch window will be very short. Atlantis must launch within a few mintues of 3:34 am or NASA will scrub the launch attempt.

Additional STS-76 mission information can be obtained from NASA on the World Wide Web at http://spacelink.msfc.nasa.gov.

If you live in the New Jersey area and would like to organize a gathering to watch this event, please contact the author at dquagliana@aol.com.

[Info via Douglas Quagliana, KA2UPW]

* LINUX SOFTWARE *
==========
Discussions heard between Space Shuttle "Columbia" and mission control on NASA TV last week indicate that computers running under the Linux operating system are being used on STS-75. Linux is powerful 32-bit multiuser, multitasking operating system similar to Unix in many ways except cost and licensing.

Linux can run on most 386, 486, and Pentium-based personal computers in addition to Amiga and Atari computers. It is currently being ported to the ARM, MIPS, PowerPC, and PowerMac computers, and a 64-bit version is available for the DEC Alpha.

Linux was designed a few short years ago by Linus Torvalds, a graduate student at the University of Helsinki in Finland who took his first courses in `C' and Unix in the Fall of 1990. By October 1991, Linux version 0.02 was announced and this attracted the attention of thousands of programmers and software developers on the Internet. International collaboration in the development of Linux has resulted in a very powerful operating system whose capabilities are growing faster than those of commercial operating systems.

Part of the enthusiasm behind Linux development is rooted in the fact that like Unix, the Linux operating system is hardware independent. As a result, it is possible to author software for Linux that will operate equally well under many hardware platforms, whether they be a powerful mainframe or a small laptop. Its growth and development are reminiscent of the telecommunication innovations brought to the world through the efforts

of Amateur Radio Operators over the years. Linux also supports a wide variety of networking protocols, including AX.25 (Amateur Packet Radio) at the kernel level, a feature not many other operating systems can claim.

There already exists quite an extensive list of Amateur Radio and Amateur Satellite related software applications for the Linux operating system. That list will grow later this week with the release of the following programs written by KD2BD:

predict: A multiuser satellite orbital prediction program that also provides optical visibility information

dove : A simple DOVE-OSCAR-17 telemetry decoding program

uo11 : A simple UoSAT-OSCAR-11 ASCII telemetry decoding program

kepgen : A program that allows the creation of Keplerian data files in the NASA 2-line format from data entered through the keyboard

These programs are free for the asking and must be used for non-commercial purposes only. They were written in `C' and compiled using the highest level of optimization possible from GCC compiler version 2.5.8. The resulting executable files are in an a.out binary format. These programs will be made available via anonymous FTP at pilot.njin.net in the /pub/SpaceNews/linux subdirectory or uploaded to the AMSAT-OSCAR-16 or LUSAT-OSCAR-19 satellites by request. All programs include on-line manual pages with the exception of "predict" which contains a built-in help option.

Further information on the Linux operating system may be obtained through the World Wide Web at: http://sunsite.unc.edu/mdw/linux.html and many other sites around the world. A link to a HAM-HOWTO page describing other free Amateur Radio software available for Linux may also be accessed through this site.

Incidentially, the Linux operating system has been used exclusively for the creation and circulation of SpaceNews since the release of "Windows 95" in August of 1995. Perhaps SpaceNews can also be referred to as the first Amateur newsletter edited and circulated entirely under Linux. :-)

* THANKS! *
==========
Thanks to all who sent messages of appreciation to SpaceNews, especially:

N1ESK KE4PNM Rick Denis

And MY thanks to all those who circulate SpaceNews around the world and translate SpaceNews into languages other than English every week. YOUR work is very much appreciated!

* FEEDBACK/INPUT WELCOMED *
==========
Comments and input for SpaceNews should be directed to the editor (John,

KD2BD) via any of the paths listed below:

FAX : 1-908-747-7107
FTP : pilot.njin.net cd to /pub/SpaceNews
WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@pilot.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

468. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-04 00:00:00 UTC
From: jimf@zoinks.corp.sgi.com
Message-ID: <4hfqtn$6kb@murrow.corp.sgi.com>
Source record: 22835
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

In article <NEWTNews.825958328.26555.Postmaster@GGHERB.MONSANTO.COM>,
gherbst@msn.com writes:
|> Paul,
|>
|> That's a very blatent claim you make. This patent went through with only
|> one need for clarification from the PTO. Obviously know one else sought
|> such a patent which is evidence by the PTO issuing me patent # 5457342.
|>
|> Those companies you mention have devices that are similar with respect to
|> cooling only if you care to follow the patents mentioned on my abstract.
|> However, NONE have developed the device I have NOR do they have a patent
|> on such a device. As such, I am the sole owner to pursue development of
|> this product or companies under infringement.
|>
|> Gaerhardt G. Herbst
|>

What I am wondering is what this has anything to do with amateur radio antennas, homebrew, space, etc.? The point is that this, and the preceding posts were made to the amateur radio news groups.

Cooling of microprocessors, and your grandstanding of being awarded a patent are of no interest to me or in any way pertinent to my interest in amateur radio. And that is why the newsgroup(s) have those titles.

If you are looking for invetors, get a clue and do it somewhere else.

If you are simply so proud of yourself for being awarded a patent for what appears to be anothers work, then HIP HIP HOORAY for you! Now grow up and go away.

Jim

469. Re: A0-27 INFo

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <DnrrFt.Cqu@icon.rose.hp.com>
Source record: 22836

M.F.P. (mfp@aros.net) wrote:
: What is the status of the FM transponder on A0-27? What's the schedule when
: the FM transponder is on???
:
: Any info will be appreciated...
: KB7YJJ
:

The mid-day pass on 24-feb was very strong (or was that on the 25th?) Anyway,
I was able to work a station in each of Alaska, Utah, Arizona, and Hawaii
on that one pass. That was definitely one of my better days on the birds!

I don't remember the exact description of when the transponder is operational,
so I won't try... I remember it was a little complicated.

Greg KO6TH

470. NORAD Two-Line Orbital Element Set: Space Shuttle (96064.36683141)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4hgekn$l6g@blackbird.afit.af.mil>
Source record: 22837

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

```
STS 75
1 23801U 96012A 96064.36683141 .00002236 -70702-5 00000+0 0 499
2 23801 28.4456 208.1357 0007896 44.1589 8.9297 15.95356370 1686
TSS
1 23805U 96012B 96064.21249966 .00481012 00000-0 28807-2 0 387
2 23805 28.4674 211.1122 0057390 261.9679 97.4347 15.73120637 1634
```

--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

471. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: paul@laughton.com
Message-ID: <4hgr8o$p96@sun.sirius.com>
Source record: 22838
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

gherbst@msn.com wrote:

>Paul,

>That's a very blatent claim you make. This patent went through with only
>one need for clarification from the PTO. Obviously know one else sought
>such a patent which is evidence by the PTO issuing me patent # 5457342.

>Those companies you mention have devices that are similar with respect to
>cooling only if you care to follow the patents mentioned on my abstract.
>However, NONE have developed the device I have NOR do they have a patent
>on such a device. As such, I am the sole owner to pursue development of
>this product or companies under infringement.

>Gaerhardt G. Herbst

Having too much time on my hands, I went and looked at your patent.
The first part of the patent describes the exact CCD cooling method
used for years by Santa Barbara Instruments (and others) for cooling
CCDs. Your novel claim seems to be an IC cooler that is retrofitted to
an existing, uncooled IC.

<Yawn>

472. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: landisj@nad.com
Message-ID: <1996Mar5.113206.460@nad.com>
Source record: 22839
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,sci.astro.amateur

In article <4hgr8o$p96@sun.sirius.com>, paul@laughton.com (Paul Laughton) writes:
> gherbst@msn.com wrote:
>
>>Paul,
>
>>That's a very blatent claim you make. This patent went through with only
>>one need for clarification from the PTO. Obviously know one else sought
>>such a patent which is evidence by the PTO issuing me patent # 5457342.
>
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>>However, NONE have developed the device I have NOR do they have a patent
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>
>>Gaerhardt G. Herbst
>
> Having too much time on my hands, I went and looked at your patent.
> The first part of the patent describes the exact CCD cooling method
> used for years by Santa Barbara Instruments (and others) for cooling
> CCDs. Your novel claim seems to be an IC cooler that is retrofitted to
> an existing, uncooled IC.
>
> <Yawn>
Are these the same Peltier(sp?) devices that you can pick up surplus from
places like Marlin P. Jones and Edmund Scientific for like $12.95?
Just curious,
Joe - AA3GN
--
Joe Landis - Systems and Network Manager - North American Drager - Telford, PA
landisj@nad.com ..speaking only for myself, of course..

473. ARLK015 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk015.1996@arrl.org>
Source record: 22840
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK015
ARLK015 Keplerian data

ZCZC SK15
QST de W1AW
Keplerian Bulletin 15 ARLK015
From ARRL Headquarters
Newington, CT March 5, 1996
To all radio amateurs

SB KEP ARL ARLK015
ARLK015 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-75
1 23801U 96012A 96065.29566541 .00285091 23237-4 65327-3 0 539
2 23801 28.4410 201.1259 0007899 60.1692 300.0076 15.95945855 1836
TSS-1R
1 23805U 96012B 96065.22717657 .00498101 00000-0 28644-2 0 427
2 23805 28.4736 203.6874 0056789 273.4113 86.0055 15.74030659 1797
Mir
1 16609U 86017A 96065.03966941 .00003217 00000-0 49240-4 0 04371
2 16609 51.6459 285.8295 0005735 61.7697 298.3808 15.57692308573772
HST
1 20580U 90037B 96064.56445140 .00000409 00000-0 25214-4 0 7795
2 20580 28.4671 171.0513 0006301 157.1398 202.9470 14.91021690122953
AO-10
1 14129U 83058B 96062.58968558 -.00000253 00000-0 10000-3 0 04077
2 14129 26.3426 221.3778 5985426 355.2764 0.7720 2.05882457067676
RS-10/11
1 18129U 87054A 96064.93826559 .00000038 00000-0 25017-4 0 01977
2 18129 82.9223 225.5732 0013204 83.2033 277.0622 13.72362975435872
UO-11
1 14781U 84021B 96065.01709112 .00000136 00000-0 30833-4 0 08746
2 14781 97.7925 60.4146 0013109 65.0367 295.2198 14.69431667642357
RS-12/13
1 21089U 91007A 96065.05719818 .00000049 00000-0 35495-4 0 08927
2 21089 82.9194 266.5612 0029009 160.1783 200.0507 13.74067005254737
```

```
AO-13
1 19216U 88051B 96064.31034608 -.00000144 00000-0 11226-3 0 1617
2 19216 57.3315 131.4111 7383394 33.4915 356.6332 2.09732791 27635
UO-14
1 20437U 90005B 96065.13845140 -.00000016 00000-0 10620-4 0 01748
2 20437 98.5516 150.0871 0010906 142.8761 217.3178 14.29913188319186
RS-15
1 23439U 94085A 96064.79457478 -.00000039 00000-0 10000-3 0 01318
2 23439 64.8145 191.9033 0163432 217.4081 141.5373 11.27523991049017
AO-16
1 20439U 90005D 96065.10022796 .00000026 00000-0 27030-4 0 09821
2 20439 98.5645 152.1004 0011401 145.2920 214.9008 14.29968298319195
DO-17
1 20440U 90005E 96065.13278522 -.00000008 00000-0 13513-4 0 09659
2 20440 98.5656 152.7145 0011443 143.9188 216.2771 14.30109198319222
WO-18
1 20441U 90005F 96064.70063374 .00000023 00000-0 25860-4 0 09765
2 20441 98.5651 152.2356 0012192 146.7285 213.4666 14.30079761319165
LO-19
1 20442U 90005G 96065.19405898 .00000009 00000-0 20293-4 0 9647
2 20442 98.5685 153.1787 0012261 143.4506 216.7513 14.30186697319252
FO-20
1 20480U 90013C 96065.14306746 -.00000023 00000-0 22774-4 0 08704
2 20480 99.0385 109.7212 0541040 0.3626 359.7774 12.83232049284542
AO-21
1 21087U 91006A 96064.99039007 .00000094 00000-0 82657-4 0 07067
2 21087 82.9378 38.8187 0035050 133.7179 226.6888 13.74566390255697
UO-22
1 21575U 91050B 96065.16436401 -.00000004 00000-0 13154-4 0 06738
2 21575 98.3655 134.5909 0006454 219.6174 140.4540 14.37013830243128
KO-23
1 22077U 92052B 96065.06616102 -.00000037 00000-0 10000-3 0 05704
2 22077 66.0769 47.4565 0008664 326.1548 33.8911 12.86295922167418
KO-25
1 22828U 93061F 96065.15323004 .00000017 00000-0 24304-4 0 04401
2 22828 98.5882 142.7435 0009794 156.3112 203.8521 14.28132086095266
IO-26
1 22826U 93061D 96065.14757288 .00000011 00000-0 21984-4 0 04587
2 22826 98.5930 142.6862 0008443 172.3635 187.7673 14.27796526127155
AO-27
1 22825U 93061C 96065.14337380 .00000021 00000-0 26333-4 0 04598
2 22825 98.5927 142.5369 0008036 171.0084 189.1240 14.27688774127143
PO-28
1 22829U 93061G 96065.16844773 .00000017 00000-0 24273-4 0 04634
2 22829 98.5897 142.8098 0009529 158.3059 201.8525 14.28112562127183

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
March 9, 1996, at 2330z on Baudot and AMTOR.
NNNN
```

/EX

474. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-05 00:00:00 UTC
From: n7ws@azstarnet.com
Message-ID: <n7ws.89.0028658F@azstarnet.com>
Source record: 22841
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

In article <4hdlvj$kvv@sun.sirius.com> paul@laughton.com (Paul Laughton) writes:
>From: paul@laughton.com (Paul Laughton)
>Subject: Re: Announsing: Technology Patent Available For Purchase
>Date: Mon, 04 Mar 1996 02:54:14 GMT

>gherbst@msn.com wrote:

[blah,blah... deleted]

>I wonder how Mr Herbst slipped this one past the prior art
>investigation? This technology has been around since the early 70's -
>at least. For example, IBM and Amdahl main frames made extensive use
>of it.

Simple. He reinvented it first!

475. NORAD Two-Line Orbital Element Set: Space Shuttle (96065.29566541)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-06 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4hiktq$pvr@blackbird.afit.af.mil>
Source record: 22842

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

STS 75
1 23801U 96012A 96065.29566541 .00285091 23237-4 65327-3 0 539
2 23801 28.4410 201.1259 0007899 60.1692 300.0076 15.95945855 1836
TSS
1 23805U 96012B 96065.22717657 .00498101 00000-0 28644-2 0 427
2 23805 28.4736 203.6874 0056789 273.4113 86.0055 15.74030659 1797
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

476. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-06 00:00:00 UTC
From: paul@laughton.com
Message-ID: <4hjal5$l7r@sun.sirius.com>
Source record: 22843
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,sci.astro.amateur

landisj@nad.com (Joe Landis - Systems & Network Mgr) wrote:

>In article <4hgr8o$p96@sun.sirius.com>, paul@laughton.com (Paul Laughton) writes:
>> gherbst@msn.com wrote:
>>
>>>Paul,
>>
>>>That's a very blatent claim you make. This patent went through with only
>>>one need for clarification from the PTO. Obviously know one else sought
>>>such a patent which is evidence by the PTO issuing me patent # 5457342.
>>
>>>Those companies you mention have devices that are similar with respect to
>>>cooling only if you care to follow the patents mentioned on my abstract.
>>>However, NONE have developed the device I have NOR do they have a patent
>>>on such a device. As such, I am the sole owner to pursue development of
>>>this product or companies under infringement.
>>
>>>Gaerhardt G. Herbst
>>
>> Having too much time on my hands, I went and looked at your patent.
>> The first part of the patent describes the exact CCD cooling method
>> used for years by Santa Barbara Instruments (and others) for cooling
>> CCDs. Your novel claim seems to be an IC cooler that is retrofitted to
>> an existing, uncooled IC.
>>
>> <Yawn>
>Are these the same Peltier(sp?) devices that you can pick up surplus from
>places like Marlin P. Jones and Edmund Scientific for like $12.95?
>Just curious,
>Joe - AA3GN
>--
>Joe Landis - Systems and Network Manager - North American Drager - Telford, PA
>landisj@nad.com ..speaking only for myself, of course..

Yep. Peltier Junctions. Very Cool (or hot) devices! :->

-Paul

477. Re: Why so little amateur space activity

Newsgroup: rec.radio.amateur.space
Date: 1996-03-06 00:00:00 UTC
From: Ed Garnett <ted>
Message-ID: <4hjvdr$lu5@dingo.cc.uq.oz.au>
Source record: 22844

Hi fellas...

Perhaps there is some plain reason, caused posibly by geographical location or time of day, why this question was first posed!? However, I would like to suggest that it can be explained simply by one word - COMMITMENT.

Yes, Amateur Radio is a very diverse hobby and it can be a major undertaking to cover a range of operating modes across many bands. The satellite aspect of Amateur Radio presents a similar challenge now, in as much as there exists one of the greatest array of spacecraft that has ever been made available to the amateur community! This in itself should be exciting enough!! And why there are not greater numbers of Amateurs pursuing an interest in satellites I do not know.

As with a vast number of spacecraft to choose from, so too is there a ready supply of CHEAP and excellent options for becoming QRV on the modern modes. I am referring in part to the no-tune downconverter and transverter kits (DownEast Microwave) - 1200 and 9600bps modems by G3RUH - really cheap TNCs (TNC2 clone - Z80 based) from G0BSX the BSX-2 (ever heard of that?) etc etc. Yes, you do need to arch-up the soldering iron but what the heck... it is Amateur Radio!

Of course the not so practically inclined Amateur is also catered for with commercially available equipment - the decision is yours, YES you actually have options avilable to you (some are just a lot more costly $$ wise!), you simply need to do a little home work. Make no mistake, everyone can enjoy a little (personal) experimenting even if it's just figuring out where best to put the receive pre-amp for better S/N!!

I too am enchanted by mode A (nearly) as much as mode S... and for my cents worth, I'd greatly like to see the continuation of both (and all modes) in future spacecraft.

I wonder if anyone has ever bothered to ask the same question of EME...? I would suggest not! Probably because that aspect of Amateur Radio does require commitment and determination. Something you may not find a lot of at your local HAM radio supermarket!

73 Ted. VK1BL

478. Re: Fate of TSS?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-06 00:00:00 UTC
From: Bruce Burke <eaim103@email.mot.com>
Message-ID: <313D86CE.41C67EA6@email.mot.com>
Source record: 22845
Cross-posted to: sci.space.shuttle,sci.space.tech,rec.radio.amateur.space

Roman Robles wrote:
>
> Where can I find Keps for the TSS?
> Thanks in advance
> roman
> romanr@bga.com
On the Shuttle page:

http://shuttle.nasa.gov/

Look under tracking.

They are grouped with the keps for the shuttle.

Regards,
Bruce

479. Re: FS: IC402 & G500 el-rotor (trade FT790

Newsgroup: rec.radio.amateur.space
Date: 1996-03-06 00:00:00 UTC
From: "David W. Biddle" <davidb9608@aol.com>
Message-ID: <4hl3am$dgd@turing.direcpc.com>
Source record: 22846
Cross-posted to: rec.radio.amateur.space,rec.radio.swap

Harry if you get on 1296 give me telephone call and I will get
out me ht and talk to you. It needs the exercise. 860-632-9390
David
N1TDX
Talked to you on six meters sideband last summer

480. FS 9600 BPS Pac Com internal pacsat modem $60

Newsgroup: rec.radio.amateur.space
Date: 1996-03-07 00:00:00 UTC
From: elsner@alpha1.csd.uwm.edu
Message-ID: <4hlav4$168@uwm.edu>
Source record: 22847

$60

elsner@alpha1.csd.uwm.edu

don elsner ks9f

481. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-07 00:00:00 UTC
From: jfsawyer@freewave.com
Message-ID: <4hlv15$18f@news-2.csn.net>
Source record: 22848
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

gherbst@msn.com wrote:
>
>> Correct you Charles.
>>
>> Gerhardt G. Herbst
>>
>Whoops...I mean correct you are Charles...
>
>Gerhardt
>

In 1982 I put a Peltier Cooler on a 8087 coprocessor in an IBM computer in an effort to speed up the clock. I had a PC board made and along with schematics and documentation. This progressed into modules for 80287's. In fact I hold the record for the highest speed attained using a 80287 in an IBM AT computer by cooling the 80287 down to -50 deg C.

I therefore have prior documented art on this invention and demand all royaties should be sent to me. <grin>

Jonathan Sawyer

FreeWave Technolgies

482. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-07 00:00:00 UTC
From: jackl@pinetree.microserve.com
Message-ID: <4hmp0u$nqk@crash.microserve.net>
Source record: 22849
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

"Thomas C. J. Sefranek" <sefranek@iii.net> wrote:

>Clearly a case of opportunism. Ah well Bill Gates can do it, why not
>this turkey?

Bill Gates' success year after year is NOT the result of taking undue
advantage of some helpless victim.

Perhaps opportunism is just another catch-all phrase coined so the
have-nots could better antagonize the haves?

73,
Jack WB3U

483. Ground Station

Newsgroup: rec.radio.amateur.space
Date: 1996-03-07 00:00:00 UTC
From: Luis Miguel Nunes <lm@demnet2.ubi.pt>
Message-ID: <313F1C1B.41C6@demnet2.ubi.pt>
Source record: 22850

Hi !

Please, I need help in setting a ground station.
I want to receive the data from PoSAT-1.

The equipment that we have is as follows:

Radio - Kenwood TS 790 E
TNC - MJF 1278B
Kansas City Tracker - Board + Software
Yeasu G-5600B
Prelinear Amp. Controller

I tried to install Wisp, but it was impossible to track the sattelite and comunicate at the same time.
Do anyone knows about good software available in order to put one or two computers communicating with the sat.
and also saving the telemetry data.

Thanks

Luis Miguel

484. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-07 00:00:00 UTC
From: frederick.mckenzie-1@kmail.ksc.nasa.gov
Message-ID: <frederick.mckenzie-1-0703961729010001@k4dii.ksc.nasa.gov>
Source record: 22851
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

In article <NEWTNews.825958328.26555.Postmaster@GGHERB.MONSANTO.COM>,
gherbst@msn.com wrote:
> That's a very blatent claim you make. This patent went through with only
> one need for clarification from the PTO. Obviously know one else sought
> such a patent which is evidence by the PTO issuing me patent # 5457342.

Gaerhardt-

I think some of us have jumped to the erroneous conclusion that your invention duplicates prior art. On the other hand, your statements do not clearly show how it is different from prior art.

You are looking for investors to finance development of a product that on the surface, appears to be old technology. I suggest you revise your "sales pitch", so that it is clear that your invention is (a) new, and (b) of commercial value. In other words, why would one want to use your invention instead of existing spot-cooling techniques?

73, Fred, K4DII

485. NORAD Two-Line Orbital Element Set: Space Shuttle (96067.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-08 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ho1i3$a1k@blackbird.afit.af.mil>
Source record: 22852

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

STS 75
1 23801U 96012A 96067.25042824 .00002249 -71089-5 00000+0 0 647
2 23801 28.4476 186.3867 0004844 124.3695 336.5590 15.97773484 2149
TSS
1 23805U 96012B 96067.12813148 .00468489 00000-0 25248-2 0 478
2 23805 28.4664 189.8005 0054547 297.4646 62.0399 15.75694818 2098
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

486. satellite over texas 3-8-96??

Newsgroup: rec.radio.amateur.space
Date: 1996-03-08 00:00:00 UTC
From: Gary Stone <garystone@texoma.com>
Message-ID: <4ho2ff$bc6@venus.texoma.com>
Source record: 22853

Greetings,

My mother just called and said she heard on the TV news that a satellite will be coming over head on 3-8-96 that people in the 'Dallas Area' could see with the naked eye. She could not remember the name of the satellite. It is supposed to cover N. Texas on 3-8-96 UTC at about 1140 UTC. Any ideas?

Thanks

73 de N5PHT

--

/__/\ Gary and Karen Stone (Gary N5PHT)
0 0 E-Mail: garystone@texoma.com
@ or karenstone@texoma.com
(_/_) Http://home.texoma.com/personal/garystone
~~

487. Re: satellite over texas 3-8-96??

Newsgroup: rec.radio.amateur.space
Date: 1996-03-08 00:00:00 UTC
From: Manfred Bester <manfred@ssl.berkeley.edu>
Message-ID: <4hpu8v$c2@agate.berkeley.edu>
Source record: 22854

Maybe they were talking about Space Shuttle Columbia. The shuttle had a visible pass over Dallas this morning at about 6:00 CST. There will be another one tomorrow (Saturday) around 6:04-6:06 CST due south and 27 degrees up. Check the Shuttle Web Page for landing and re-entry information.

Furthermore, there are also visible passes of the Tether Satellite coming up. For those opportunities you can check the SatPasses web page at:

http://ssl.berkeley.edu/isi_www/satpasses.html

Happy viewing,
-Manfred

--
Manfred Bester
Space Sciences Laboratory
University of California
Berkeley, CA 94720

488. Re: MIR and SAREX

Newsgroup: rec.radio.amateur.space
Date: 1996-03-08 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4hq0in$9im@newsbf02.news.aol.com>
Source record: 22855

Indeed, a ground plane....best bet would be a 1/4 Wave, should have a nice capture at anywhere from 20 to 90 deg. spacecraft inclination.
good luck.....
n2lzh

489. Face On Mars Development

Newsgroup: rec.radio.amateur.space
Date: 1996-03-08 00:00:00 UTC
From: Brad Grier <bgrier@probe.net>
Message-ID: <4hofoh$fkm@jake.probe.net>
Source record: 22856

There's been an intriguing development regarding the so-called
"Face On Mars." For the details, visit the following URL:

http://www.probe.net/~brgrier/Submerge.html

For Netscape 2.0 with Java support, there's an animation based
on NASA Mars photography. It's definitely worth a visit.

490. NORAD Two-Line Orbital Element Set: Space Shuttle (96068.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4hqu3v$fkb@blackbird.afit.af.mil>
Source record: 22857

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

STS 75
1 23801U 96012A 96068.25042824 .00002183 -69023-5 00000+0 0 695
2 23801 28.4865 179.0227 0032003 84.0732 0.3143 15.90877967 2292
TSS
1 23805U 96012B 96068.20445684 .00483381 00000-0 25009-2 0 488
2 23805 28.4693 181.9269 0053170 310.5325 49.0741 15.76653960 2266
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

491. NORAD Two-Line Orbital Element Sets (TLE771)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4hquio$fkp@blackbird.afit.af.mil>
Source record: 22858

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

```
- Current Two-Line Element Sets #771 -
Alouette 1
1 00424U 62049A 96066.60002898 .00000056 00000-0 55172-4 0 1796
2 00424 80.4567 24.9621 0023214 303.3182 56.5742 13.67862779668317
ATS 1
1 02608U 66110A 96065.25178074 -.00000334 00000-0 10000-3 0 9591
2 02608 14.6283 353.9425 0008768 68.8906 291.2206 1.00388179 23823
ATS 3
1 03029U 67111A 96068.21166682 -.00000111 00000-0 10000-3 0 4624
2 03029 14.8992 0.8671 0010420 269.4222 226.6378 1.00272745103753
Starlette
1 07646U 75010A 96065.43501681 -.00000100 00000-0 32176-4 0 9535
2 07646 49.8285 198.1343 0205882 247.7946 110.0985 13.82190828 64617
LAGEOS
1 08820U 76039A 96066.81983665 .00000004 00000-0 10000-3 0 1761
2 08820 109.8609 350.9362 0043765 150.7032 209.6052 6.38664795207292
```

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ETS-2
1 09852U 77014A 96065.30102708 -.00000365 00000-0 10000-3 0 653
2 09852 13.1085 34.1577 0002215 125.7552 234.3004 1.00011620 16608
GOES 2
1 10061U 77048A 96062.53171615 .00000050 00000-0 10000-3 0 6464
2 10061 12.2111 38.3383 0010976 142.4284 354.5985 1.00270918 13375
IUE
1 10637U 78012A 96065.95932184 -.00000171 00000-0 10000-3 0 2382
2 10637 35.6055 84.7568 1350302 54.1537 337.7428 1.00263813 18906
GPS BI-01
1 10684U 78020A 96064.78564172 -.00000038 00000-0 10000-3 0 4318
2 10684 64.9523 26.9725 0055996 164.0811 195.9766 1.98069890117345
GPS BI-02
1 10893U 78047A 96063.66328260 .00000057 00000-0 10000-3 0 2241
2 10893 63.2321 264.3717 0227905 13.0325 347.5735 2.01627474130684
GOES 3
1 10953U 78062A 96067.14777355 -.00000124 00000-0 10000-3 0 6234
2 10953 11.2061 41.1201 0002935 282.2350 153.0065 1.00277490 18033
SeaSat 1
1 10967U 78064A 96065.85885684 -.00000073 00000-0 20479-4 0 4695
2 10967 107.9888 320.9724 0002428 254.8730 105.2141 14.38089640926596
GPS BI-03
1 11054U 78093A 96067.68539580 .00000053 00000-0 10000-3 0 3873
2 11054 62.9146 263.1333 0045841 179.6008 180.4339 1.93505499126692
Nimbus 7
1 11080U 78098A 96064.14039877 -.00000089 00000-0 -42888-4 0 5692
2 11080 98.9608 291.4049 0008290 250.1747 109.8514 13.83695450876649
GPS BI-04
1 11141U 78112A 96066.16687940 -.00000030 00000-0 10000-3 0 309
2 11141 64.9506 29.1880 0049413 27.4641 332.7818 1.92894726 15896
GPS BI-05
1 11690U 80011A 96064.14809938 -.00000036 00000-0 10000-3 0 9998
2 11690 65.2899 28.4959 0149601 192.8288 166.7867 2.00570585132092
GPS BI-06
1 11783U 80032A 96058.76416382 .00000061 00000-0 10000-3 0 1317
2 11783 62.3637 257.3674 0224816 29.6597 331.6801 2.03456650116588
GOES 5
1 12472U 81049A 96062.98513183 -.00000100 00000-0 10000-3 0 9175
2 12472 7.9988 51.3142 0004875 43.0133 317.1560 1.00204499 12031
Cosmos 1383
1 13301U 82066A 96067.88589062 .00000022 00000-0 81939-5 0 4785
2 13301 82.9294 208.0560 0027657 156.3545 203.8885 13.68072932683520
LandSat 4
1 13367U 82072A 96067.26524445 .00002473 00000-0 55749-3 0 8571
2 13367 98.0864 121.2047 0008475 97.8801 262.3364 14.57178589725691
DMSP B5D2-1
1 13736U 82118A 96067.04883902 .00000040 00000-0 35206-4 0 9592
2 13736 98.6260 257.0668 0008352 331.8679 28.2048 14.25772335686511
IRAS
1 13777U 83004A 96068.03688809 .00000127 00000-0 11755-3 0 2514
```

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2 13777 98.9660 255.6780 0013334 21.0833 339.0861 13.99254399339222
Cosmos 1447
1 13916U 83021A 96066.56675222 .00000083 00000-0 71523-4 0 5737
2 13916 82.9425 266.9379 0039666 77.5872 282.9727 13.74336728649640
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Meteor 2-16
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AO-21
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RS-12/13
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Nadezhda 3
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Glonass 57
1 22057U 92047B 96065.60571183 -.00000026 00000-0 00000+0 0 1412
2 22057 64.8117 327.1701 0008984 328.9962 31.0099 2.13102915 27953
Glonass 58
1 22058U 92047C 96066.95299607 -.00000023 00000-0 10000-3 0 860
2 22058 64.7996 327.1204 0011036 269.1392 90.7862 2.13103040 28031
TOPEX
1 22076U 92052A 96064.52065795 -.00000038 00000-0 10000-3 0 9467
2 22076 66.0377 70.0671 0007667 263.8440 96.1705 12.80930210166717
KO-23
1 22077U 92052B 96068.02067677 -.00000037 00000-0 10000-3 0 5610
2 22077 66.0766 41.2696 0008813 325.1823 34.8609 12.86295891167794
S80/T
1 22078U 92052C 96066.41302135 -.00000037 00000-0 10000-3 0 5589
2 22078 66.0794 43.2522 0009960 328.5514 31.4906 12.86578914167674
GPS BIIA-15
1 22108U 92058A 96063.70144580 .00000019 00000-0 10000-3 0 7004
2 22108 54.0730 231.8129 0118642 157.5662 202.9246 2.00558649 25476
FREJA
1 22161U 92064A 96066.66129060 .00000041 00000-0 55873-4 0 5926
2 22161 62.9877 141.0530 0832884 9.3021 352.2466 13.21884043164873
LAGEOS II
1 22195U 92070B 96064.16362647 -.00000009 00000-0 10000-3 0 4727
2 22195 52.6570 58.0242 0137258 30.9559 329.9012 6.47293910 79478
GPS BIIA-16
1 22231U 92079A 96067.37663918 .00000018 00000-0 10000-4 0 6797
2 22231 54.6807 173.8121 0033774 277.0975 82.5291 2.00552169 24122
GPS BIIA-17
1 22275U 92089A 96063.52555489 -.00000018 00000-0 10000-3 0 6994
2 22275 54.6328 171.4618 0053001 253.4925 105.9151 2.00575417 23452
TDRS 5
1 22314U 93003B 96063.86709747 -.00000288 00000-0 10000-3 0 6203
2 22314 2.4107 70.5490 0002533 248.6145 109.0803 1.00268836 11520
GPS BIIA-18
1 22446U 93007A 96066.59019502 .00000000 00000-0 10000-3 0 6693
2 22446 54.2700 291.4961 0088345 1.1759 358.8550 2.00563064 22500
Glonass 59
1 22512U 93010A 96066.93584096 .00000049 00000-0 10000-3 0 7733
2 22512 65.1079 87.6826 0008081 194.3635 165.6777 2.13101976 23517
Glonass 60
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2 22513 65.1056 87.6796 0007598 213.4356 146.5752 2.13102751 23719
Glonass 61
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2 22514 65.1284 87.6490 0010478 198.9549 161.0612 2.13102659 23732
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2 22521 31.1052 349.4468 0056648 244.8638 114.6131 15.02773231167257
UFO F1
1 22563U 93015A 96057.96974541 -.00000275 00000-0 00000+0 0 4908
2 22563 25.5352 290.3887 0007612 305.0327 54.9204 0.99253978 14994
GPS BIIA-19
1 22581U 93017A 96067.23181666 -.00000062 00000-0 10000-3 0 5112
2 22581 55.2130 352.1355 0065733 36.8183 323.6274 2.00563529 21577
ARSENE
1 22654U 93031B 96064.96423014 -.00000110 00000-0 10000-3 0 3541
2 22654 3.0262 76.1527 2878077 231.5843 99.2635 1.42202749 10115
GPS BIIA-20
1 22657U 93032A 96066.87579742 -.00000063 00000-0 10000-3 0 6132
2 22657 55.2383 352.0152 0080897 218.7976 140.6780 2.00553501 16891
RADCAL
1 22698U 93041A 96065.11649005 .00000044 00000-0 14349-4 0 4714
2 22698 89.5403 276.8488 0090036 306.6971 52.5971 14.21367070139644
GPS BIIA-21
1 22700U 93042A 96066.83058872 .00000029 00000-0 10000-3 0 5190
2 22700 54.2356 232.5151 0046374 359.0404 0.9059 2.00553505 19699
NOAA 13
1 22739U 93050A 96066.87426459 -.00000032 00000-0 74419-5 0 124
2 22739 99.0303 21.4911 0010329 147.8720 212.3074 14.10956952132626
GPS BIIA-22
1 22779U 93054A 96065.43124290 .00000001 00000-0 10000-3 0 5800
2 22779 54.4122 291.5562 0015930 264.1422 95.7353 2.00564042 18426
Meteor 2-21
1 22782U 93055A 96067.48605044 .00000062 00000-0 43104-4 0 4676
2 22782 82.5436 67.7411 0020555 264.1995 95.6819 13.83049380127074
UFO F2
1 22787U 93056A 96066.61537616 -.00000074 00000-0 00000+0 0 6247
2 22787 4.2236 326.4665 0004063 19.8752 111.6872 1.00275956 7808
SPOT 3
1 22823U 93061A 96068.21110128 -.00000022 00000-0 10000-4 0 5234
2 22823 98.7104 143.6174 0001359 76.4355 283.6979 14.20041331126903
STELLA
1 22824U 93061B 96067.79611798 -.00000071 00000-0 -11156-4 0 4558
2 22824 98.5877 144.6303 0005810 162.8833 197.2521 14.27103493127472
AO-27
1 22825U 93061C 96064.72287419 .00000023 00000-0 27130-4 0 4574
2 22825 98.5927 142.1235 0008038 172.2562 187.8739 14.27688737127087
IO-26
1 22826U 93061D 96064.72710517 .00000002 00000-0 18322-4 0 4564
2 22826 98.5930 142.2726 0008514 173.6147 186.5142 14.27796393127094
HEATHSAT
1 22827U 93061E 96066.75676520 .00000016 00000-0 23832-4 0 5181
2 22827 98.5906 144.1826 0009073 153.0681 207.0973 14.27927961127397
ITAMSAT
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KO-25
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2 22830 98.4829 135.8622 0012043 123.6874 236.5460 14.28103811127617
JIANBING-93 P/L(1)
1 22870U 93063H 96068.19754546 .02300292 11148-4 12667-3 0 5077
2 22870 56.4150 33.9954 0155556 73.4334 288.3791 16.12090402117468
GPS BIIA-23
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METEOSAT 6
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2 22912 0.2937 287.4316 0002332 6.6727 90.0360 1.00269282 6811
HST Array
1 22920U 90037C 96067.27403415 .00004420 00000-0 30219-3 0 4395
2 22920 28.4690 83.6468 0003635 123.6204 236.4727 15.03738879124061
Meteor 3-6
1 22969U 94003A 96066.26077513 .00000051 00000-0 10000-3 0 2377
2 22969 82.5593 333.1223 0016133 129.7373 230.5172 13.16734590101501
TUBSAT-B
1 22970U 94003B 96067.19180349 .00000051 00000-0 10000-3 0 2295
2 22970 82.5654 332.3786 0016804 126.1912 234.0739 13.16827333101631
GPS BIIA-24
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Glonass 62
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2 23043 64.6806 327.4589 0004511 193.2656 166.7876 2.13103126 14831
Glonass 63
1 23044U 94021B 96067.12847730 -.00000024 00000-0 00000+0 0 2921
2 23044 64.6740 327.4647 0028191 205.5163 154.4085 2.13103357 14836
Glonass 64
1 23045U 94021C 96066.36679900 -.00000025 00000-0 00000+0 0 3022
2 23045 64.6638 327.5002 0011466 29.5294 330.5952 2.13102623 14818
GOES 8
1 23051U 94022A 96068.15338968 -.00000260 00000-0 00000+0 0 4803
2 23051 0.1880 264.3957 0000792 128.8646 113.0440 1.00279059 14358
MSTI 2
1 23101U 94028A 96068.09599372 .00003794 00000-0 62111-4 0 2927
2 23101 97.0860 262.7814 0011487 343.5477 16.5400 15.53054771103607
STRV-1A
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2 23125 7.4260 285.0154 7247049 332.6677 3.1655 2.31857585 13688
STRV-1B
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2 23126 7.4534 285.2466 7251567 332.3094 3.2014 2.31722774 13727
Nadezhda 4
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Glonass 65
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2 23203 64.7770 207.5609 0007857 139.5907 220.4326 2.13102066 12219
Glonass 66
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2 23204 64.8433 207.5898 0015821 346.2520 14.3606 2.13090550 12221
Glonass 67
1 23205U 94050C 96067.55939161 .00000041 00000-0 00000+0 0 2578
2 23205 64.7584 207.5431 0000860 5.5539 354.4279 2.13103038 12234
DMSP B5D2-7
1 23233U 94057A 96067.65763181 .00000037 00000-0 43355-4 0 6927
2 23233 98.8449 127.8545 0013456 107.0907 253.1736 14.12685737 78491
OKEAN 1-7
1 23317U 94066A 96066.25944610 .00000101 00000-0 11836-4 0 1367
2 23317 82.5464 153.7197 0028073 55.9421 304.4444 14.74001774 75376
ELEKTRO
1 23327U 94069A 96067.69472353 -.00000106 00000-0 00000+0 0 1294
2 23327 0.2042 242.0608 0004200 175.1249 74.5486 1.00271427 4983
RESURS 1-3
1 23342U 94074A 96067.23734888 .00000091 00000-0 23271-4 0 4577
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Glonass 68
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Glonass 69
1 23397U 94076B 96067.57874378 .00000047 00000-0 00000+0 0 2204
2 23397 65.0333 87.7439 0014301 315.0722 44.8699 2.13102310 10074
Glonass 70
1 23398U 94076C 96067.46246504 .00000047 00000-0 00000+0 0 2375
2 23398 65.0235 87.7428 0004653 280.4071 79.5969 2.13102032 10082
LUCH (Altair-2)
1 23426U 94082A 96067.70060148 -.00000281 00000-0 00000+0 0 2707
2 23426 1.6566 269.2500 0003662 102.1590 141.7075 1.00265159 4482
RS-15
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2 23439 64.8144 190.3252 0163428 217.2371 141.7127 11.27523972 49127
NOAA 14
1 23455U 94089A 96067.85262304 .00000027 00000-0 39416-4 0 5214
2 23455 98.9332 13.6913 0009444 162.5447 197.6049 14.11572409 61151
ODERACS II A
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2 23471 51.6330 173.0391 0006229 359.8164 0.2636 16.25771023 63455
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1 23511U 95009A 96066.95287977 -.00000024 00000-0 00000+0 0 1590
2 23511 64.7004 327.7407 0005031 228.2606 131.7597 2.13103346 7799
Glonass 72
1 23512U 95009B 96067.07103414 -.00000024 00000-0 00000+0 0 1699
2 23512 64.6878 327.7425 0007311 325.5845 34.4254 2.13102299 7792
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GMS 5
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2 23522 0.4769 321.0834 0001840 111.7451 197.6084 1.00264408 3414
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1 23533U 95015A 96067.80361455 .00000041 00000-0 45762-4 0 4220
2 23533 98.8385 71.5794 0007351 352.3926 7.7126 14.12728207 49312
Microlab 1
1 23547U 95017C 96068.06211404 .00000185 00000-0 69552-4 0 907
2 23547 69.9784 44.7359 0013799 310.0744 49.9177 14.45496533 49055
OFEQ 3
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2 23549 143.3663 333.6150 0232374 9.2142 351.2800 15.13517300 51057
GFZ-1
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2 23558 51.6521 279.4542 0006266 186.8136 173.2769 15.61606483573708
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1 23560U 95021A 96065.74764284 .00000017 00000-0 22597-4 0 1721
2 23560 98.5465 141.3013 0001088 53.8513 306.2771 14.32251894 45767
Spektr
1 23579U 95024A 96067.15680309 .00004464 00000-0 65699-4 0 2828
2 23579 51.6445 275.2232 0005642 67.3317 292.9477 15.57701725 45537
GOES 9
1 23581U 95025A 96066.31002296 .00000079 00000-0 00000+0 0 1447
2 23581 0.0130 266.5059 0002930 44.3202 189.7250 1.00272926 2897
Helios 1A
1 23605U 95033A 96068.25374860 .00000093 00000-0 26817-4 0 1789
2 23605 98.1134 5.4483 0001193 68.2401 291.8933 14.63852263 35781
UPM SAT 1
1 23606U 95033B 96066.68230184 .00000133 00000-0 32118-4 0 1422
2 23606 98.0955 4.6458 0007710 139.5200 220.6566 14.67217546 35689
CERISE
1 23607U 95033C 96064.47524691 .00000129 00000-0 31605-4 0 713
2 23607 98.0951 2.3760 0005822 147.3233 212.8304 14.66928178 35381
TDRS 6
1 23613U 95035B 96065.37547027 .00000121 00000-0 00000+0 0 1421
2 23613 0.4683 83.8573 0003266 239.4941 185.4839 1.00285155 2345
Glonass 74
1 23620U 95037A 96066.67860613 .00000033 00000-0 00000+0 0 1066
2 23620 64.8351 207.4097 0018691 164.3331 195.6917 2.13103179 4826
Glonass 75
1 23621U 95037B 96064.97846871 .00000020 00000-0 00000+0 0 1121
2 23621 64.8416 207.4680 0017818 173.9984 185.9865 2.13102270 4787
Glonass 76
1 23622U 95037C 96065.50614757 .00000024 00000-0 00000+0 0 1100
2 23622 64.8366 207.4526 0037054 163.2198 196.8707 2.13102531 4791
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2 23632 67.4910 253.0580 8684574 318.8090 10.3320 0.26373900 592
SICH-1
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2 23657 82.5346 295.8720 0029326 28.1335 332.1448 14.73456968 27580
Soyuz TM-22
1 23665U 95047A 96059.84305967 -.00006216 00000-0 -75801-4 0 1688
2 23665 51.6452 311.8700 0005758 42.7534 317.4666 15.57625500 27836
RADARSAT
1 23710U 95059A 96066.55237040 -.00000044 00000-0 00000+0 0 1084
2 23710 98.5808 74.6845 0001025 73.0246 287.1055 14.29967290 17574
Glonass 77
1 23734U 95068A 96066.09287537 .00000029 00000-0 00000+0 0 749
2 23734 64.8356 207.3529 0018291 326.8320 33.0155 2.13102092 1778
Glonass 78
1 23735U 95068B 96065.37846610 .00000023 00000-0 00000+0 0 657
2 23735 64.8297 207.3701 0005994 207.5962 152.3301 2.13124842 1751
Glonass 79
1 23736U 95068C 96066.80208333 .00000034 00000-0 00000+0 0 552
2 23736 64.8207 207.3381 0006827 190.5559 173.5580 2.13102158 1789
Progress M-30
1 23744U 95070A 96053.49138942 .54973737 00000-0 57553+0 0 646
2 23744 51.6533 343.6989 0013362 34.6441 325.4459 15.55758865571981
XTE
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2 23757 22.9846 33.3480 0013439 266.0571 93.8382 14.97610411 9999
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1 23785U 96008B 96067.89216959 .00171472 -14585-5 60528-3 0 463
2 23785 26.0366 230.5122 3217510 266.4273 56.8771 9.14392270 1714
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1 23787U 96009A 96066.88659391 .00000012 00000-0 10000-4 0 165
2 23787 82.5791 178.9943 0009008 344.3718 15.7094 12.63859407 2125
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1 23788U 96009B 96066.89852290 .00000012 00000-0 10000-4 0 137
2 23788 82.5728 178.9921 0004236 331.0281 29.0575 12.62962716 2127
1996009C
1 23789U 96009C 96066.90639218 .00000012 00000-0 10000-4 0 133
2 23789 82.5801 179.0128 0004796 270.4928 89.5613 12.62370990 2127
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1 23790U 96009D 96066.90627417 .00000012 00000-0 10000-4 0 155
2 23790 82.5815 179.0156 0002343 282.9998 77.0831 12.62380667 2122
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1 23791U 96009E 96066.91848877 .00000012 00000-0 10000-4 0 129
2 23791 82.5745 179.0121 0006746 224.8618 135.1927 12.61463716 2120
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2 23793 82.5715 178.9287 0043510 203.8546 156.0525 12.54992951 2156
1996010B
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2 23795 51.6056 263.2977 0003164 295.4214 64.6476 16.48143374 574
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1 23796U 96010C 96051.07380848 .12626906 12430-4 10548-2 0 67
2 23796 51.6041 278.7639 0005661 46.0070 314.1909 16.38788332 122
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1 23797U 96010D 96067.87643344 .00001967 00000-0 47425-3 0 248
2 23797 48.5491 277.8926 7323945 4.0604 359.6900 2.23207621 398
1996011A
1 23798U 96011A 96067.15680309 .00004464 00000-0 65699-4 0 185
2 23798 51.6445 275.2232 0005642 67.3317 292.9477 15.57701725 2285
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1 23800U 96005E 96063.70590353 .00001377 00000-0 53065-3 0 79
2 23800 47.2813 271.9374 7318657 9.8339 359.1515 2.22317781 307
STS 75
1 23801U 96012A 96068.25042824 .00002183 -69023-5 00000+0 0 695
2 23801 28.4865 179.0227 0032003 84.0732 0.3143 15.90877967 2292
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1 23802U 96013A 96056.81847283 .00244027 -37843-6 25424-1 0 58
2 23802 85.9833 27.1480 7930535 292.0359 6.3451 1.53686527 21
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1 23803U 96013B 96068.17955825 .00255106 -87236-6 32486-3 0 287
2 23803 85.9254 18.4905 0501271 232.5039 122.9488 15.12557741 1911
1996013C
1 23804U 96013C 96067.88121863 .00008459 -75751-6 10394-2 0 89
2 23804 86.0567 26.8763 7927411 290.5958 6.1783 1.53731696 198
TSS
1 23805U 96012B 96068.20445684 .00483381 00000-0 25009-2 0 488
2 23805 28.4693 181.9269 0053170 310.5325 49.0741 15.76653960 2266
1996005F
1 23813U 96005F 96060.61682853 .00000380 00000-0 38249-3 0 33
2 23813 47.3624 272.9400 7300500 8.7585 359.1850 2.21910637 199
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tkelso@afit.af.mil Air Force Institute of Technology
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492. WTB/Trade: 70cm allmode for TH78/G500A

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: white_hae@ccsua.ctstateu.edu
Message-ID: <1996Mar9.073221.1@ccsua.ctstateu.edu>
Source record: 22859
Cross-posted to: rec.radio.amateur.space,rec.radio.swap

Looking for a Yaesu FT-790 70cm portable allmode. Cash or trade. I have the
following items for trade, partial trade, etc...
- Kenwood TH-78A dual-band HT in FB shape (no mods done).
- Yaesu G500A elevation rotor new-in-box
Thanks
Harry/N1QVE
white_hae@ccsu.ctstateu.edu harry@connix.com

493. Re: JV FAX question

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: Rich Griffiths <rgriffiths@monmouth.com>
Message-ID: <3141C6B9.1FA1@monmouth.com>
Source record: 22860

Stanley L. Flegler wrote:
>
> I just read the article on the JVFAX APT adapter in the Feb. issue of
> QST. I'm completely new to this field. What bands are these
> transmissions on, VHF, UHF, or HF? Thanks and 73 Stan K8RPA,
> flegler@pilot.msu.edu

I'm surprised no one has responded to this yet (9 March). Here's my shot at it.

The images you saw in the article were captured from NOAA satellites. NOAA 12 and NOAA 14 are currently sending APT images. NOAA 12 sends on 137.5 MHz, and NOAA 14 sends on 137.65. The Russian satellite Meteor 3-5 is also currently sending APT on 137.85 ins slightly different format, which I think JVFax can also handle.

Note that the APT adapter is not all you'll need. You'll also need a receiver/receiving system that has about 50 kHz IF bandwidth. This is much wider than the IF in most commonly available VHF receivers. Many weather satellite buffs buy special receivers.

Rich Griffiths W2RG

494. An Invitation

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <31414d88.2158540@news.innotts.co.uk>
Source record: 22861

Thank you to those who have already called to see the pages from this group.

There is a need to include some sort of write-up on the topics this newsgroup covers, as I realise this area is a bit thin and I'm no expert.

Anyone care to write a couple of paragraphs I can include in the pages? Email me here or via the pages, please.

Thanks

Updated for March and awarded *** by the .net mag (big Internet Magazine)

http://www.innotts.co.uk/~asperges/

The pages contain:

* An introduction to Amateur Radio,
* Questions and answers,
* Lots of Links to useful Radio pages;
* Local information on the QTH and area;
* IRC Link;
* Link to the RSGB News;
* Friends on the Net
* New Pages for Listeners (SWL)

3550 visitors to date. All welcome.

73 de
Jeremy G4NJH
asperges@innotts.co.uk
[Home, Am Radio, SWL pages: http://www.innotts.co.uk/~asperges/]

495. ARLK016 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk016.1996@arrl.org>
Source record: 22862
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK016
ARLK016 Keplerian data

ZCZC SK16
QST de W1AW
Keplerian Bulletin 16 ARLK016
From ARRL Headquarters
Newington, CT March 9, 1996
To all radio amateurs

SB KEP ARL ARLK016
ARLK016 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96068.50402382 .00002282 00000-0 36855-4 0 04616
2 16609 51.6429 268.4688 0005566 75.1357 285.0253 15.57707274574313
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2 14129 26.3511 220.9315 5983467 356.3180 0.5177 2.05877093067731
RS-10/11
1 18129U 87054A 96068.43784805 .00000030 00000-0 16450-4 0 01921
2 18129 82.9226 222.9869 0013282 74.0808 286.1795 13.72362949436358
UO-11
1 14781U 84021B 96068.42182308 .00000118 00000-0 27733-4 0 08729
2 14781 97.7929 63.6656 0013099 55.6727 304.5720 14.69432550642857
RS-12/13
1 21089U 91007A 96068.47963712 .00000047 00000-0 33815-4 0 08865
2 21089 82.9194 264.0221 0029299 150.6480 209.6334 13.74067184255209
AO-13
1 19216U 88051B 96067.17106549 -.00000332 00000-0 27291-3 0 1638
2 19216 57.3224 130.8419 7386364 33.4500 356.6605 2.09738899 27692
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2 20437 98.5517 153.1116 0011090 133.9886 226.2215 14.29913351319629
RS-15
1 23439U 94085A 96068.43102910 -.00000039 00000-0 10000-3 0 01300
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DO-17
1 20440U 90005E 96068.21123399 .00000014 00000-0 22344-4 0 09829
2 20440 98.5657 155.7443 0011446 134.2715 225.9411 14.30109711319666
WO-18
1 20441U 90005F 96068.26891170 -.00000035 00000-0 33758-5 0 09730
2 20441 98.5656 155.7479 0012253 136.5100 223.7048 14.30079430319672
LO-19
1 20442U 90005G 96068.27234265 -.00000019 00000-0 96026-5 0 09793
2 20442 98.5686 156.2093 0012249 134.2866 225.9319 14.30186635319696
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2 20480 99.0395 112.1259 0540985 353.6544 5.7877 12.83231902284923
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1 21087U 91006A 96068.41158826 .00000094 00000-0 82657-4 0 07047
2 21087 82.9380 36.2870 0035149 124.5050 235.9432 13.74566547256161
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1 21575U 91050B 96068.15841333 .00000002 00000-0 15068-4 0 06850
2 21575 98.3651 137.5003 0006567 207.6279 152.4568 14.37014073243550
KO-23
1 22077U 92052B 96068.40942891 -.00000037 00000-0 10000-3 0 05634
2 22077 66.0768 40.4562 0008893 324.8437 35.1991 12.86295900167849
KO-25
1 22828U 93061F 96068.23593701 .00000014 00000-0 23217-4 0 04360
2 22828 98.5880 145.7751 0009887 146.6667 213.5137 14.28132388095703
IO-26
1 22826U 93061D 96068.23100460 -.00000024 00000-0 78486-5 0 04725
2 22826 98.5929 145.7186 0008765 162.4975 197.6508 14.27796317127593
AO-27
1 22825U 93061C 96068.22703873 -.00000033 00000-0 40852-5 0 04748
2 22825 98.5929 145.5697 0008270 161.5342 198.6139 14.27688281127586
PO-28
1 22829U 93061G 96068.25119671 .00000026 00000-0 27881-4 0 04592
2 22829 98.5895 145.8408 0009536 148.3102 211.8652 14.28113008127622

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
March 12, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
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496. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-09 00:00:00 UTC
From: paul@laughton.com
Message-ID: <4hr82l$svb@sun.sirius.com>
Source record: 22863
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna,misc.invest.technical,misc.invest.stocks,misc.invest.funds,misc.invest.canada

gherbst@msn.com wrote:

>Gerhardt G. Herbst II, is the patent holder for "Cold Spot Module".
>This product is for sale to an individual or manufacturer.

>The "Cold Spot Module" is used to effectively reduce the operating
>temperature of integrated circuits such as computer CPUs to maintain
>reliability under extreme operating conditions. This module is protected
>under a U.S. Utility Patent issued in October of 1995. A Utility patent
>provides the strongest protection under U.S. law.

>An independent North American Market Study was done on the product and the
>potential market has been identified.

>The product has not yet been introduced to the general public but is referenced
>in the U.S. Patent catalog which is posted periodically. For an on-line reference
>refer to:

>http://www.uspto.gov

>Search on Patent Number: 5457342

>The title abstract is: Integrated circuit cooling apparatus

>Note: A search on just the patent number will bring up the details.

>Exclusive rights can be purchased reasonably with negotiable license term.

>For further information, contact Gerhardt G. Herbst II.

> Gerhardt G. Herbst II
> 133 Wynstay
> Valley Park, MO 63088
> Phone: (314) 861-0426
> E-mail: gherbst@msn.com

Having investigated this patent, it appears to cover a very, very
narrow area of widely used prior art. I particular it is a device that
can be added to an existing IC in an existing circuit to cool a single
IC. The
method of coolling (peltier junction, heat sink and fan) has been used
in many different fields - so there is nothing new here.

As far as it practical value, you would have to have room in the
device enclosure to add the add-on cooler, an method of
expelling the removed heat from the enclosure and some source of power

for the add-on
device(s). The needed additional room sounds sgnificant with the heat sink and fan. For each IC you needed to cool, you would need a seperate device.

It also appears that this patent is not even a very good replication of the
prior art of IC cooling. In the abstract it does not mention any method of regulating the IC being cooled. A peltier device will lower the temp of it host device by a certain level from the ambiant temperature. This means that as the ambiant temperature changes, so will the temperature of the cooled device. Regulation sets the device temperature at something less then the full cooling capability of the peltier junction and then monitors the temperature and regulates the peliter junction to insure the
cooled device stays at a constant temperature.

If the cooler is unregulated, then wild swings in ambiant temperature will produce wild swings in the device temperature.

In my humble opinion, this patented device is not worth much. It does not do the job well. There is so much prior art in this field that one could create a slightly different device and not be in conflict with this patent and would probably do a better job.

-Paul
N6BVH

497. Re: => How Can I get Shuttle Audio?? <=

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4i134v$h5k@paperboy.ids.net>
Source record: 22767

In article <4hv6ki$t1d@sloth.swcp.com> Brian Mileshosky, n5zgt@swcp.com writes:
> I am planning on putting up a 2 meter repeater in Albuquerque, NM
>that will re-transmit live shuttle audio during missions. I have
>already received written permission from NASA to do so.

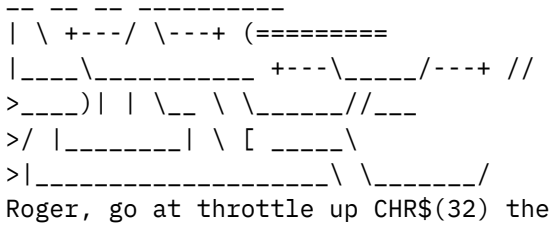
Best way is with a satellite dish. From where you're located a 7 to 10 foot C-Band dish would be required. If it's specifically for NASA TV then you can save a bit of the cost by using a dish which is only aimed at Spacenet 2 without any acutator motor which is used to move the dish to aim it at other satellites. If you scrounge a bit you can probably get by for under $200.

Alternately you can retransmit the WA3NAN Goddard HF transmissions as long as you obey the standard amateur radio rules about retransmissions.

In theory you could get the audio via Internet, but it wouldn't be high quality.

You could also get the audio with a long distance phone call, but that would be extremely $$$$$$.

Remember that it is legal for you to retransmit air-to-ground music (e.g. the wakeup calls), but not legal to transmit the press conferences or other audio which may be of a commercial nature, or otherwise prohibited on amateur frequencies.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

498. Re: Announsing: Technology Patent Available For Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: gherbst@msn.com
Message-ID: <NEWTNews.826564341.13885.Postmaster@GGHERB.MONSANTO.COM>
Source record: 22768
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.antenna

> Amen, Jim. If this thing works like this guy spells, he's got a tough sell.

>
> "Announsing", "blatent" and "know one else" indeed. I don't know what his
> device is, because searching for the number didn't work for me. Sounds like
a
> Peltier device, but I guess it could be cold fusion.
>
> 73, Wes -- N7WS
>
Always nice to see a couple of smarta*sses on the net..Hi fellows

Gerhardt-

499. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: st11@ita.pwr.wroc.PL
Message-ID: <199603111700.JAA05616@UCSD.EDU>
Source record: 22769

```
subscribe
```

500. Re: => How Can I get Shuttle Audio?? <=

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4i1pga$jgl@sloth.swcp.com>
Source record: 22770

Philip Chien <kc4yer@amsat.org> wrote:

>Best way is with a satellite dish. From where you're located a 7 to 10
>foot C-Band dish would be required. If it's specifically for NASA TV
>then you can save a bit of the cost by using a dish which is only aimed
>at Spacenet 2 without any acutator motor which is used to move the dish
>to aim it at other satellites. If you scrounge a bit you can probably
>get by for under $200.

Thanks for the message! Where abouts can I find/buy one of these
dishes. This is going to be just for shuttle audio, so unless there
is another satellite up there I can use, Spacenet 2 will be the one.

>Alternately you can retransmit the WA3NAN Goddard HF transmissions as
>long as you obey the standard amateur radio rules about retransmissions.

I hardly hear them on HF anyway, so I'll stick with Spacenet 2.

>Remember that it is legal for you to retransmit air-to-ground music (e.g.
>the wakeup calls), but not legal to transmit the press conferences or
>other audio which may be of a commercial nature, or otherwise prohibited
>on amateur frequencies.

Thanks for the info, and I'm still looking for more! I hope to get
this thing rolling by this summer at the latest.
Best of 73,
Brian, N5ZGT...

Boy Scouts of America Amateur Radio
J.A.S.M. - Troop 41 N5ZGT
Albuquerque, NM Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
Great Southwest Council Internet: n5zgt@swcp.com
O.A. Lodge 66
----

501. Re: Why so little amateur space activity

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4i12ie$h5k@paperboy.ids.net>
Source record: 22864

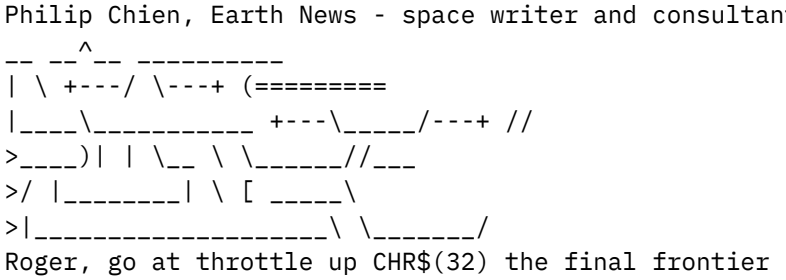
Most of the responses in this thread have been extremely informative --- but extremely off topic and do not answer the original question.

The original poster asked why amateur satellite operations were sparse in his particular area (Southeastern Virgina).

Most of the responses have responded to why amateur satellite work is a specialized portion of amateur radio and not a more popular form of communications for hams. Accurate and interesting information - but not responding to the original question.

I stand by my original response - amateur satellite work is a field which requires a lot of elmering and exposure. If you haven't been introduced by somebody in your area (either via a ham club or at a hamfest) then you aren't likely to get in to it yourself. And the solution is for satellite hams to encourage others in their area to get involved - show them how easy it is, how much better the quality of satellite communications is over other techniques.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



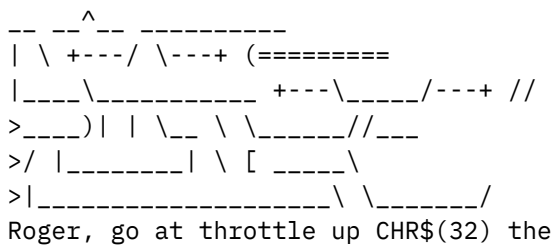
Roger, go at throttle up CHR$(32) the final frontier

502. Re: Face On Mars Development

Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4i12lm$h5k@paperboy.ids.net>
Source record: 22865

In article <4hofoh$fkm@jake.probe.net> Brad Grier, bgrier@probe.net
writes:
>There's been an intriguing development regarding the so-called
>"Face On Mars." For the details, visit the following URL:

Unless the face on Mars happens to have an amateur radio license - I fail
to see what this particular anouncement has to do with
rec.amateur.radio.space ....

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

503. Re: receiving Spacenet2 from the Netherlands

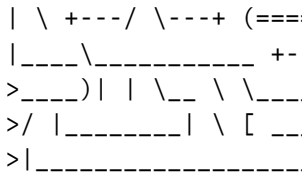
Newsgroup: rec.radio.amateur.space
Date: 1996-03-11 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4i12rn$h5k@paperboy.ids.net>
Source record: 22866

In article <4hq54p$4uc@big.hacom.nl> Nico Vermaas, nico@hacom.nl writes:
>I'm trying to find out if I can receive the spacenet2 sat from
>the Netherlands, I'm at 52 North, 5.30 East..
>The sat is at 69 West...

Spacenet 2, and almost all domestic satellites, aims its signal towards the continental United States. So even though the satellite is above the horizon for over a third of the world its signal is aimed at a much smaller portion.

And the Netherlands is a bit outside of its planned audience ...

If you're trying to get NASA Select, check out some of the international birds, especially on missions with a heavy European or Russian involvement. I understand Gorizont 20 is used for transmissions from Kaliningrad to Houston during the joint Shuttle-Mir missions.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

504. ARLK017 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk017.1996@arrl.org>
Source record: 22771
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK017
ARLK017 Keplerian data

ZCZC SK17
QST de W1AW
Keplerian Bulletin 17 ARLK017
From ARRL Headquarters
Newington, CT March 12, 1996
To all radio amateurs

SB KEP ARL ARLK017
ARLK017 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TSS-1R
1 23805U 96012B 96072.18601985 .00958423 32828-3 41330-2 0 595
2 23805 28.4692 152.6657 0047081 357.3427 2.6978 15.82028988 2896
Mir
1 16609U 86017A 96072.16079048 .00002315 00000-0 37268-4 0 05383
2 16609 51.6450 250.1405 0005669 85.2167 274.9470 15.57728879574881
HST
1 20580U 90037B 96072.19531427 .00000350 00000-0 19423-4 0 07887
2 20580 28.4681 121.9958 0005843 236.6921 123.3109 14.91024392124090
AO-10
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2 14129 26.3511 220.9315 5983467 356.3180 0.5177 2.05877093067731
RS-10/11
1 18129U 87054A 96071.93743031 .00000011 00000-0 -48318-5 0 01914
2 18129 82.9231 220.4007 0013305 65.4915 294.7625 13.72362773436835
UO-11
1 14781U 84021B 96071.96274222 .00000084 00000-0 21932-4 0 8681
2 14781 97.7934 67.0462 0012938 45.5592 314.6691 14.69433108643372
RS-12/13
1 21089U 91007A 96072.04771058 .00000032 00000-0 17988-4 0 08859
2 21089 82.9191 261.3744 0029659 140.7982 219.5319 13.74067177255691
AO-13
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RS-15
1 23439U 94085A 96071.71270775 -.00000039 00000-0 10000-3 0 01265
2 23439 64.8172 180.7147 0163505 216.1597 142.8182 11.27523812049797
AO-16
1 20439U 90005D 96072.09739542 -.00000028 00000-0 58609-5 0 09775
2 20439 98.5640 158.9817 0011720 124.3996 235.8287 14.29968150320191
DO-17
1 20440U 90005E 96072.12925858 -.00000024 00000-0 76420-5 0 09821
2 20440 98.5651 159.5981 0011868 123.2125 237.0176 14.30109746320224
WO-18
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2 20441 98.5652 159.6026 0012420 124.8256 235.4105 14.30079975320239
LO-19
1 20442U 90005G 96072.12019448 .00000005 00000-0 18540-4 0 09783
2 20442 98.5676 159.9943 0012575 122.9517 237.2863 14.30187271320248
FO-20
1 20480U 90013C 96072.15969265 .00000021 00000-0 12383-3 0 8626
2 20480 99.0391 115.4134 0540803 344.4786 14.0278 12.83232636285443
AO-21
1 21087U 91006A 96071.90557887 .00000094 00000-0 82657-4 0 07056
2 21087 82.9378 33.6997 0035687 114.5536 245.9334 13.74566435256645
UO-22
1 21575U 91050B 96072.05763844 .00000045 00000-0 29411-4 0 06881
2 21575 98.3643 141.2879 0006791 192.4130 167.6906 14.37014991244116
KO-23
1 22077U 92052B 96072.06369927 -.00000037 00000-0 10000-3 0 5623
2 22077 66.0765 32.8050 0009068 324.7486 35.2916 12.86295806168317
KO-25
1 22828U 93061F 96072.22944239 .00000006 00000-0 19720-4 0 4365
2 22828 98.5873 149.7004 0010217 134.5779 225.6237 14.28132749 96278
IO-26
1 22826U 93061D 96072.08529168 .00000002 00000-0 18548-4 0 04708
2 22826 98.5926 149.5081 0008870 150.6546 209.5133 14.27796969128148
AO-27
1 22825U 93061C 96072.08161743 .00000027 00000-0 28634-4 0 04746
2 22825 98.5916 149.3563 0008504 149.9399 210.2280 14.27689125128136
PO-28
1 22829U 93061G 96072.10463280 .00000007 00000-0 20080-4 0 04536
2 22829 98.5885 149.6268 0009891 135.9100 224.2884 14.28113243128178

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
March 16, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

505. unsubscribe

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: DELOUARD.GUY@Mail.FTMD.FRance-Telecom.FR
Message-ID: <9602128266.AA826678923@Mail.FTMD.France-Telecom.fr>
Source record: 22772

```
UNSUBSCRIBE delouard.guy@ftmd.france-telecom.fr ham-space
```

506. March 16 Colorado ATV/Repeater/Packet Balloon Launch.

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: au156@yfn.ysu.edu
Message-ID: <4i2nh1$ica@news.ysu.edu>
Source record: 22773

EOSS-25: CENTRAL COLORADO REPEATER/ATV BALLOON LAUNCH

Region: Central Colorado

Date/Time: March 16 / 11:00 AM MST, 18:00 UTC

Location: RC (Radio Controlled) model airplane airport
located east of Falcon, CO on US 24 (about 9
miles east of Colorado Springs on US 24)

Expected track: between 45 and 145 degrees azimuth

Flight
Experiment: US Air Force Academy satellite experiment
and RMRL crossband repeater

Project
Integrators: USAFA and EOSS

ATV: a. [EOSS] 426.25 MHz AM (1 watt output) NTSC color
b. [AFA] 439.25 MHz AM (1 watt output) NTSC color

VHF/UHF Repeater: 446.000 MHz FM Input
147.555 MHz FM Output

Beacons: 144.34 MHz Morse ID audio on FM
(periodic; frequency shared with packet
telemetry)

Telemetry: a. [EOSS] 144.340 MHz FM (1 Watt output)
AX.25, 1200 baud mostly plain english text;
includes APRS position data string.
b. [AFA] 147.450 and 147.500 Mhz FM, AX.25,
1200 baud; special telemetry format.

HF Net: 7.235 Mhz SSB

For additional launch data and general Edge of Space Sciences (EOSS)
information:

http://www.usa.net/~rickvg/eoss.htm
maintained by Rick von Glahn
rickvg@usa.net

Hank Riley, N1LTV

h1riley@umassd.edu
au156@yfn.ysu.edu

507. Re: Radio Telescope info?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: larry@grove.net
Message-ID: <4i4htv$nlb@news2.his.com>
Source record: 22774

Philip Chien <kc4yer@amsat.org> wrote:

>In article <4gt9dh$89d@usenet.srv.cis.pitt.edu>, davep+@pitt.edu says:
>>
>>Hey folks!
>>I don't know if this is the right newsgroup, but I saw a guy on TV
>>that had an amature radio telescope setup linked into a few PC's
>>looking for intelligent signals, is there any info out there on how to
>>set up a rig like this?
>>
>>Any help would be appreciated!
>>Dave Powell
>>davep+@pitt.edu

>This is the right group. For the amateur SETI project check out the SETI
>League's WWW site.

>Or better yet, check out the upcoming feature in "Popular Mechanics".
>Modesty prevents me from mentioning who wrote that article ...

Or better yet, subscribe to satellite Times magazine, the only magazine in the world with a regular Radio Astronomy column edited by the dean of SARA, Jeff Lichtman. If you want to learn more about RA you could attend the Grove Comm Expo 96 this fall in Atlanta. The SARA (Society of Amateur Radio Astronomers) will be holding their fall conference in conjunction with the Expo. Have have no modesty, I'm the publicity chairman and they have no morals, scrubles, and anything else.

Hope that helps,

Larry Van Horn
Managing Editor
Satellite Times magazine
Email: steditor@grove.net
Web Page: http://www.grove.net/hmpgst.html

508. UK WWW Satellite Predictions

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: "Dave (badger) Johnson" <badger@parallax.co.uk>
Message-ID: <3145320C.5BCD@parallax.co.uk>
Source record: 22775
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur

FYI

I publish amateur radio satellite predictions on the web,
the URL is http://www.parallax.co.uk/~badger/predict.

It covers 11 major cities and all the current amateur satellites
and MIR.

Any feedback would be welcome.

--
badger@parallax.co.uk | Wk. :+44 1203 693633
g4dpz@amsat.org | Hm. :+44 121 561 3891
http://www.parallax.co.uk/~badger | Mob.: 0802 210695

509. Working the Microsats

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: jeffj@crl.com
Message-ID: <4i5njl$rn1@crl.crl.com>
Source record: 22776

I am hoping someone can help me out with working the microsats. A friend of mine will be out to sea and wants to be able to receive email via the microsats. He is a ham of course but he like me have'nt be able to find much information on how to use them. I have the Satellite book from the ARRL and it helps some. Could someone that works them please email me or post here exactly how we could use them to send meal back and forth to each other? Also I assume that omni directional antennas would work best off his boat. Thanks for any and all help!

Jeff Jones

AB6MB

510. Windload for helix antenna?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: ericr@access1.digex.net
Message-ID: <ericr.826667177@access1>
Source record: 22777
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

I have a 16-turn, 10 ft long G3RUH 70cm helix with an 18" square screen as
the reflector. I'd like to figure out the windloading for this antenna.
Can anyone suggest either the windload itself or how to calculate it.

Thanks,

Eric
--
Eric Rosenberg WD3Q, EI4VPS, YJ0AER, J20BY, etc.
Washington, DC
ericr@access.digex.net wd3q@amsat.org

511. STS-76 EastCoast Launch Liason Freq?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4i4h4q$mfn@newsbf02.news.aol.com>
Source record: 22778

How About a 80m liason net on 3.818 the morning of the STS-76 Launch? (3/21EST). ANS reports that folks on up the east-coast will be able to see the main-tank seperation. It should be quite visible!! I don't know if we here in syracuse (76 x 43deg) will be able to see much w/o climbing a TALL hill (Mt. Sevier comes to mind), or even if the infamous Lake Ontario Snow Snake will be up and runnin', clouds and all. But, a pre-set freq. such as suggested would be a nice idea to let the folks on the seashore report back to we in-landers.....

How 'bout it??

Hail Atlantis!!!

George N2LZH

512. A USA QSL BURO

Newsgroup: rec.radio.amateur.space
Date: 1996-03-12 00:00:00 UTC
From: 102452.2315@compuserve.com
Message-ID: <4i2hk3$hg0@arl-news-svc-3.compuserve.com>
Source record: 22779

* * * * * * * A T T E N T I O N A L L H A M S * * * * * * *

NOW SEND "QSL VIA USBURO" ON THE AIR!
USA QSL BUREAU FOR ALL YOUR DOMESTIC QSL CARDS, ALL 10
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START ENJOYING THE SAVINGS AND BENEFITS TODAY!!
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PLEASE PUT YOUR CALLSIGN IN TOP LEFT CORNER!!! OR
YOU MAY SEND $5.00, YOUR CORRECT RETURN ADDRESS & WE SUPPLY
10 ADDRESSED STAMPED ENVELOPES FOR YOU.

SEND YOUR CHECK/OUTGOING CARDS ALONG WITH YOUR SASE'S TO;
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NOW, THERE IS NO REASON NOT TO QSL!!!
OPERATED BY AA1MF & CREW
E-MAIL 102452.2315@COMPUSERVE.COM
-EOF-

513. Re: Radio Meteor Obs. Bull. Feb 1996

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: Geir <nada@telepost.no>
Message-ID: <314648F9.7D6C@telepost.no>
Source record: 22780

Christian Steyaert wrote:
>
> Hi Geir,
>
> >This is interesting! Will it be possible for me to pick up those >transmissions with an AOR AR-8000 and discone when there are reflections?
>
> Undoubtly, this is a fine piece of equipment.
> There are always (more or less) reflections, also outside the streams.
>
> Sorry if you got the FAQs below already, but perhaps they can be interesting for you, not so much for the radio technique, but for the more astronomical part.
>
> Kind regards,
>
> Chris

Hello Chris

Thanks for your answer. I will try to listen to the 66 MHz signals via ms with my AOR AR-8000.
I am also a radio amateur (LA6LU) with 100watts 50 MHz capability with my Icom IC-736 tranceiver.
I have ordered a digital tape recorder from germany, but have not received it yet. When I get it,
I can send & receive high speed morse at 10000 chars/min. via meteorscatter. I will also in the
near future buy or build a 5, 6 or 7 element yagi antenna for the 50 MHz band. However, I am a ms
newbie, but have been a radio amateur for 20 years, so the ms FAQ you sent was very welcome.

I am also the responsible person for 3 beacons here; LA4TEN on 28.211, LA4VHF on 144.890 & LA7UHF on 432.830. In the FAQ there was said that below 40 MHz is not good for ms. Well is that
really true? I have for many years now listen for 28 MHz beacon sucessfully via ms. And I have
some funny experiences with my own beacon LA4TEN wich runs 250 Watts ERP Omni directional. I have a summer cabin wich I use the whole year more or less in some weekends. When I drive with my car, I drive for 7 hours to get there. The distance by car is about 440 km in mountain
roads and I will suggest it is about 300 km in a straight line. In my cabin I have a 28 MHz tranceiver & an omni directional vertical. The signal from the beacon must travel (shortest distance) about 300 km as mentioned. The signal must also get over a high mountain in between West /

East of the southern part of Norway. The mountain is at least about 1000 meters high. Now to the
point; In my cabin I can receive the beacon day or night, summer or winter, right above the noise
floor. This was not expected at all at this distance!! Normally I would have expected a 28 MHz
signal reach about 100 km max and not in any way at my cabin. I am not speaking of skip signal here,
the skip will go typically to italy or to the middle of Europe. The signal is quite steady. Well
steady is not really true. The beacon is there about 60-70% of the time I listen. Sometimes it is
just below the noise floor & sometimes just above it. Sometimes the signal peaks wich I think is
because of meteorscatter or airplane scatter. But the question is; how can a 28 MHz signal reach
more than 300 km and "climb" over a big mountain and still be so steady at my cabin? What kind of
propagation is this?

I also thread this message as an answer to your origal output. If anybody can explain this it will
be highly appreciated. At least some of the signal is heard via ms :-)

73 de Geir/LA6LU

---------The Beacons (technical info):

Call MHz Antenna Direction ERP mAsl QTH Status

LA4TEN 28.211 Vertical Omni 250W 30 JP20LG QRV 24h
LA4VHF 144.890 2 * 8 el Yagi 0 degr. (North) 380W 30 JP20LG QRV 24h
LA7UHF 432.830 4 el. Yagi 0 degr. (North) 200W 30 JP20LG QRV 24h

QTH is on an island: Sotra (EU-055) at a small place: Telavaag west for the city Bergen.
Exact position is: N 60ï¿½15'35.76" - E 05ï¿½04'06.05".

SWL Reports is welcome! All reports via mailed QSL's will be QSL'ed back with the beacons QSL card!

Contact: Geir Laastad/LA6LU
Bergvegen 9
5382 Skogsvaag

Tel.Priv: 56 33 72 10
Tel.Work: 56 33 72 57
GSM.Tel.: 901 78 525

Packet radio: LA6LU@LA1B.BRG.R.NOR.EU
E-mail.....: nada@telepost.no

514. Help OSCAR 2m Dwnlnk

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: aga@ssguest.west.sun.com
Message-ID: <4i6vk9$ddf@newsworthy.West.Sun.COM>
Source record: 22781

I need some help choosing an antenna for the 2 meter downlink. I am trying to build a solid receiver setup at as low a cost as is reasonable. I allready have a Yeasu FT-101ZD receiver at 14mhz using an Ameco Nuvistor convertor. It's old but sure seems to have plenty of gain and is a stable setup. I plan on making up for the convertors mediocre noise figure by installing a GasFet preamp at the antenna which will be only 20 feet or less away from the shack. I am contemplating a six turn helix but haven't worked out the mechanical details. (Need to get to Home Depot hihi). As an alternative antenna I am thinking of the KLM,Hy-gain or M2 Circular polarized yagis. I have notice they make both a large and a smaller model (15ele vs 11 or so). Which one is my best bet? Should I go for the higher or lower gain model? I like the idea of switching RHCP and LHCP but I'm not sure how important it is? Slowly but shurely and before the sunspots are back!

TIA

Tony WA6LZH

515. Re: UK WWW Satellite Predictions

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: Michael J Wooding <vhf-comm@g6iqm.demon.co.uk>
Message-ID: <j1UGJOAkWzRxEwDy@g6iqm.demon.co.uk>
Source record: 22782
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur

In article <3145320C.5BCD@parallax.co.uk>, "Dave (badger) Johnson"
<badger@parallax.co.uk> writes
>Any feedback would be welcome.

When's the nest chineese bird coming down? - can I takes me 'ard 'at orf
yet?

Mike

Michael J Wooding vhf-comm@g6iqm.demon.co.uk - CompuServe: 100441,377
WWW: http://www.eolas.co.uk/ag/vhfcomm.htm (hambits.htm & hamclip.htm)
WWW: http://www.clearlight.com/~vhfcomm
Tel: (0)1788 890365 Fax: (0)1788 891883
KM Publications, 5 Ware Orchard, Barby, Nr.Rugby, CV23 8UF, UK
VHF Communications Magazine - Especially Covering VHF, UHF and Microwaves

516. Re: A USA QSL BURO

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4i7igl$h4h@sloth.swcp.com>
Source record: 22783

I think I'll stick with the ARRL's Bureau...
Best of 73,
Brian, N5ZGT...

Boy Scouts of America Amateur Radio
J.A.S.M. - Troop 41 N5ZGT
Albuquerque, NM Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
Great Southwest Council Internet: n5zgt@swcp.com
O.A. Lodge 66
---

517. ARLS004 Ham radio on STS-76

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls004.1996@arrl.org>
Source record: 22784
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS004
ARLS004 Ham radio on STS-76

ZCZC AS12
QST de W1AW
Space Bulletin 004 ARLS004
From ARRL Headquarters
Newington, CT March 13, 1996
To all radio amateurs

SB SPACE ARL ARLS004
ARLS004 Ham radio on STS-76

Mission managers at the NASA Kennedy Space Center have announced March 21 as the official launch date for the Space Shuttle Atlantis, and mission STS-76. The mission marks the third time the shuttle will dock with the Russian Mir Space Station. The astronauts are also planning to conduct Amateur Radio activities as part of the Shuttle Amateur Radio EXperiment (SAREX). Five student groups have been selected to make scheduled radio contacts with the crew.

The shuttle will also carry a SPACEHAB laboratory, providing the astronauts with a working environment to conduct microgravity research and development, and to help resupply Mir.

The astronauts may find time to make contacts with the amateur community and their own families. All of the contacts will be 2-meter FM voice, using the shuttle's VHF Mir-docking radio. Frequencies, call signs and general operating information can be obtained from the new ARRL SAREX World Wide Web site at http://www.arrl.org/sarex/.

The following pre-launch Keplerian elements can be used by most computer tracking software to predict the ground track of the shuttle. The elements are based on a scheduled launch of March 21 at 0835 UTC. Thanks to Ken Ernandes, N2WWD, for the following elements which were found on the AMSAT Web site at http://www.amsat.org.

(AMSAT-format)

Satellite: STS-76 OMS-2
Catalog number: 99976
Epoch time: 96081.38742082
Element set: 1
Inclination: 51.6455 deg
RA of node: 203.9666 deg

Eccentricity: 0.0076991
Arg of perigee: 3.1580 deg
Mean anomaly: 185.7961 deg
Mean motion: 16.10725400 rev/day
Decay rate: 2.00933e-04 rev/day sq
Epoch rev: 1
Checksum: 311

(NASA two-line format)

STS-76 OMS-2
1 99976U 96081.38742082 .00020093 16712-8 12080-4 0 16
2 99976 51.6455 203.9666 0076991 3.1580 185.7961 16.10725400 13

Stay tuned to W1AW for additional bulletins throughout the mission.
Details about SAREX can be obtained from the ARRL Educational
Activities Department.
NNNN
/EX

518. Re: Radio Telescope info?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-13 00:00:00 UTC
From: ron.hauger@sourcebbs.com
Message-ID: <8BCA299.0391000114.uuout@sourcebbs.com>
Source record: 22785

On 03/12/96 LARRY VAN HORN wrote to ALL...

LV> Or better yet, subscribe to satellite Times magazine, the only
LV> magazine in the world with a regular Radio Astronomy column edited by
LV> the dean of SARA, Jeff Lichtman. If you want to learn more about RA
LV> you could attend the Grove Comm Expo 96 this fall in Atlanta. The SARA

Hi Larry. Are you planning to come to the BIG hamfest at
Va. Beach in Sept ?

RON.HAUGER@WARPDRV.COM*KC4KNA*VBARC*AMSAT*RTTY*PACKET*SWL*ATV
HF+VHF WEFAX*TVRO*SCPC*FM2*EXTRATERRESTRIAL*WATCHEROFTHESKIES

The big guy with the glasses.....

---
* OFFLINE 1.58

This message originated from: ---------- Selective Source BBS
------- Virginia Beach, Virginia
----- (804) 471 6776

519. Re: MacPB (sat software for MAcs)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-14 00:00:00 UTC
From: r.serna@eworld.com
Message-ID: <4i925l$1om@hp5.online.apple.com>
Source record: 22786

Hi Gil:

Hi have testing your program.

Ramon Serna EA3CFC
R.Serna@eworld.com

520. Costs of equip in Aus

Newsgroup: rec.radio.amateur.space
Date: 1996-03-14 00:00:00 UTC
From: Mike Lynn <100135.2612@CompuServe.COM>
Message-ID: <4i9pnt$d6a$2@mhadf.production.compuserve.com>
Source record: 22787

Anyone,

I am going to Australia in May and i am wondering what the average

costs are for equipment ie ft290r mk 2

Is it worth buying it here in England or taking my money over there.

Mike Lynn

Compuserve 100135,2612

--
Mike Lynn
Comms Guru
lynnm@westpac.demon.co.uk
compuserve 100135,2612

521. 6 meter EME

Newsgroup: rec.radio.amateur.space
Date: 1996-03-15 00:00:00 UTC
From: Geir <nada@telepost.no>
Message-ID: <3148C4BC.5C6A@telepost.no>
Source record: 22788

Hello and thanks for reading this.

Does anybody know of how common 6 meter moonbounce is? I have plans to build a station with big 6 meter yagi(s) feed from an IC-736 with 100 watts out at 6. I have already ordered a digital taperecorder/sender wich is capable for 10000 char/min. for meteorscatter works. I hope to be QRV with all this before june. I am also looking for suggestions and prices for big 6 meter yagis wich I intend to import from the U.S.

73 de Geir / LA6LU

522. Re: UK WWW Satellite Predictions

Newsgroup: rec.radio.amateur.space
Date: 1996-03-15 00:00:00 UTC
From: pjessop@tdc.dircon.co.uk
Message-ID: <pjessop.826889687@tdc>
Source record: 22789
Cross-posted to: rec.radio.amateur.space,uk.radio.amateur

"Dave (badger) Johnson" <badger@parallax.co.uk> writes:
>I publish amateur radio satellite predictions on the web,
>the URL is http://www.parallax.co.uk/~badger/predict.
>
>It covers 11 major cities and all the current amateur satellites
>and MIR.
>
>Any feedback would be welcome.

Here is some feedback: Thank You Very Much!

Seriously, the availability of your data has made it very easy to verify
that my own software is producing (or not) reliable data, which is vital
in setting up to receive the satellites.

I wonder if you might add the Weather satellites?

Paul

523. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-15 00:00:00 UTC
From: DELOUARD.GUY@Mail.FTMD.FRance-Telecom.FR
Message-ID: <9602158269.AA826938208@Mail.FTMD.France-Telecom.fr>
Source record: 22790

```
DELETE delouard.guy@ftmd.france-telecom.fr ham-space
```

524. Re: Working the Microsats

Newsgroup: rec.radio.amateur.space
Date: 1996-03-15 00:00:00 UTC
From: "JOSE V. GAVILA" <Fermax.esp@vlc.servicom.es>
Message-ID: <4ibi58$2ft@ns.mad.servicom.es>
Source record: 22791

Hello Jeff,

I work the AO-16 and LO-19 (1200 baud) and the KO-23, KO-25 and UO-22 (9600 baud) satellites.

Depending of the satellites you need a PSK modem (1200) or an FSK modem (9600). I recommend this last because PSK satellites operate in SSB and it is difficult to track manually the PSK signal (due to Doppler effect, you need to change the receiving and transmitting frequency during the pass, as you know).

So, if you are going to use the 9600 FSK sats (KO-23, KO-25 and/or UO-22), you need a 9600 baud FSK modem, a TNC and a PC computer with an adequate program. I recommend WISP suite (you can get it at AMSAT), because with WISP you have orbit prediction, doppler correction and communications in only one package.

Well, if you want specific information on any subject, tell me.

Regards & 73s JOSE - EB5AGV / EC5AAU

525. Re: 6 meter EME

Newsgroup: rec.radio.amateur.space
Date: 1996-03-15 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960315145526.8570A-100000@internet>
Source record: 22792

On Fri, 15 Mar 1996, Geir wrote:

> Hello and thanks for reading this.
>
> Does anybody know of how common 6 meter moonbounce is? I have plans to
> build a station with big 6 meter yagi(s) feed from an IC-736 with 100
> watts out at 6. I have already ordered a digital taperecorder/sender
> wich is capable for 10000 char/min. for meteorscatter works. I hope to
> be QRV with all this before june. I am also looking for suggestions and
> prices for big 6 meter yagis wich I intend to import from the U.S.
>
> 73 de Geir / LA6LU
>
>
>

Get ahold of k6qxy who has been active on 6 eme. You will need a lot
more than 100 watts though. Dan WA7TDZ oconneld@mail.oit.osshe.edu

526. ARLK018 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-16 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk018.1996@arrl.org>
Source record: 22793
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK018
ARLK018 Keplerian data

ZCZC SK18
QST de W1AW
Keplerian Bulletin 18 ARLK018
From ARRL Headquarters
Newington, CT March 16, 1996
To all radio amateurs

SB KEP ARL ARLK018
ARLK018 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76 OMS-2
1 99976U 96081.38742082 .00020093 16712-8 12081-4 0 17
2 99976 51.6455 203.9666 0076991 3.1580 185.7961 16.10725400 13
Mir
1 16609U 86017A 96075.24012569 .00003186 00000-0 48715-4 0 4431
2 16609 51.6457 234.7062 0005740 93.6065 266.5584 15.57753218575367
AO-10
1 14129U 83058B 96072.78930691 .00000050 00000-0 10000-3 0 4060
2 14129 26.3531 219.7580 5987476 358.1706 0.3226 2.05880387 67880
RS-10/11
1 18129U 87054A 96074.85374787 .00000030 00000-0 16349-4 0 01835
2 18129 82.9232 218.2454 0013308 58.4857 301.7603 13.72362895437232
UO-11
1 14781U 84021B 96074.95890219 .00000068 00000-0 19255-4 0 08882
2 14781 97.7936 69.9064 0012876 36.3045 323.9046 14.69433691643818
RS-12/13
1 21089U 91007A 96075.03324080 .00000015 00000-0 36365-7 0 08832
2 21089 82.9187 259.1587 0029921 132.6373 227.7308 13.74067103256107
AO-13
1 19216U 88051B 96074.32287726 .00000154 00000-0 23066-3 0 01671
2 19216 57.3184 129.4281 7389451 33.9446 356.5364 2.09735039027843
UO-14
1 20437U 90005B 96075.14477950 .00000127 00000-0 65871-4 0 01863
2 20437 98.5471 159.9089 0011209 113.0845 247.1691 14.29915948320612
```

```
RS-15
1 23439U 94085A 96074.72830329 -.00000039 00000-0 10000-3 0 01198
2 23439 64.8168 175.8389 0163555 215.6050 143.3874 11.27523883050130
AO-16
1 20439U 90005D 96075.10617426 .00000026 00000-0 26937-4 0 09726
2 20439 98.5631 161.9386 0011902 115.5852 244.6543 14.29968958320628
DO-17
1 20440U 90005E 96075.13774020 .00000034 00000-0 29730-4 0 09740
2 20440 98.5647 162.5579 0011866 114.4069 245.8377 14.30110594320653
WO-18
1 20441U 90005F 96075.19556439 -.00000004 00000-0 15046-4 0 09876
2 20441 98.5651 162.5625 0012655 116.4525 243.7972 14.30080139320667
LO-19
1 20442U 90005G 96075.12851484 .00000009 00000-0 20266-4 0 09737
2 20442 98.5670 162.9538 0012672 114.0211 246.2304 14.30187545320678
FO-20
1 20480U 90013C 96075.12227557 -.00000056 00000-0 -47829-4 0 08788
2 20480 99.0390 117.8168 0540829 337.7688 20.0740 12.83231912285828
AO-21
1 21087U 91006A 96074.89002478 .00000094 00000-0 82657-4 0 07025
2 21087 82.9380 31.4917 0035680 106.3612 254.1444 13.74566576257059
UO-22
1 21575U 91050B 96075.12131504 .00000018 00000-0 20567-4 0 06832
2 21575 98.3637 144.2636 0007055 180.8707 179.2470 14.37015181244553
KO-23
1 22077U 92052B 96075.01821635 -.00000037 00000-0 10000-3 0 05776
2 22077 66.0766 26.6197 0009287 324.3282 35.7122 12.86295786168696
KO-25
1 22828U 93061F 96075.10196191 .00000017 00000-0 24186-4 0 04499
2 22828 98.5868 152.5235 0010322 125.6501 234.5630 14.28133273096685
IO-26
1 22826U 93061D 96075.09864250 -.00000019 00000-0 10033-4 0 04638
2 22826 98.5921 152.4697 0009100 141.6500 218.5297 14.27797096128576
AO-27
1 22825U 93061C 96075.09519594 .00000028 00000-0 28774-4 0 04691
2 22825 98.5912 152.3179 0008554 140.3525 219.8283 14.27689571128560
PO-28
1 22829U 93061G 96075.11731706 -.00000004 00000-0 15969-4 0 04731
2 22829 98.5885 152.5895 0010226 127.0710 233.1407 14.28113408128601

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
March 19, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

527. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-03-16 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_826959501@rtfm.mit.edu>
Source record: 22794
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

528. ISU USPC'96-NBS'96 Announcement

Newsgroup: rec.radio.amateur.space
Date: 1996-03-16 00:00:00 UTC
From: wallio@dsm1.dsmnet.com
Message-ID: <4ietul$54q@dsm6.dsmnet.com>
Source record: 22795

IOWA STATE UNIVERSITY
Announces and Calls for Papers

UNIVERSITY SPACE PROJECTS CONF '96 NATIONAL BALLOON SYMPOSIUM '96
Wednesday-Friday, July 17-19, 1996 Friday-Sunday, July 19-21, 1996

USPC'96 is a conference for NBS'96 is the second gathering of
university faculty, students and high altitude balloon enthusiasts
staff that are involved in some from both the professional and
form of space-related activities. amateur communities. NBS'96 is
USPC'96 is intended to be more designed as a show-and-tell
broadly focused than any existing gathering where the exchange of
conference, bringing together for ideas is encouraged and ample time
discussion and exchange of ideas, for demonstration of hardware will
university personnel active in be provided. Suggested topics
shuttle small payloads, small include:
satellites, sounding rockets, and
high altitude balloons. Suggested
topics include:

- Shuttle Small Payloads - History and Future Prospects
- Sounding Rocket Flights/Payloads - Interesting Experiences
- High Altitude Balloon Missions - High Altitude Science
- Small Satellite Programs - FAA and FCC Regulatory Issues
- University-NASA Relations - Getting Started
- University-Industry Relations - Payload Design and Capabilities
- Funding Opportunities - Flight System Design
- Flight Opportunities - Mission Management
- Tracking and Recovery

University students, faculty and staff, professional and amateur
scientists, and Amateur Radio enthusiasts are encouraged to share their
interests, education and experience by submitting and presenting papers for
either or both gatherings. Papers will be selected from submitted
abstracts, published in separate proceedings, and scheduled for
presentation in a single track format. Submission of an abstract indicates
the author's intention to write and present a technical paper. Abstracts
summarizing proposed papers, not to exceed 300 words, must be received by
May 1, 1996. Send abstracts to:

Darby G. Cooper, Asst. Director
Iowa Space Grant Consortium
Iowa State University
407 Town Engineering Building
Ames, Iowa 50011-3231
Phone: 800-854-1667 or 515-294-8487

FAX : 515-294-3262
EMAIL: dgcooper@iastate.edu

---------- CUT FOR REGISTRATION FORM ----------

UNIVERSITY SPACE PROJECTS CONF '96 NATIONAL BALLOON SYMPOSIUM '96
July 17-19, 1996 July 19-21, 1996

Dual Registration Form - Duplicate as Necessary
One attendee per registration form
(Please print or type)

NAME _____

ORGANIZATION _____

MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE (Day) _____ FAX _____

INTERNET E-MAIL _____ HAM CALL _____

REGISTRATION OPTIONS

USPC'96 early registration fee (received by July 1st) $ 175 $ _____
USPC'96 registration fee (received after July 1st) $ 190 $ _____
(Both of the above include Wednesday and Thursday
evening meals and one copy of the USPC'96 proceedings)
USPC'96 student registration fee $ nc $ nc
(Does not include meals or proceedings)
USPC'96 Wednesday evening meal (Students or guests) $ 10 $ _____
USPC'96 Thursday evening meal (Students or guests) $ 12 $ _____
USPC'96 Proceedings (Students or additional copies) $ 15 $ _____

NBS'96 early registration fee (received by July 1st) $ 30 $ _____
NBS'96 registration fee (received after July 1st $ 35 $ _____
(Both of the above include one copy of the NBS'96
proceedings but no meals)
NBS'96 Friday evening meal $ 10 $ _____
NBS'96 Saturday evening meal $ 12 $ _____
NBS'96 Proceedings $ 10 $ _____

TOTAL ENCLOSED $ _____

Full payment in U.S. dollars is Registration confirmations will be
required with registration. Checks mailed out immediately. Further
payable to Iowa State University information will be mailed after
will be cashed on July 1st. July 1st. There will be no refunds
after July 1st.
___ Reasonable accommodation is
available for persons with Registration and questions to:
disabilities. Please check this
line for additional information. Iowa Space Grant Consortium

Iowa State University
___ Please check this line if you 408 Town Engineering Building
require special dietary Ames, Iowa 50011
considerations (specify). 800-854-1667 or 515-294-3106

---------- CUT FOR REGISTRATION FORM ----------

UNIVERSITY SPACE PROJECTS CONF '96 NATIONAL BALLOON SYMPOSIUM '96

Conference Co-chairmen: Symposium Chairman:
John P. Basart, Ph.D. Ralph Wallio, W0RPK
Professor of Electrical Engineering Middle River Valley Radio Obs.
Iowa State University ISU ISAT-SSOL-HABET Advisor
jpbasart@iastate.edu Iowa State University
and wallio@dsmnet.com
Ralph Wallio W0RPK@W0AK.IA

Conference Information

Registration Information:

Early registration fees must be received by July 1st. Refunds will be made to those registrants that must cancel by July 1st. A written cancellation must be received by July 1st. No refunds will be made after July 1st. Substitutions will be accepted. (Iowa State University reserves the right to cancel these programs due to insufficient enrollment and limits its liability to registration refunds only.)

Travel and transportation:

The Des Moines International Airport (40-miles south of Ames and Iowa State University) is served by several national and regional air carriers. Ground transportation is available from the Des Moines airport to Ames on a regular basis or vehicles can be rented from several agencies.

Contact FBOs at the Ames Municipal Airport (AMW) for fly in and tie down information. Arrangements can be made for transport to ISU conference facilities.

Attendees using surface transportation should use I-35, then west on U.S. 30, then north on Elwood Drive then West on Lincoln Way, to the Iowa State Center, Scheman Building.

Lodging:

USPC'96 and NBS'96 registration confirmations will include an Ames Lodging Guide and map. Many have limousine service available to guests.

Exhibit information:

A lockable area will be available for university, commercial, group and individual exhibits and demonstrations at no charge beyond full registration. Contact Darby Cooper at the Iowa Space Grant Consortium for further information.

Internet Information:

USPC'96 and NBS'96 WWW information: http://www.public.iastate.edu/~isgc

Schedule:

Wednesday Noon - 6:00 USPC'96 Exhibit set up
July 17th 3:00 - 6:00 USPC'96 Registration
6:00 Informal meal
7:00 - USPC'96 Evening presentation

Thursday 7:00 - noon USPC'96 Registration
July 18th 8:00 - 9:00 Speaker or Panel Discussion
9:00 - noon USPC'96 Paper presentations
1:00 - 5:00 USPC'96 Paper presentations
6:00 Evening meal
7:00 USPC'96 Evening presentation

Friday 8:00 - 9:00 Speaker or Panel Discussion
July 19th 9:00 - noon USPC'96 Paper presentations
noon USPC'96 Wrap-up
noon - 6:00 NBS'96 Exhibit set up
3:00 - 6:00 NBS'96 Registration
6:00 Informal meal
7:00 NBS'96 Evening presentation

Saturday 7:00 - noon NBS'96 Registration
July 20th 8:00 - noon NBS'96 Paper presentations
1:00 - 5:00 NBS'96 Paper presentations
6:00 Evening meal
7:00 NBS'96 evening presentation

Sunday 6:00 - noon ISU HABET Demonstration Mission
July 21st

Updated schedule information will be posted on the conference WWW homepage.

529. PacComm Spirit-2

Newsgroup: rec.radio.amateur.space
Date: 1996-03-16 00:00:00 UTC
From: vk2top@vk2djg.une.EDU.AU
Message-ID: <245@vk2top.ampr.org>
Source record: 22796

Hi all, I recently purchased a new PacComm Spirit-2 which
I appear to be (maybe) having a little problem with. As it was
purchased with Satellite operating software inside, I really
dont understand a lot about how it works as compared to the
Normal PacComm TNC's.
I have it set to operate 9600BPS whereas it came normally
set at dual speed. The tnc appears to be a little DEAF as compared
to the PacComm DFM NB96 which I was previously using on the
satellites. I have the tnc interfaced to an Icom 820H. Nothing
was changed at the radio end...only the TNC was changed.
Is any-one else out there using the new spirit-2, and if so,
have/are they experienced thsi problem and if so, have they fixed
it and if so how. The old DFM NB96 appeared to work practically
right down to noise, but not this new one.
73'S Norm

530. Re: GS232 & tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-17 00:00:00 UTC
From: Jack Davis <jedavis@deltanet.com>
Message-ID: <NEWTNews.827099837.17718.jed@Deltanet.deltanet.com>
Source record: 22797

In Article<6189@gw.ra3apw.ampr.org>, <ra3apw@gw.ra3apw.ampr.ORG> writes:
> Path: news.deltanet.com!news.deltanet.com!uunet!in2.uu.net!newsfeed.internetmci.com!info
.ucla.edu!galaxy.ucr.edu!ihnp4.ucsd.edu!news1.ucsd.edu!news-mail-gateway
> From: ra3apw@gw.ra3apw.ampr.ORG
> Newsgroups: rec.radio.amateur.space
> Subject: GS232 & tracking
> Date: 16 Mar 96 19:59:50 GMT
> Organization: ucsd usenet gateway
> Lines: 13
> Message-ID: <6189@gw.ra3apw.ampr.org>
> NNTP-Posting-Host: mail.ucsd.edu
> Originator: daemon@ucsd.edu
>
>
> Hello,
>
> what tracking software suporte the interface GS232 for the rotator G5400?
>
> Thank in advance
>
> Karen Tadewosyan, RA3APW
> Moscow, Russia
> phone: (095) 474-62-83
> Email: sysop@ampr.demos.su
> AMPR: ra3apw@gw.ra3apw.ampr.org
> Packet: RA3APW@RA3APW.MSK.RUS.EU

What is the GS232?

73 de WA4EJR

531. Re: 6 meter EME

Newsgroup: rec.radio.amateur.space
Date: 1996-03-17 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar17.212425.12910@ke4zv.atl.ga.us>
Source record: 22798

In article <3148C4BC.5C6A@telepost.no> Geir <nada@telepost.no> writes:
>
>Does anybody know of how common 6 meter moonbounce is? I have plans to
>build a station with big 6 meter yagi(s) feed from an IC-736 with 100
>watts out at 6. I have already ordered a digital taperecorder/sender
>wich is capable for 10000 char/min. for meteorscatter works. I hope to
>be QRV with all this before june. I am also looking for suggestions and
>prices for big 6 meter yagis wich I intend to import from the U.S.
>
>73 de Geir / LA6LU

I don't think there are many stations operating 6m EME, the antenna
arrays required are too large for most amateurs to manage.

A note on meteor scatter, you don't want too large an antenna for
MS, a 3 or 4 element yagi is about right. You don't know precisely
where a meteor trail is going to appear, so too narrow a beam can
cause you to miss many opportunities for a contact. The meteor trail
only has to appear in the common volume of space both you and the
fellow on the other end are illuminating with your antennas. If
you make that common volume too small by using narrow beamwidths,
you'll miss most of the suitable trails.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

532. Re: Old WXSAT rx from TIMESTEP

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4ijldm$blh@bbcnews.rd.bbc.co.uk>
Source record: 22799

Karl Jan Skontorp (skontorp@telepost.no) wrote:
: Hi folks!
: I have a problem, and hope some one out there can give me som help! I
: have an old rx for WXSATs from timestep. The pcb is about 35x140mm big
: and the IC used is MC3359 from Motorola and an audioamplifier TBA820. The
: rx itsefl is working ok except the squelche circuit! I need a schematic
: drawing for this rx and would be very happy if someone could get me
: one!!! I know this diagram have been 'published' and I hope someone have
: got a copy! I have tried to contact Timestep directly, but the tell me
: that they don't have the diagram any more!
:
: tnx de Karl Jan LA3FY
:

I have the prosat II, but I would hav to do as I think you will have to
and that is work out the diagram from the pcb.
I'd like to be able to help. Have you tried timestep??

J.
--

****
* John Boyer, BBC Research & Development Department *
* Kingswood Warren, Tadworth, Surrey, KT20 6NP *
* email: john.boyer@rd.bbc.co.uk *
* phone: 01737 836580 fax: 01737 836665 *
****

533. Re: GS232 & tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-1803960718580001@jake-4h.ip.realtime.net>
Source record: 22800

In article <NEWTNews.827099837.17718.jed@Deltanet.deltanet.com>, Jack Davis <jedavis@deltanet.com> wrote:

> In Article<6189@gw.ra3apw.ampr.org>, <ra3apw@gw.ra3apw.ampr.ORG> writes:
> > Hello,
> >
> > what tracking software suporte the interface GS232 for the rotator G5400?
> >
> > Thank in advance
> >
> > Karen Tadewosyan, RA3APW
> > Moscow, Russia
> > phone: (095) 474-62-83
> > Email: sysop@ampr.demos.su
> > AMPR: ra3apw@gw.ra3apw.ampr.org
> > Packet: RA3APW@RA3APW.MSK.RUS.EU
>
> What is the GS232?
>
> 73 de WA4EJR

It is Yaesu's VERY expensive RS-232 interface to their G-5400 controller box.

--
Ron W5RKN

534. Re: mac tracking software ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: Dave Hartrum WA3YDZ <71664.1743@compuserve.com>
Message-ID: <314E2885.4B3F@compuserve.com>
Source record: 22801

Argon wrote:
>
> Does anyone have any comments about macintosh satellite tracking software ?
>
> Has anyone imported the data from OrbiTrack into Voyager ?
>
> Thanks!
>
> Kyle

I have been running OrbiTrack 2.1.3 for some time now and am
very pleased with the software. It can be found on the Amsat
website.

Dave WA3YDZ

535. Freq in FL near Nasa With Launch Audio

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: aschlie@uoft02.utoledo.edu
Message-ID: <DoHE4F.Fxt@utnetw.utoledo.edu>
Source record: 22802

My father will be down for the launch of sts76 and I would like to know if there are any freq's down there near nasa to hear nasa select audio for the hours leading up to the launch. Either a ham freq or nasa is ok.

Thanks for any help.

Tony

536. Sat / Shuttle tracking program wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: aschlie@uoft02.utoledo.edu
Message-ID: <DoHEBs.GpG@utnetw.utoledo.edu>
Source record: 22803

I am looking for a good sat/shuttle tracking program. I have win95 and linux at my disposal. I am new to this so any pointers would be appreciated.

Tony

537. * SpaceNews 18-Mar-96 *

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: magliaco@email.njin.net
Message-ID: <4ikoih$k88@pilot.njin.net>
Source record: 22804
Cross-posted to: rec.radio.amateur.space,rec.radio.info

From: magliaco@email.njin.net (John Magliacane)
Subject: * SpaceNews 18-Mar-96 *
Date: 18 Mar 1996 17:37:05 -0500
Organization: Rutgers University
Message-ID: <4ikoih$k88@pilot.njin.net>

SB NEWS @ AMSAT $SPC0318
* SpaceNews 18-Mar-96 *

BID: $SPC0318

=========
SpaceNews
=========

MONDAY MARCH 18, 1996

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
published every week and is made available for unlimited free distribution.

* CELESTIAL BBS UPDATE *
========================
Stephen L. Wilson, N9OTT reports that the Celestial World Wide Web URL is:

http://www.grove.net/~tkelso

* MIR NEWS *
============
The Mir #22 crew, as of 11-Mar-96, is busy getting use to their new
environment and perparing for the arrival of the Shuttle Alantis, STS-76.
The 2-meter station has been turned off since the first of the month.
It is hoped that after the STS-76 Docking mission is over, that normal
PMS activity will resume.

Most of the Mir passes over the USA are currently during the early morning
hours. The Mir Space station will be visible in the morning sky over the
next few weeks. Please update your tracking programs, and look for Mir
passes 30 to 120 minutes after before sunrise.

Space Shuttle Alantis STS-76 will be docking with the Space Station Mir a
few days after liftoff (launch of STS-76 scheduled for 21-Mar-96). This
mission will last for approximately 9 days. The Shuttle will be docked
to Mir for approximately 5 days. The best set of Keps to use to track
Space Shuttle Alantis are the Keps for Mir. The orbit of the Mir Space
station is very stable, Mir only drifts 30-60 seconds a week. The orbit
of the Space Shuttle Alantis will be constantly changing until it docks

with Mir. You can find Keps on most PBBS and via the Internet. Any keps for Mir less than a week old will be sufficient.

Remember, only 1 station can connect to MIR's PMS (R0MIR-1) at a time, ALL others must wait.

[Info via G. Miles Mann, WF1F (mann@pictel.com)]

* STS-76 VISIBILITY *
==========
Richard Kramer reports that the last nighttime MIR rendezvous Shuttle launch was visible as far north as 30 miles south of Boston, Massachusettes. The view was brief but spectacular and would suggest that the effort required to watch the launch (weather permitting) is well worth it. It was particularly incredible to watch the launch live on the NASA TV channel and then step outside and see the vehicle streak by, close to the horizon just a few minutes later. (Make sure you keep the TV dimmed down to preserve your night vision).

* STS-76 SAREX NEWS *
==========
The STS-76 SAREX mission is currently scheduled for March 21st, with launch at 3:35 AM EST (0835 UTC). It will use the SAREX-M configuration (e.g. voice only using the VHF transceiver that is also used to talk to Mir).

The crew are:

CDR Kevin Chilton TBD
PLT Rick Seafross KC5CKM
MS1 Ron Sega KC5ETH
MS2 Rich Clifford N0CAL
MS3 Linda Godwin N5RAX
MS4 Shannon Lucid TBD

Kevin Chilton reported that he just took his test (and passed) and Shannon Lucid is interested in getting her license. She and her husband are planning on taking the Technician test before the launch.

The three previously licensed astronauts got their tickets for several different previous SAREX flights. Linda Godwin got her Technician license in 1990 (now a Tech Plus) for the STS-37 mission and also used SAREX on her second shuttle flight, STS-59. Rick Seafross got his license for the STS-58 mission in October 1993. Ron Sega got his license for the STS-60 mission in February 1994.

Kevin Chilton did not have his license for the STS-59 SAREX flight, but did use the transceiver for an educational contact.

Last December, Linda Godwin married fellow astronaut Steve Nagel N5RAW, making the couple the first married astronaut ham couple.

The crew will have their preflight press conference on March 12th at 1530 UTC, and this will be carried on NASA Television. NASA Television carried on Spacenet 2, Transponder 5, Channel 9 at 69 degrees West

longitude. The transponder frequency is 3880 MHz and the audio
subcarrier is 6.8 MHz. Polarization is horizontal.

[Info via Philip Chien]

* STS-76 ELEMENT SET *
======================
The following is a pre-launch Keplerian element data set for STS-76:

STS-76
1 99976U 96081.38742082 .00020093 16712-8 12081-4 0 17
2 99976 51.6455 203.9666 0076991 3.1580 185.7961 16.10725400 13

Satellite: STS-76
Catalog number: 99976
Epoch time: 96081.38742082
Element set: 1
Inclination: 51.6455 deg
RA of node: 203.9666 deg
Eccentricity: 0.0076991
Arg of perigee: 3.1580 deg
Mean anomaly: 185.7961 deg
Mean motion: 16.10725400 rev/day
Decay rate: 2.00933e-04 rev/day^2
Epoch rev: 1

[Info via Gary Morris, KK6YB]

* LUSAT-OSCAR-19 NEWS *
=======================
The fileserver on LUSAT-OSCAR-19 has been re-opened and is functioning
normally once again.

* FEEDBACK/INPUT WELCOMED *
===========================
Comments and input for SpaceNews should be directed to the editor (John,
KD2BD) via any of the paths listed below:

WWW : http://www.njin.net/~magliaco/
PACKET : KD2BD @ KS4HR.NJ.USA.NA
INTERNET : kd2bd@amsat.org, magliaco@email.njin.net
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

SpaceNews is available every week on Usenet in the rec.radio.info,
rec.radio.amateur.misc, and sci.space.news newsgroups, and on packet
radio BBSs worldwide as well as the AMSAT-OSCAR-16 satellite. It can
also be retrieved using the anonymous File Transfer Protocol (FTP) at
pilot.njin.net (128.6.7.38) from the /pub/SpaceNews subdirectory. You
can also "finger magliaco@pilot.njin.net" for a copy of the latest
issue.

<<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

538. WISP

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: Aart.Wedemeijer@pa3cpl.idn.nl
Message-ID: <5d6_9603191720@idn.nl>
Source record: 22805
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

Replying to a message of Jim Chandler to All:

JC> I there a trial version of WISP available on the net someone? I tried
JC> to connect to www.amsat.org but it did not respond (Sun 2100 CST).
JC> Thanks and 73.

WISP runs OK without registration, it's not crippled. But at the start there's
a posting that suggest to pay AMSAT for phase 3d and then you get a key.

Try //ftp.amsat.org, usually works OK here

Greetings, Aart!
aart.wedemeijer@pa3cpl.idn.nl
http://www.noord.bart.nl/~aartw
(Last revision: January 21)
--
| Standard disclaimer: The views of this user are strictly his own.

539. mac tracking software ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-18 00:00:00 UTC
From: argon@onramp.net
Message-ID: <argon-1803961239490001@argon.onramp.net>
Source record: 22806

Does anyone have any comments about macintosh satellite tracking software ?

Has anyone imported the data from OrbiTrack into Voyager ?

Thanks!

Kyle

540. Re: Freq in FL near Nasa With Launch Audio

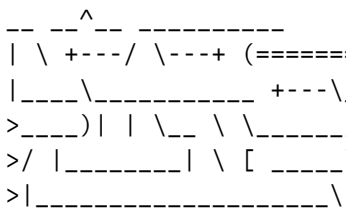
Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4ilqad$apr@paperboy.ids.net>
Source record: 22807

In article <DoHE4F.Fxt@utnetw.utoledo.edu> , aschlie@uoft02.utoledo.edu
writes:
>I would like to know if
>there are any freq's down there near nasa to hear nasa select audio for
the
>hours leading up to the launch. Either a ham freq or nasa is ok.

Check out the 2 meter ham repeater 146.94 - Mhz. - K4GCC.

John Anderson K4GCC, the owner/operator has been providing continious
NASA audio from countdown through landing for almost every single mission
since STS-7 (June 1983). Coverage typically starts about 3 hours before
launch when the NASA commentator starts.

The repeater is located on Merritt Island, about 15 miles south of the
launch pads.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

541. Re: Sat / Shuttle tracking program wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4il79o$q7j@news.mhv.net>
Source record: 22808

In article <DoHEBs.GpG@utnetw.utoledo.edu>, aschlie@uoft02.utoledo.edu wrote:
>I am looking for a good sat/shuttle tracking program. I have win95 and linux at
>my disposal. I am new to this so any pointers would be appreciated.
>
>Tony

STSORBIT Plus is one of the best. Point your web browser to:
HTTP://www.cts.com/browse/garym/elements

He'll have orbital elements and you can get the software there. Great web
page by the way!

Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

542. help 9600 modification IC-475/H

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: geko@redestb.es
Message-ID: <geko-1903961353380001@ppp232.redestb.es>
Source record: 22809

Hi ham interested in the modificati&#65533;n for 9600Bd modificati&#65533;n
to icom ic-475/h

Thank`s EA3CFC

My E.mail:geko@redestb.es
--
Ram&#65533;n Serna
PO.Box-115
E08.750-Molins de Rei
Barcelona
Spain

543. Re: Sat / Shuttle tracking program wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: Manfred Bester <manfred@ssl.berkeley.edu>
Message-ID: <4inafs$i69@agate.berkeley.edu>
Source record: 22810

aschlie@uoft02.utoledo.edu wrote:
>I am looking for a good sat/shuttle tracking program. I have win95 and linux at
>my disposal. I am new to this so any pointers would be appreciated.
>
>Tony

Tony,

for Linux you may want to check SatTrack V3.1. The latest version including
all patches is available from the SatTrack web page at:

http://www.primenet.com/~bester/sattrack.html

Individual patches are available from this web page, too.

--Manfred

544. Anyone Using STSPLUS Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: burch@netline.net
Message-ID: <4in7um$mbp@tesla.netline.net>
Source record: 22811

I have been using STSPLUS traking program and am interested in finding
the Trakstar program that is used with stsplus. Does anyone know
where I can find the program?

545. STS-67 QSL CARD RECVD TODAY

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4in6tg$1ht@newsbf02.news.aol.com>
Source record: 22812

nice one, too

happy spring

546. STS-67 QSL CARD RECVD TODAY

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4in6p2$1g6@newsbf02.news.aol.com>
Source record: 22813

nice one, too

happy spring

547. Re: Sat- Dat : for Sat Programm

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DoIMq9.AnB@pe1chl.ampr.org>
Source record: 22814

In <3414753246.5280518@magnet.at> gebha@magnet.at (Martin Gebhart) writes:

>Hi AFus !

>Search : Newest Sat Dat for Sat Proggy in Amsat or Nasa Formats !!!

>Interesstest Sats : Meteo Sat, Mir, Afu Sats, Hubble or Another.

You can find data regularly posted here, or else look on
ftp://archive.afit.af.mil/pub/space

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

548. Re: STS-76 EastCoast Launch Liason Freq?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-19 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4iligu$g2t@newsbf02.news.aol.com>
Source record: 22815

com'on, kids, it's either get up early, or stay up late.....

any takers?

n2lzh@amsat.org

"g"

549. Re: ? Software NOVA from W5RKN ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2003960631490001@jake-4j.ip.realtime.net>
Source record: 22717

In article <4ioah9$dem@surz03fi.HRZ.Uni-Marburg.DE>,
Mueller1@Mailer.Uni-Marburg.DE wrote:

> Hello from Marburg/Germany!
>
> Somewhere I have read about the software NOVA,, written by W5RKN.
> This software also controls the vfos of ICOM- or Kenwood-transceivers
> during tracking of satellites (LEO-type). The result is a compensation
> of the Doppler-shift and makes QSOs via these low orbiting satellites
> very comfortable.
> Where can I get the software - maybe by FTP? Any hints?
>
> By the way: I will be QRV again via AO13 from Kaliningrad (UA2) as
> R2/DK4VW during 2nd week of july 96.
>
> 73 Ulrich
>
> e-mail: mueller1@mailer.uni-marburg.de

Sorry, but I did not write Nova, W9IP, Michael Owen did.

The Nova program can be obtained from:
Bob Myers Communications
PO Box 17108
Fountain Hills, AZ 85269-7108
voice: 602-837-6492
FAX: 602-837-6872
e-mail: bmyers@primenet.com
http://www.primenet.com/~bmyers/

Ron W5RKN

--
Ron W5RKN

550. Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: jeffj@crl.com
Message-ID: <4iqcue$bb4@crl.crl.com>
Source record: 22718

I was wondering how well omni directional antennas would work with the Pacsats? As they are low orbit and fairly line of sight it seems a omni would work. Can someone enlighten me on this?

Thanks and 73!

Jeff
AB6MB

551. Re: GS232 & tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <4io2rv$919@news.onramp.net>
Source record: 22719

>What is the GS232?

The over priced RS-232 control box sold by YAESU to control
the 5400 az/ele rotor.

The Sattrack IV box is a better deal and less money.

I have seem a Mac program that uses the box but the
OrbitTrack author could mod the program to use the GS232 hardware.

73
kc5ejk@amsat.org

552. HELP setting up a ground station

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: lm@demnet2.ubi.pt
Message-ID: <4ioetr$505@vixc.voyager.net>
Source record: 22720

Hello

Please, I need help in setting a ground station.
I want to receive the data from PoSAT-1.

The equipment that we have is as follows:

Radio - Kenwood TS 790 E
TNC - MJF 1278B
Kansas City Tracker - Board + Software
Yeasu G-5600B
Prelinear Amp. Controller

I tried to install Wisp, but it was impossible to track the sattelite and comunicate at the same time.
Do anyone knows about good software available in order to put one or two computers communicating with the sat.
and also saving the telemetry data.

Thanks

Luis Miguel

553. ARLK019 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk019.1996@arrl.org>
Source record: 22721
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK019
ARLK019 Keplerian data

ZCZC SK19
QST de W1AW
Keplerian Bulletin 19 ARLK019
From ARRL Headquarters
Newington, CT March 19, 1996
To all radio amateurs

SB KEP ARL ARLK019
ARLK019 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76 OMS-2
1 99976U 96081.38742082 .00020093 16712-8 12081-4 0 17
2 99976 51.6455 203.9666 0076991 3.1580 185.7961 16.10725400 13
TSS-1R
1 23805U 96012B 96079.63893078 .11809260 -74753-5 60710-2 0 920
2 23805 28.4650 96.7362 0011176 106.4936 253.7201 16.19069509 4081
Mir
1 16609U 86017A 96079.66662306 .00002715 00000-0 42474-4 0 4490
2 16609 51.6451 212.5259 0005807 108.2771 251.8855 15.57773964576059
HST
1 20580U 90037B 96078.15274213 .00000430 00000-0 27306-4 0 07907
2 20580 28.4677 83.7083 0005809 301.0855 58.9163 14.91027695124984
AO-10
1 14129U 83058B 96072.78930691 .00000050 00000-0 10000-3 0 4060
2 14129 26.3531 219.7580 5987476 358.1706 0.3226 2.05880387 67880
RS-10/11
1 18129U 87054A 96077.84297158 .00000058 00000-0 46515-4 0 02023
2 18129 82.9234 216.0362 0013301 50.5726 309.6608 13.72363361437645
UO-11
1 14781U 84021B 96078.02315394 .00000105 00000-0 25566-4 0 08862
2 14781 97.7937 72.8317 0012703 26.7671 333.4188 14.69434685644267
RS-12/13
1 21089U 91007A 96078.01876775 .00000054 00000-0 41253-4 0 08771
2 21089 82.9182 256.9428 0030593 125.4410 234.9600 13.74067527256510
```

```
AO-13
1 19216U 88051B 96077.18363011 -.00000522 00000-0 28477-6 0 01685
2 19216 57.3208 128.8734 7390251 34.2284 356.5462 2.09740172027900
UO-14
1 20437U 90005B 96078.15367296 -.00000030 00000-0 51260-5 0 01804
2 20437 98.5467 162.8617 0011508 104.8228 255.4229 14.29914493321043
RS-15
1 23439U 94085A 96079.34039035 -.00000039 00000-0 10000-3 0 1208
2 23439 64.8178 168.3812 0163505 214.7940 144.2198 11.27524054 50659
AO-16
1 20439U 90005D 96078.11495296 .00000013 00000-0 21798-4 0 09871
2 20439 98.5629 164.8971 0011932 107.1147 253.1341 14.29969180321051
DO-17
1 20440U 90005E 96078.14622119 -.00000024 00000-0 75960-5 0 09685
2 20440 98.5646 165.5176 0012134 106.3167 253.9339 14.30110326321085
WO-18
1 20441U 90005F 96078.13414178 .00000016 00000-0 22841-4 0 09824
2 20441 98.5649 165.4534 0012721 107.9058 252.3515 14.30080637321084
LO-19
1 20442U 90005G 96078.13683299 .00000013 00000-0 21844-4 0 09893
2 20442 98.5665 165.9134 0012846 105.5612 254.6992 14.30187937321100
FO-20
1 20480U 90013C 96078.08486224 -.00000031 00000-0 87404-5 0 08746
2 20480 99.0390 120.2199 0540830 331.0537 26.1525 12.83232169286208
AO-21
1 21087U 91006A 96079.33029735 .00000094 00000-0 82657-4 0 6876
2 21087 82.9384 28.2070 0036263 94.3591 266.1710 13.74566586257664
UO-22
1 21575U 91050B 96078.11536190 .00000003 00000-0 15439-4 0 06762
2 21575 98.3633 147.1719 0007206 171.3022 188.8291 14.37015462244982
KO-23
1 22077U 92052B 96078.05048357 -.00000037 00000-0 10000-3 0 05696
2 22077 66.0765 20.2715 0009260 323.5907 36.4480 12.86295666169083
KO-25
1 22828U 93061F 96078.11460398 .00000009 00000-0 21168-4 0 04438
2 22828 98.5863 155.4844 0010477 116.7534 243.4716 14.28133577097116
IO-26
1 22826U 93061D 96078.18207172 -.00000017 00000-0 10673-4 0 4598
2 22826 98.5916 155.5001 0009272 132.6325 227.5645 14.27797343129010
AO-27
1 22825U 93061C 96078.17885801 -.00000029 00000-0 56864-5 0 04627
2 22825 98.5908 155.3477 0008871 132.0260 228.1684 14.27689343129000
PO-28
1 22829U 93061G 96078.13000110 -.00000019 00000-0 98379-5 0 04658
2 22829 98.5883 155.5520 0010452 118.6148 241.6087 14.28113453129035

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
March 23, 1996, at 2330z on Baudot and AMTOR.
NNNN
```

/EX

554. Homebrew sat. tracking controller?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: joachimp@stud.unit.no
Message-ID: <4ipon4$1cc@due.unit.no>
Source record: 22722

We are in need of a satelite tracking controller, and naturally, we want to build it ourselves. We already have Satscan scanning software, and we know it is capable of talking to a rotor controller, but we do not know what format the data output is, and what kind of handshaking it expects. Does anyone know?

If not: does anyone know of other tracking programs that are easy to use, yet still have a documented way of talking to the controller. Buying an interface is out the question, given the fact that this club (LA1K) consists mainly of engineering students.

--
==========
Joachim "Cobra Ball" Pihl _/ LC2DAT \ LA1K
Hans Osnes v. 4 _/
7030 Trondheim _/ Om du ikke husker alle dine
joachimp@stud.unit.no _/ idiotier, kan du ta deg faen paa
_/ at noen andre gjoer det..
IRMA 1000 member #1071 _/ A. And
==========
Critical Error: Unable to locate coffee - Operator Halted

555. ? Software NOVA from W5RKN ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-20 00:00:00 UTC
From: Mueller1@Mailer.Uni-Marburg.DE
Message-ID: <4ioah9$dem@surz03fi.HRZ.Uni-Marburg.DE>
Source record: 22816

Hello from Marburg/Germany!

Somewhere I have read about the software NOVA,, written by W5RKN.
This software also controls the vfos of ICOM- or Kenwood-transceivers
during tracking of satellites (LEO-type). The result is a compensation
of the Doppler-shift and makes QSOs via these low orbiting satellites
very comfortable.
Where can I get the software - maybe by FTP? Any hints?

By the way: I will be QRV again via AO13 from Kaliningrad (UA2) as
R2/DK4VW during 2nd week of july 96.

73 Ulrich

e-mail: mueller1@mailer.uni-marburg.de

556. Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4iqb0p$ofa@news.mcn.net>
Source record: 22723

Is phase 3D to launch this year or next?

73 de KB7ADL

557. Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: tom_boza@ccm.ch.intel.com
Message-ID: <4is85i$8oj@chnews.ch.intel.com>
Source record: 22724

Would someone post the KEPs for Comet Hyakutake?

558. REJECTED: Ham-Space Digest V96 #81

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Message-ID: <9603220204.AK00028@rtp41.rtp.dg.com>
Source record: 22725

----- Mail rejected by CEO. -----
No Routing Link Available Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #81
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Thu, 21 Mar 96 Volume 96 : Issue 81

Today's Topics:
? Software NOVA from W5RKN ? (2 msgs)
Face On Mars Development
GS232 & tracking
mac tracking software ?
Phase 3D to launch this year?
Sat / Shuttle tracking program wanted (2 msgs)
STS-67 QSL CARD RECVD TODAY

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 20 Mar 1996 06:31:49 -0600
From: rparsons@bga.com (Ronald G. Parsons)
Subject: ? Software NOVA from W5RKN ?

In article <4ioah9$dem@surz03fi.HRZ.Uni-Marburg.DE>,
Mueller1@Mailer.Uni-Marburg.DE wrote:

> Hello from Marburg/Germany!
>
> Somewhere I have read about the software NOVA,, written by W5RKN.
> This software also controls the vfos of ICOM- or Kenwood-transceivers
> during tracking of satellites (LEO-type). The result is a compensation

> of the Doppler-shift and makes QSOs via these low orbiting satellites
> very comfortable.
> Where can I get the software - maybe by FTP? Any hints?
>
> By the way: I will be QRV again via AO13 from Kaliningrad (UA2) as
> R2/DK4VW during 2nd week of july 96.
>
> 73 Ulrich
>
> e-mail: mueller1@mailer.uni-marburg.de

Sorry, but I did not write Nova, W9IP, Michael Owen did.

The Nova program can be obtained from:
Bob Myers Communications
PO Box 17108
Fountain Hills, AZ 85269-7108
voice: 602-837-6492
FAX: 602-837-6872
e-mail: bmyers@primenet.com
http://www.primenet.com/~bmyers/

Ron W5RKN

--
Ron W5RKN

Date: Wed, 20 Mar 1996 07:02:01 GMT
From: Mueller1@Papin.HRZ.Uni-Marburg.DE (Ulrich Mueller)
Subject: ? Software NOVA from W5RKN ?

Hello from Marburg/Germany!

Somewhere I have read about the software NOVA,, written by W5RKN.
This software also controls the vfos of ICOM- or Kenwood-transceivers
during tracking of satellites (LEO-type). The result is a compensation
of the Doppler-shift and makes QSOs via these low orbiting satellites
very comfortable.
Where can I get the software - maybe by FTP? Any hints?

By the way: I will be QRV again via AO13 from Kaliningrad (UA2) as
R2/DK4VW during 2nd week of july 96.

73 Ulrich

e-mail: mueller1@mailer.uni-marburg.de

Date: Sat, 16 Mar 1996 09:17:31 -0600
From: Steve Sampson <ssampson@telepath.com>
Subject: Face On Mars Development

Philip Chien wrote:
>
> In article <4hofoh$fkm@jake.probe.net> Brad Grier, bgrier@probe.net
> writes:
> >There's been an intriguing development regarding the so-called
> >"Face On Mars." For the details, visit the following URL:
>
> Unless the face on Mars happens to have an amateur radio license - I fail
> to see what this particular anouncement has to do with
> rec.amateur.radio.space ....
>
> Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET
> __ __^__ __________
> | \ +---/ \---+ (=========
> |______________ +---_____/---+ //
> >____)| | __ \ ______//___
> >/ |________| \ [_____\
> >|____________________\ _______/
> Roger, go at throttle up CHR$(32) the final frontier

Get rid of that stupid graphic, thanks. And take your jack-boots off.

Date: 20 Mar 1996 04:51:11 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: GS232 & tracking

>What is the GS232?

The over priced RS-232 control box sold by YAESU to control
the 5400 az/ele rotor.

The Sattrack IV box is a better deal and less money.

I have seem a Mac program that uses the box but the
OrbitTrack author could mod the program to use the GS232 hardware.

73
kc5ejk@amsat.org

Date: Mon, 18 Mar 1996 12:39:49 -0600
From: argon@onramp.net (Argon)
Subject: mac tracking software ?

Does anyone have any comments about macintosh satellite tracking software ?

Has anyone imported the data from OrbiTrack into Voyager ?

Thanks!

Kyle

Date: Thu, 21 Mar 96 01:21:29 GMT
From: vfiscus@mcn.net (Vince Fiscus, KB7ADL)
Subject: Phase 3D to launch this year?

Is phase 3D to launch this year or next?

73 de KB7ADL

Date: Mon, 18 Mar 1996 10:59:54 GMT
From: aschlie@uoft02.utoledo.edu
Subject: Sat / Shuttle tracking program wanted

I am looking for a good sat/shuttle tracking program. I have win95 and
linux at
my disposal. I am new to this so any pointers would be appreciated.

Tony

Date: Tue, 19 Mar 96 02:50:51 GMT
From: trandall@mhv.net
Subject: Sat / Shuttle tracking program wanted

In article <DoHEBs.GpG@utnetw.utoledo.edu>, aschlie@uoft02.utoledo.edu
wrote:
>I am looking for a good sat/shuttle tracking program. I have win95 and
linux at
>my disposal. I am new to this so any pointers would be appreciated.
>
>Tony

STSORBIT Plus is one of the best. Point your web browser to:
HTTP://www.cts.com/browse/garym/elements

He'll have orbital elements and you can get the software there. Great web
page by the way!

Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

Date: 19 Mar 1996 15:51:46 -0500
From: gsteve490@aol.com (GSteve490)
Subject: STS-67 QSL CARD RECVD TODAY

nice one, too

happy spring

```
------------------------------

End of Ham-Space Digest V96 #81
******************************
```

559. Re: Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: Thomas Griffin <griff@ssd.intel.com>
Message-ID: <3151E842.41C67EA6@ssd.intel.com>
Source record: 22726

Hi Tom,

WB7ASR wrote:
>
> Would someone post the KEPs for Comet Hyakutake?

Try http://newproducts.jpl.nasa.gov/comet/hyakutake/ephemjpl3.html

73, Thomas (Griff) Griffin, N7ZKL
Beaverton, Oregon, USA
Internet: n7zkl@amsat.org
Packet: n7zkl@k7iqi.or.usa.na

560. Shuttle re-broadcast freqs/NYC

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: sreymann@radar-sci.jpl.nasa.gov
Message-ID: <4isak4$ojk@ampersand.jpl.nasa.gov>
Source record: 22727

I'll be working the STS-76 mission in Houston, but I expect to be travelling during the mission to the New York City/NJ area for a funeral. Can anyone give me some two-meter frequencies to monitor NASA Select audio in the NYC/LI/NNJ area?

561. Icom 735 query

Newsgroup: rec.radio.amateur.space
Date: 1996-03-21 00:00:00 UTC
From: Thomas.Smith@228.woodybbs.com
Message-ID: <348_9603210542@woodybbs.com>
Source record: 22728

Need a touch of help on this one, as I have a chance to buy this unit...

A bit of research shows me the Icom 735 is NOT able to do any satellite work...i.e., it cannot use the CT-16 satellite converter supplied by Icom...

As I am interested in working ALL ham modes, can anyone tell me if the 735 can do ANY satellite work of any kind...appreciate this info!
* RM 1.31 2831 * ... Ham radio operators do it with higher frequency.
--
|Fidonet: Thomas Smith 1:2619/228
|Internet: Thomas.Smith@228.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

562. Re: MIR and SAREX

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <DonACB.7zq@icon.rose.hp.com>
Source record: 22729

Ok, so for MIR/Shuttle flights, MIR stays on 145.550 simplex, and the shuttle uses 144.45&47 / 145.84 split, right? Or does 145.55 get turned off for the flight and only one of the ships communicate with us down here?

Thanks,

Greg KO6TH

563. Re: Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: n7tcf@primenet.com
Message-ID: <4iu6g9$3qu@nnrp1.news.primenet.com>
Source record: 22730

Someone else pointed out that sat-tracking software cannot track objects
outside earth orbit. You must use an astronomical tracking program.

Jim N7TCF

In <3151E842.41C67EA6@ssd.intel.com>, Thomas Griffin <griff@ssd.intel.com> writes:
>Hi Tom,
>
>WB7ASR wrote:
>>
>> Would someone post the KEPs for Comet Hyakutake?
>
>Try http://newproducts.jpl.nasa.gov/comet/hyakutake/ephemjpl3.html
>
>
>73, Thomas (Griff) Griffin, N7ZKL
>Beaverton, Oregon, USA
>Internet: n7zkl@amsat.org
>Packet: n7zkl@k7iqi.or.usa.na

564. Re: Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <4itf8o$jto@reader2.ix.netcom.com>
Source record: 22731

jeffj@crl.com (Jeff Jones) wrote:
>I was wondering how well omni directional antennas would work with the
>Pacsats? As they are low orbit and fairly line of sight it seems a
>omni would work. Can someone enlighten me on this?
>
>Thanks and 73!
>
>Jeff
>AB6MB
>
Jeff: I have been PACSAT active for about a year now, using the M
Squared Eggbeaters on 2 meters and 70 cm (I'm not using the optional
ground plane accessory which would add about 6 db to the overhead lobe).
Although I clearly don't get the performance that I would with
directional antennas, I get two good passes a day, and can download about
20 to 30 kb's per pass. I can upload relatively easy as well. I'm using
the Eggbeaters with a Mirage preamp on the mast for 70 cm, and a Mirage
brick on the 2 meter uplink. The rig is a Yaesu FT-736R.
For not having a directional antenna, I do quite well. I am
limited to the 1200 baud birds. I am told that if I tried the 9600 baud
satellites without directional antennas, I wouldn't get very far because
of the long queue's for usage on those birds.
Let me know if you've got other questions. 73's de Bernie, KF0QS

hamdan@ix.netcom.com

565. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4iu74b$k10@nms.telepost.no>
Source record: 22732

```
In article <4iqb0p$ofa@news.mcn.net>, vfiscus@mcn.net says...
>
>
>Is phase 3D to launch this year or next?
>
>
>73 de KB7ADL
>

No - not this year - perhaps next year?
73's de Karl Jan LA3FY
```

566. Re: Homebrew sat. tracking controller?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4iu7c5$k10@nms.telepost.no>
Source record: 22733

In article <4ipon4$1cc@due.unit.no>, joachimp@stud.unit.no says...
>
>
>We are in need of a satelite tracking controller, and naturally, we want
>to build it ourselves. We already have Satscan scanning software, and
>we know it is capable of talking to a rotor controller, but we do not
>know what format the data output is, and what kind of handshaking it
>expects. Does anyone know?
>
>If not: does anyone know of other tracking programs that are easy to
use,
>yet still have a documented way of talking to the controller. Buying
>an interface is out the question, given the fact that this club (LA1K)
>consists mainly of engineering students.
>
>--
>===
>Joachim "Cobra Ball" Pihl _/ LC2DAT \ LA1K
>Hans Osnes v. 4 _/
>7030 Trondheim _/ Om du ikke husker alle dine
>joachimp@stud.unit.no _/ idiotier, kan du ta deg faen paa
> _/ at noen andre gjoer det..
>IRMA 1000 member #1071 _/ A. And
>===
>Critical Error: Unable to locate coffee - Operator Halted
>

Yes - lot of stuff!
try amsat.org look for ITRACK and FODTRACK - I'll send you a personal
letter in norwegian too!!

73's de Karl Jan LA3FY

567. Re: GS232 & tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DonvHr.KwB@pe1chl.ampr.org>
Source record: 22734

In <4io2rv$919@news.onramp.net> Bob Winingham <kc5ejk@onramp.net> writes:

>>What is the GS232?

>The over priced RS-232 control box sold by YAESU to control
>the 5400 az/ele rotor.

>The Sattrack IV box is a better deal and less money.

>I have seem a Mac program that uses the box but the
>OrbitTrack author could mod the program to use the GS232 hardware.

The firmware in that box is very funny... I think someone should
write new firmware before it is really useful.

The only thing it does, is providing single-letter commands to let
the rotors move UP,DOWN,LEFT,RIGHT and commands to read back the current
A/D converter values (rotor position).
This means the host system has to be part of the control loop, and when
the system crashes or the program exits unexpectedly the rotors keep
doing what they were last told to do (turning).

As the box includes a microprocessor, this is silly. The commands should
have been like "turn to 300 azimuth, 20 elevation" and the box itself
should take care of the control loop and report back when it has reached
the target direction.

Fortunately, the current firmware is so simple that you can easily
disassemble it, and write new firmware with more reasonable behaviour.
The processor is 6800-family, if I remember well.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

568. Re: Old WXSAT rx from TIMESTEP

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4iu7p9$k10@nms.telepost.no>
Source record: 22735

In article <4ijldm$blh@bbcnews.rd.bbc.co.uk>, boyer@rd.bbc.co.uk says...
>
>Karl Jan Skontorp (skontorp@telepost.no) wrote:
>: Hi folks!
>: I have a problem, and hope some one out there can give me som help! I
>: have an old rx for WXSATs from timestep. The pcb is about 35x140mm big
>: and the IC used is MC3359 from Motorola and an audioamplifier TBA820.
The
>: rx itsefl is working ok except the squelche circuit! I need a
schematic
>: drawing for this rx and would be very happy if someone could get me
>: one!!! I know this diagram have been 'published' and I hope someone
have
>: got a copy! I have tried to contact Timestep directly, but the tell me
>: that they don't have the diagram any more!
>:
>: tnx de Karl Jan LA3FY
>:
>
>I have the prosat II, but I would hav to do as I think you will have to
>and that is work out the diagram from the pcb.
>I'd like to be able to help. Have you tried timestep??
>
>J.
>--
>
> **
> * John Boyer, BBC Research & Development Department *
> * Kingswood Warren, Tadworth, Surrey, KT20 6NP *
> * email: john.boyer@rd.bbc.co.uk *
> * phone: 01737 836580 fax: 01737 836665 *
> **

tnx for responding!
I have tried Timestep - but they don't have a schematic disgram for this
receiver (!!???)
Yes - I have traced the pcb, but a lot of work! I have traced parts of it
and found that solutions are not too 'good' - the squelch system turns
the power to the audio amp. on and off with transistor!! This part is
already modified. The main problem seems to be 'noise' comming into the
10.7Mhz IF-system trough the ceramic filter! I have to think it over
again - do I want to spend more time on it? I have found another diagram
and at the momnet I'm looking for an old xtal filter with wide passband!
Thanks again for bothering!

73's de Karl Jan LA3FY

569. Re: Sat / Shuttle tracking program wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4iu7u6$k10@nms.telepost.no>
Source record: 22736

In article <DoHEBs.GpG@utnetw.utoledo.edu>, aschlie@uoft02.utoledo.edu says...
>
>I am looking for a good sat/shuttle tracking program. I have win95 and linux at
>my disposal. I am new to this so any pointers would be appreciated.
>
>Tony

try amsat.org - different programs there! My favorite is ITRACK! The one for Linux is also really nice - I don't remember the name - was it SATTRACK?
de Karl Jan LA3FY

570. Smooth antenna tracking vice stop-n-go ??

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: <>
Message-ID: <1996Mar22.155645.7159@nosc.mil>
Source record: 22737

I am curious if there exist an satellite antenna tracking software/hardware that enables smooth (continous increments) vice the stop-n-go action. I think that I remembered seeing one a while back that had a ramping software with a hardware mod available?? I have an EMOTO az/el system and would like to try something in this configuration. I currently run WISP but can adapt if required.

Regards, 73, John AA6QN
email feistjf@mork.nosc.mil

571. Re: Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: jim.fawns.projectx.com
Message-ID: <DooLHK.IAF@westonia.com>
Source record: 22738

In article <4is85i$8oj@chnews.ch.intel.com>, tom_boza@ccm.ch.intel.com says...
>
>Would someone post the KEPs for Comet Hyakutake?
>
don't know if it went through the first time, I'll send it again.

For those of you hams that are interested but not aware, there is currently approaching earth (but won't hit us) a recently discovered comet
that should become the brightest comet since Comet West in 1976.
Comet Hyakutake, C/1996 B2 is already mag 2.5 and brightening noticablely every day. A tail has developed that should grow quite long when it pass the earth just 10 million miles away on the night of March 25/26 1996.

I have seen a few request on packet radio for the orbital elements, here they are.

Comet Hyakutake C/1996 B2.

Perihelion date, T 1996 May 1.14025 TT
Eccentricity, e 0.999846
Perihelion distance, 0.230123 a.u.
Argument of perihelion 130.1925 deg.
Longitude of ascending node, 188.0514 deg.
Inclination, i 124.9016 deg.

I don't know if they will work in Traksat or Instant track etc, I never tried them. Comets orbit the Sun , not the Earth so I don't know if satellite tracking programs can handle it properly.
Your best bet is to download a shareware program like Skymap or HomePlanet then plug the elements into these programs, they will display a more easier to understand view of the sky then what satellite tracking programs offer.

In late March the Comet will become circumpolar thus visible all night, look for it moving pass the Big Dipper and on past Polaris between Mar 24 to 28, it should be at its brightest then.
More information can be found on the Internet, point your web browser toward Comet Hyakutake.

I heard some group is going to image Comet Hyakutake with ground based radar. Maybe some well equipped hams may be able to try for the first ECE. (hi)
73 Jim VE3JAT

572. NORAD Two-Line Orbital Element Sets (TLE779)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ivdfb$9sp@blackbird.afit.af.mil>
Source record: 22739

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

```
- Current Two-Line Element Sets #779 -
Alouette 1
1 00424U 62049A 96078.88837063 .00000056 00000-0 55172-4 0 1823
2 00424 80.4607 12.8412 0022311 271.3535 88.5051 13.67863780669995
ATS 1
1 02608U 66110A 96075.21288416 -.00000368 00000-0 10000-3 0 9609
2 02608 14.6274 353.8371 0009008 74.8414 285.2310 1.00383689 23922
ATS 3
1 03029U 67111A 96080.37724226 -.00000130 00000-0 10000-3 0 4709
2 03029 14.8986 0.7359 0009342 271.8295 295.9720 1.00273073103874
Starlette
1 07646U 75010A 96078.52149730 -.00000166 00000-0 -19874-4 0 9568
2 07646 49.8292 146.4919 0205879 290.9706 66.9269 13.82190112 66421
LAGEOS
1 08820U 76039A 96079.19056068 -.00000004 00000-0 10000-3 0 1798
2 08820 109.8597 355.1825 0043178 147.4743 212.8566 6.38664393208087
```

```
ETS-2
1 09852U 77014A 96075.29963408 -.00000359 00000-0 10000-3 0 668
2 09852 13.1236 34.0447 0001956 114.5619 245.4802 1.00006468 16706
GOES 2
1 10061U 77048A 96081.53000704 .00000038 00000-0 10000-3 0 6539
2 10061 12.2392 38.1053 0009051 127.4176 28.0339 1.00277136 13569
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NOAA 10
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2 21854 65.1032 87.4172 0015303 9.5764 350.4950 2.13104052 32189
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2 21930 55.7095 352.1668 0030278 190.3418 169.6215 2.00629070 28797
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2 21987 28.4318 74.6767 0009849 139.0011 221.1324 15.19696562209823
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1 22012U 92038A 96081.86312208 .00000641 00000-0 53162-4 0 7049
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Glonass 60
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Glonass 61
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2 23828 98.7992 157.6421 0031161 244.2955 119.7280 14.20245703 149
STS 76
1 23831U 96018A 96082.37240185 -.00003735 11806-4 00000+0 0 18
2 23831 51.6550 199.4732 0102066 1.8739 188.3802 16.17935543 03
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

573. NORAD Two-Line Orbital Element Set: Space Shuttle (96082.37240185)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ivdk0$9t9@blackbird.afit.af.mil>
Source record: 22740

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial BBS,

http://www.mindspring.com/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Until mid-March 1996, the old Celestial BBS may be accessed at (334) 409-9280 24 hours/day at speeds up to 28,800 bps using 8 data bits, 1 stop bit, no parity.

Note: The old Celestial BBS will cease operations around mid-March 1996. It is being replaced with a new WWW site for distributing the current selection of data and software. The URL for this site is:

http://www.mindspring.com/~tkelso/

Data will continue to be available via anonymous ftp at archive.afit.af.mil.

****

STS 76
1 23831U 96018A 96082.37240185 -.00003735 11806-4 00000+0 0 18
2 23831 51.6550 199.4732 0102066 1.8739 188.3802 16.17935543 03
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

574. Re: Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DooF20.M9n@pe1chl.ampr.org>
Source record: 22741

In <4iqcue$bb4@crl.crl.com> jeffj@crl.com (Jeff Jones) writes:

>I was wondering how well omni directional antennas would work with the
>Pacsats? As they are low orbit and fairly line of sight it seems a
>omni would work. Can someone enlighten me on this?

Not very well...
Maybe you can get some results with the 1200 bps PSK sats, but for
9600 bps FSK the signal level really is too low for a good BER.
Of course you can try it, to get the feel of what satellite packet
is like. Then you can install steerable yagis later.

You will also need to use a lot of transmit power to get sufficient ERP.
Many stations use about 30W in a yagi, so you would need about 250W
for comparable ERP.
(the ERP is not really needed when looking at the sat sensitivity specs,
but unfortunately there is often a lot of QRM on the uplink)

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

575. Comment 03/22/96 6:00pm

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: Ken.Ernandes@333.woodybbs.com
Message-ID: <36d_9603231007@woodybbs.com>
Source record: 22742

Joe -

Could you post the following news bulletin?:

The Larkfield Amateur Radio Club ARES/RACES unit will be having a
Satellite Communications session / demonstration on Saturday March 30,
1996 at the Huntington Town Hall, Route 25A. Setup will begin at
approximately 8:00 A.M. This activity is open to the public.
Interested amateur radio operators are encouraged to attent.

For further information, check in to the AMSAT Satellite Net on Tuesday
evening at 8:00 P.M. on the WA2SNQ repeater 147.075 MHz / + (4Z PL -
136.5) or contact Ken Ernandes, N2WWD
--
|Fidonet: Ken Ernandes 1:2619/333
|Internet: Ken.Ernandes@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

576. need info on JRC positioner and ham sat`s

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: Stefan Bauer <bauer>
Message-ID: <4iu8cg$fae@hrz-ws11.hrz.uni-kassel.de>
Source record: 22743

hi people with sat and tv-sat experince...

I`m new to the sat business. so as you know all beginners are asking
questions about all and everything. so this is what you can expect when
you don`t stop reading now !

my name is steve, dl1fdf/vy1qrp, qth kassel central germany, I am 28.

1. looking for frequency table (tv sat, canadian channels, NOAM.. !!!)
(which I can reciever in germany OK :-)

2. need all info e.g. wireing etc., need remote controller with rs 232
for:
---> Japan Radio Company ERP 203, 24v, 18watts (it`s a 2 in 1 ?:-) <---

3. need datashett of Low Noise block down Converter from:
---> DX ANTENNA CO., LTD japan model DSA-528 RF 10.90 ~11.70 ghz <-

4. any ideas about using this stuff for ham sat`s (e.g. for phase 3d)
the dishdiameter is 1.80m

thats it for now....
if you just have one answer to all this, perfect I already won!
thanks for helping a dummy with a short answer.....

==
73 de DL 1 FDF alias VY 1 QRP
Steve from Kassel

Internet : bauer@hrz.uni-kassel.de
Packet Radio : dl1fdf@db0vfk.#hes.deu.eu
G-QRP # : 8769
==

/EoF/

577. Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-03-22 00:00:00 UTC
From: ve2cz@hookup.net
Message-ID: <ve2cz.19.3152982E@hookup.net>
Source record: 22744

Can anyone tell me what frequencies I should be listening on to hear Shuttle comms? (Yes I have the tracking program, and up to date elements)

Chris Willson, VE2CZ

578. Re: How To Use a Kill file in 3 easy steps

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: bob@texas.net
Message-ID: <4iv95b$p32@nntp.texas.net>
Source record: 22745
Cross-posted to: sci.space.shuttle,sci.space,rec.radio.amateur.space

durham@lobby.ti.com (Ken Durham) wrote:

>~~~~~~``
>Scott, could you suggest a Net News viewer that does the job? None of
>my newsreaders seem to have the function.

>Ken K5MBV mbv@ti.com

Forte's Agent (commercial version) supports killing postings by
subject or author.

Bob

579. Re: M^2 vs KLM

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: bob@texas.net
Message-ID: <4iv95n$p32@nntp.texas.net>
Source record: 22746

donr@mdsroc.com (Don Russ) wrote:

>I'm sure that this has been hashed about before but here it goes again.
>The KLM 2M-22C vs M^2 2MCP22 and the KLM 435-40CX vs M^2 435CP42U/G.

>The KLM comes with the polarity reverse relay but has slightyl less
>ADVERTISED gain.

>Can the M^2 have a retrofit polarity reverse kit? I'm planning on running
>< 150 Watts and working the LEO and P3 sats. I would like to have
>polairty switching for the LEOs.

>Why would I want to use the M^2 for a higher price instead of the KLM?
>The M^2 seems to have a substatially larger wind area so maybe it's made
>of heavy stock thus the higher price. I know that a db is such a small
>difference that that won't sway me. I'm looking at the value aspects.

The founder of M2 is the "M" from KLM (can't 'member the name thius second)--both are excellent antennas, but the M2 antennas are rugged beyond description, the KLM mechanical construction is average. I use the M2 30 el 440 X-Yagi and the 14-el 2m X-Yagi with excellent results. Can't imagine why you'd need 22/42 elements for a low earth bird... Beamwidth is pretty narrow for the kind of angular rates you'll see tracking the low birds.

Bottom line--they're both good electronically, but the M2 is THE antenna if you're in a mechanically challenging area (e.g. wind, ice, etc)

Bob

580. fw: DSP-232 query

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: bob@texas.net
Message-ID: <4iv968$p32@nntp.texas.net>
Source record: 22747
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.equipment,rec.radio.amateur.

From the DSP-2232 Mailing List

"Caveat Emptor"

Bob

> Hello all,
>
> I was listening to one of the Boston area two meter AMSAT
> nets last night. A ham who had just bought a DSP-232 made what
> he termed a "product warning" to the net.
> He stated that he had just bought a DSP-232, but that it had
> arrived with fewer modems than advertised. Specifically, the
> BPSK modems had been deleted. Further, he stated that
> information from AEA made it clear that these modems would only
> be available as expensive options, and that no further
> development work should be expected on the DSP-232.
> This all sounds rather extreme to me. Has anybody on this
> list experienced this, or hear similar stories? Is it possible
> that with the change in management at AEA that this may change,
> or is this a *result* of the change? Everything I've seen about
> the return of AEA's founder to the company doesn't support this
> kind of attitude.
>
> 73,
>
> David Reinhart
> wa6ilt@amsat.org
> WA6ILT@K1UGM.#EMA.MA.NA

581. Wanted: updated keps for STS-76 & MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: melvlytt@interl.net
Message-ID: <4j14uu$8el@Mournblade.InterL.net>
Source record: 22748

Hello,

My local packet BBS doesn't have current keps for the current SAREX mission
or MIR. Could someone please post or e-mail the current information?

Thanks es 73 de Mel, KB0EZT
E-mail: melvlytt@interl.net

`[1;30;43mNet-Tamer V 1.00.0 - Test Drive

582. Dumb question - ham <-> Internet connections

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: okx@extro
Message-ID: <4j17gj$evl@metro.usyd.edu.au>
Source record: 22749

Sorry if this is a dumb question but is it possible to get an internet
connection via ham radio and satellites used for amateur radio?

I am thinking about this possibility for communications in remote areas -
areas that are not likely to be served by Internet providers.

Thanks, Phil.
--
Philip Rhoades
Pricom Pty Limited
E-mail: okx@extro.ucc.su.OZ.AU
Mobile: +61-2-0411:185652 Fax: +61-2-9959-3481
S-mail: GPO Box 3411 Sydney NSW 2001 Australia
http://www.usyd.edu.au/~okx/home.htm

Names of known ancestors (mostly from the UK): ADAMSON BAILEY CHIGWIDDEN
CHURCH DAVIES HENDERSON KEOUGH LAW MAY (MAI-Poznan) McMAHON OLIVER PEGUS
RANKIN RHOADES SIMMONS SMITH SOLLOWAY TUCKEY TUNKS WHITTET

583. ARLK020 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk020.1996@arrl.org>
Source record: 22750
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK020
ARLK020 Keplerian data

ZCZC SK20
QST de W1AW
Keplerian Bulletin 20 ARLK020
From ARRL Headquarters
Newington, CT March 23, 1996
To all radio amateurs

SB KEP ARL ARLK020
ARLK020 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76
1 23831U 96018A 96082.49738744 .00002218 11464-4 68202-5 0 23
2 23831 51.6478 198.7816 0051788 345.6974 213.0022 16.05085775 23
Mir
1 16609U 86017A 96082.16847754 .00006816 00000-0 96325-4 0 04615
2 16609 51.6463 199.9895 0005815 112.9547 247.2060 15.57824117576445
AO-10
1 14129U 83058B 96072.78930691 .00000050 00000-0 10000-3 0 4060
2 14129 26.3531 219.7580 5987476 358.1706 0.3226 2.05880387 67880
RS-10/11
1 18129U 87054A 96081.85290607 .00000021 00000-0 66912-5 0 02025
2 18129 82.9240 213.0735 0013229 41.6036 318.6122 13.72363178438195
UO-11
1 14781U 84021B 96081.97263031 .00000152 00000-0 33515-4 0 08810
2 14781 97.7939 76.6022 0012460 14.9495 345.2081 14.69436377644844
RS-12/13
1 21089U 91007A 96082.02374330 .00000033 00000-0 18572-4 0 08783
2 21089 82.9183 253.9714 0030720 114.6565 245.7782 13.74067496257066
AO-13
1 19216U 88051B 96081.47468731 .00000195 00000-0 17987-3 0 01706
2 19216 57.3218 128.0218 7391059 34.6119 356.5238 2.09735129027994
UO-14
1 20437U 90005B 96082.14220660 -.00000052 00000-0 -33491-5 0 01756
2 20437 98.5463 166.7764 0011675 92.6711 267.5808 14.29914131321610
```

```
RS-15
1 23439U 94085A 96081.64643473 -.00000039 00000-0 10000-3 0 01324
2 23439 64.8174 164.6523 0163423 214.4174 144.6074 11.27524032050910
AO-16
1 20439U 90005D 96082.10333297 -.00000020 00000-0 91999-5 0 09844
2 20439 98.5624 168.8180 0012146 96.4371 263.8194 14.29969119321628
DO-17
1 20440U 90005E 96082.13420547 .00000018 00000-0 23649-4 0 09699
2 20440 98.5641 169.4405 0012194 94.5997 265.6592 14.30111089321654
WO-18
1 20441U 90005F 96081.77237979 .00000002 00000-0 17468-4 0 09789
2 20441 98.5647 169.0328 0012840 97.5910 262.6730 14.30080853321607
LO-19
1 20442U 90005G 96081.77479822 -.00000003 00000-0 15726-4 0 09883
2 20442 98.5662 169.4936 0013138 96.0536 264.2145 14.30188048321628
FO-20
1 20480U 90013C 96082.13894290 -.00000028 00000-0 16117-4 0 08729
2 20480 99.0383 123.5066 0540599 321.8626 34.5352 12.83232098286726
AO-21
1 21087U 91006A 96081.87799199 .00000094 00000-0 82657-4 0 07046
2 21087 82.9385 26.3214 0036452 87.6059 272.9256 13.74566620258017
UO-22
1 21575U 91050B 96082.15384277 -.00000003 00000-0 13365-4 0 06776
2 21575 98.3628 151.0956 0007493 158.7912 201.3599 14.37015829245562
KO-23
1 22077U 92052B 96082.01575660 -.00000037 00000-0 10000-3 0 05712
2 22077 66.0764 11.9702 0009175 322.3940 37.6426 12.86295458169592
KO-25
1 22828U 93061F 96082.10810452 -.00000049 00000-0 -22401-5 0 04418
2 22828 98.5857 159.4095 0010877 106.8190 253.4142 14.28133357097685
IO-26
1 22826U 93061D 96082.10643378 -.00000023 00000-0 81061-5 0 04763
2 22826 98.5909 159.3566 0009369 120.3288 239.8810 14.27797673129576
AO-27
1 22825U 93061C 96082.10351631 -.00000021 00000-0 91381-5 0 04854
2 22825 98.5905 159.2053 0009014 120.8289 239.3772 14.27689645129564
PO-28
1 22829U 93061G 96082.12355553 .00000019 00000-0 24981-4 0 04663
2 22829 98.5880 159.4781 0010592 107.2665 252.9678 14.28114316129600

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
March 26, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

584. Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: sfton@scfn.thpl.lib.fl.us
Message-ID: <4j1td8$jnh@ns1.thpl.lib.fl.us>
Source record: 22751

Anyone recommend a Satellite tracking program that will display multiple objects on the screen and track both of them. STSPlus will only put one at a time on the screen, as well as others I have tried. During the present STS76 and Mir mission, it be nice to track both when they not docked together. WinOrbit 2.8 will display a secondary satellite, but will only update the track of one object. Keith O'Brien

585. Re: Icom 735 query

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: Bill@halcyon.com
Message-ID: <NEWTNews.827633193.14562.bill@bill.halcyon.com>
Source record: 22752

In Article<348_9603210542@woodybbs.com>, <Thomas.Smith@228.woodybbs.com>
writes:

>
> Need a touch of help on this one, as I have a chance to buy this unit...
>
> A bit of research shows me the Icom 735 is NOT able to do any satellite
> work...i.e., it cannot use the CT-16 satellite converter supplied by
> Icom...
>
> As I am interested in working ALL ham modes, can anyone tell me if the
> 735 can do ANY satellite work of any kind...appreciate this info!
> * RM 1.31 2831 * ... Ham radio operators do it with higher frequency.
> --
> |Internet: Thomas.Smith@228.woodybbs.com

Hi Tom,

The 735 will work just fine with RS-12 which is currently running with a 15
meter input and a 10 meter output.

All of the other amateur satellites either require VHF/UHF inputs or outputs
and your 735 will not work on these frequencies without transmitting or
receiving converters.

Bill

586. Re: 6 meter EME

Newsgroup: rec.radio.amateur.space
Date: 1996-03-23 00:00:00 UTC
From: blanton@ni.net
Message-ID: <blanton-2303961025410001@xband.ni.net>
Source record: 22753

In article <3148C4BC.5C6A@telepost.no>, Geir <nada@telepost.no> wrote:

> Does anybody know of how common 6 meter moonbounce is? I have plans to
> build a station with big 6 meter yagi(s) feed from an IC-736 with 100
> watts out at 6.

6 meters is a pretty poor frequency for EME due to high galactic and other
background noise and low antenna gain. Generally higher frequencies are
better for EME (up to around 10 GHz or so). Have fun on MS.

73,
Lee, WA8YBT/6
Temecula, CA, USA

587. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Doruvl.54o@pe1chl.ampr.org>
Source record: 22667

In <4j1td8$jnh@ns1.thpl.lib.fl.us> sfton@scfn.thpl.lib.fl.us (Keith OBrien) writes:

>Anyone recommend a Satellite tracking program that will display multiple
>objects on the screen and track both of them. STSPlus will only put one
>at a time on the screen, as well as others I have tried. During the
>present STS76 and Mir mission, it be nice to track both when they not
>docked together. WinOrbit 2.8 will display a secondary satellite, but
>will only update the track of one object. Keith O'Brien

SatTrack can track many satellites at the same time, and display all
of them on a graphical display and a multi-line text screen.

http://www.primenet.com/~bester/sattrack.html

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

588. Re: ARLK019 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: blanton@ni.net
Message-ID: <blanton-2403961051110001@xband.ni.net>
Source record: 22668

TSS-1R re-entered March 19th.

Lee, WA8YBT/6

589. Re: Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: clyde burdette <jbmedas@mail.multiverse.com>
Message-ID: <31556951.5E93@mail.multiverse.com>
Source record: 22669

Tom Kreyche wrote:
>
> I've got a great commercial astronomy program (Voyager II) which can
> easily handle comets as well as spacecraft, highly recommended...tom kg6yj

I am both an amateur astronomer and also into amateur radio, with a
keen interest in hamsats and spacecraft. I can assure you that Keps and
orbital elements are not used by the SAME software.

Keps use an earth-centered frame of reference, orbital element use
a sun-centered frame of reference.

590. Re: mac tracking software ?

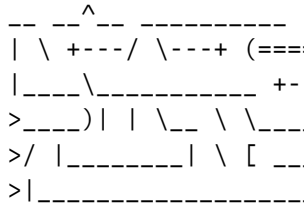
Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4j2v02$kq7@paperboy.ids.net>
Source record: 22754

In article <argon-1803961239490001@argon.onramp.net> Argon,
argon@onramp.net writes:
>Does anyone have any comments about macintosh satellite tracking
software ?
>
>Has anyone imported the data from OrbiTrack into Voyager ?

Orbittrak is *FANTASTIC* - better than any DOS or Windows satellite tracking program which I've used. You can track up to 1000 satellites (or more!) simultaneously in real time (well, it helps to have a PowerPC with an 80 Mhz. processor plus an accelerator board if you really want to do 1000 at the same time) does excellent predictions with many different Earth gravitational models, has an excellent database, and many other features which i really use.

I export data from Orbittrak in to spreadsheets (to make prediction charts and graphs) and Voyager (to plot visual satellite passes against the stars). The Orbittrak/Voyager combination helped me be one of the people who "discovered" the secret DoD-1 satellite launched from the shuttle a couple of years back.

There is one unusual "feature" I discovered about using Voyager to plot Orbittrak files though. If the satellite is above the horizon for a long period of time (e.g. Molniya, high altitude, etc.) then you get some pretty confusing ground tracks. Orbittrak exports a set of celestial coordinates (RA & Dec) for your site. When Voyager imports those units it plots them against the sky you've chosen, not realizing that those particular coordinates are for different times -- while the Earth is still rotating! So it can look pretty strange.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

591. Nasa Shuttle on WA3NAN ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: Keith@unix.asb.com
Message-ID: <Keith.882.0137122B@unix.asb.com>
Source record: 22755

```
A couple of years back, I heard NASA used a SCPC audio channel, Is
this still true ? I ask because Nasa Select's audio is sometime
different from WA3NAN ( Amateur Radio Broadcast ). Wa3nan calls
there broadcast " Nasa Contract Audio "..
```

Keith

|==|
| • Keith@unix.asb.com == SLIP/PPP Internet Address • |
| • Keith@asb.com == BBS Internet Address • |
| • Http://www.asb.com/usr/keith == My WWW Page URL Address • |
| • N2NJS@KC2FD.NY.USA.NA == Ham Radio AX25 Packet Address • |
| • 70302,2701 == CompuServe Address • |
| • Knipper@compuserve.com == CompuServe Internet Address • |
|== |
^^

592. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4j2uli$kq7@paperboy.ids.net>
Source record: 22756

In article <4iqb0p$ofa@news.mcn.net> Vince Fiscus, vfiscus@mcn.net writes:
>Is phase 3D to launch this year or next?

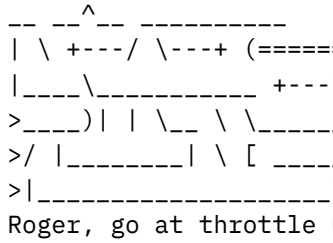
officially Phase 3-D is still on the manifest for the Ariane 502 launch, which, according to ESA, is scheduled for the november-december 1996 timeframe. Naturally any problems with the 501 launch or slips in the schedule could easily push it in to next year.

Unofficially there is a possibility that Phase 3-D may be taken off 502 and put on an Ariane 4 launch vehicle if it helps satisfy ESA and Arianespace's requirements.

In any case we'll all know better after the launch of Ariane 501, currently planned for June from the latest I've heard.

these are my own comments, representing myself only. Not speaking for AMSAT or the Phase 3-D integration team.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

593. Re: Wanted, KEPs for Comet Hyakutake

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: Tom Kreyche <tkreyche@well.com>
Message-ID: <4j2tqq$7hv@nkosi.well.com>
Source record: 22757

I've got a great commercial astronomy program (Voyager II) which can
easily handle comets as well as spacecraft, highly recommended...tom kg6yj

594. it help

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: jemalone@ballistic.com
Message-ID: <4j4mmp$d3u@news3.realtime.net>
Source record: 22758

hello. i have recently builted up a new computer for myself. i ordered
a new botherboard/cpu and ordered the intel 100 mhz cpu chip to go in
the new mb they were out of the intel and sent me the amd 120 mhz chip
instead. What I want to know if anyone out there has an amd cpu chip
and if instant track runs ok with it. It does not on my system. I go
to the menu option number 2 to track a satilite with the map and text
on bottom. well the text info on the nbottom of the screen is all
garbled and not read able. I would like to hear from people who have
this cpu chip and run it to see if you have the same problem.
jack
jemalone@ballistic.com
jack malone
jemalone@ballistic.com

595. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4j2kkl$210@dfw-ixnews5.ix.netcom.com>
Source record: 22759

In <4j1td8$jnh@ns1.thpl.lib.fl.us> sfton@scfn.thpl.lib.fl.us (Keith OBrien) writes:
>
>Anyone recommend a Satellite tracking program that will display multiple
>objects on the screen and track both of them. STSPlus will only put one
>at a time on the screen, as well as others I have tried. During the
>present STS76 and Mir mission, it be nice to track both when they not
>docked together. WinOrbit 2.8 will display a secondary satellite, but
>will only update the track of one object. Keith O'Brien
>
Check again... STSPLUS will track 32 satellites at a time plus the primary satellite. STSPLUS also allows you to designate a target satellite and it will display the range and range rate between the two birds. I have also recently purchased MicroOrbiter 3 from Precision Software Solutions at 713-538-1694 ($50.00.) It can only track 20 birds at the same time but has much more data available. Both have their merits and I will be paying the shareware on STSPLUS soon (only $8.00.) Most sat tracking programs do allow multiple bird tracking. Check your docs again and good luck...
--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

596. REJECTED: Ham-Space Digest V96 #85

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Message-ID: <9603241518.AD00021@rtp41.rtp.dg.com>
Source record: 22760

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@ucsd.edu
To: Ham-Space@ucsd.edu
Subject: Ham-Space Digest V96 #85
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Sun, 24 Mar 96 Volume 96 : Issue 85

Today's Topics:
ARLK020 Keplerian data
Comment 03/22/96 6:00pm
Dumb question - ham <-> Internet connections
Icom 735 query
MIR and SAREX

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 23 Mar 1996 16:03:00 -0500
From: w1aw@arrl.org
Subject: ARLK020 Keplerian data

SB KEP @ ARL $ARLK020
ARLK020 Keplerian data

ZCZC SK20
QST de W1AW
Keplerian Bulletin 20 ARLK020

Date: 22 Mar 96 18:06:17
From: Ken.Ernandes@333.woodybbs.com (Ken Ernandes)
Subject: Comment 03/22/96 6:00pm

Joe -

Could you post the following news bulletin?:

The Larkfield Amateur Radio Club ARES/RACES unit will be having a
Satellite Communications session / demonstration on Saturday March 30,
1996 at the Huntington Town Hall, Route 25A. Setup will begin at
approximately 8:00 A.M. This activity is open to the public.
Interested amateur radio operators are encouraged to attent.

For further information, check in to the AMSAT Satellite Net on Tuesday
evening at 8:00 P.M. on the WA2SNQ repeater 147.075 MHz / + (4Z PL -
136.5) or contact Ken Ernandes, N2WWD
--
|Fidonet: Ken Ernandes 1:2619/333
|Internet: Ken.Ernandes@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

Date: 23 Mar 1996 16:05:39 GMT
From: okx@extro.UCSD.EDU (Philip Rhoades)
Subject: Dumb question - ham <-> Internet connections

Sorry if this is a dumb question but is it possible to get an internet
connection via ham radio and satellites used for amateur radio?

I am thinking about this possibility for communications in remote areas -
areas that are not likely to be served by Internet providers.

Thanks, Phil.
--
Philip Rhoades
Pricom Pty Limited
E-mail: okx@extro.ucc.su.OZ.AU
Mobile: +61-2-0411:185652 Fax: +61-2-9959-3481
S-mail: GPO Box 3411 Sydney NSW 2001 Australia
http://www.usyd.edu.au/~okx/home.htm

Names of known ancestors (mostly from the UK): ADAMSON BAILEY CHIGWIDDEN
CHURCH DAVIES HENDERSON KEOUGH LAW MAY (MAI-Poznan) McMAHON OLIVER PEGUS
RANKIN RHOADES SIMMONS SMITH SOLLOWAY TUCKEY TUNKS WHITTET

Date: 21 Mar 96 00:23:00
From: Thomas.Smith@228.woodybbs.com (Thomas Smith)
Subject: Icom 735 query

Need a touch of help on this one, as I have a chance to buy this unit...

A bit of research shows me the Icom 735 is NOT able to do any satellite work...i.e., it cannot use the CT-16 satellite converter supplied by Icom...

As I am interested in working ALL ham modes, can anyone tell me if the 735 can do ANY satellite work of any kind...appreciate this info!
* RM 1.31 2831 * ... Ham radio operators do it with higher frequency.
--
|Fidonet: Thomas Smith 1:2619/228
|Internet: Thomas.Smith@228.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

Date: Fri, 22 Mar 1996 01:19:23 GMT
From: greg@core.rose.hp.com (Greg Dolkas)
Subject: MIR and SAREX

Ok, so for MIR/Shuttle flights, MIR stays on 145.550 simplex, and the shuttle uses 144.45&47 / 145.84 split, right? Or does 145.55 get turned off for the flight and only one of the ships communicate with us down here?

Thanks,

Greg KO6TH

Date: (null)
From: (null)

SB KEP ARL ARLK020
ARLK020 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76
1 23831U 96018A 96082.49738744 .00002218 11464-4 68202-5 0 23
2 23831 51.6478 198.7816 0051788 345.6974 213.0022 16.05085775 23
Mir
1 16609U 86017A 96082.16847754 .00006816 00000-0 96325-4 0 04615
2 16609 51.6463 199.9895 0005815 112.9547 247.2060 15.57824117576445
AO-10
1 14129U 83058B 96072.78930691 .00000050 00000-0 10000-3 0 4060
2 14129 26.3531 219.7580 5987476 358.1706 0.3226 2.05880387 67880
RS-10/11
1 18129U 87054A 96081.85290607 .00000021 00000-0 66912-5 0 02025
2 18129 82.9240 213.0735 0013229 41.6036 318.6122 13.72363178438195

```
UO-11
1 14781U 84021B 96081.97263031 .00000152 00000-0 33515-4 0 08810
2 14781 97.7939 76.6022 0012460 14.9495 345.2081 14.69436377644844
RS-12/13
1 21089U 91007A 96082.02374330 .00000033 00000-0 18572-4 0 08783
2 21089 82.9183 253.9714 0030720 114.6565 245.7782 13.74067496257066
AO-13
1 19216U 88051B 96081.47468731 .00000195 00000-0 17987-3 0 01706
2 19216 57.3218 128.0218 7391059 34.6119 356.5238 2.09735129027994
UO-14
1 20437U 90005B 96082.14220660 -.00000052 00000-0 -33491-5 0 01756
2 20437 98.5463 166.7764 0011675 92.6711 267.5808 14.29914131321610
RS-15
1 23439U 94085A 96081.64643473 -.00000039 00000-0 10000-3 0 01324
2 23439 64.8174 164.6523 0163423 214.4174 144.6074 11.27524032050910
AO-16
1 20439U 90005D 96082.10333297 -.00000020 00000-0 91999-5 0 09844
2 20439 98.5624 168.8180 0012146 96.4371 263.8194 14.29969119321628
DO-17
1 20440U 90005E 96082.13420547 .00000018 00000-0 23649-4 0 09699
2 20440 98.5641 169.4405 0012194 94.5997 265.6592 14.30111089321654
WO-18
1 20441U 90005F 96081.77237979 .00000002 00000-0 17468-4 0 09789
2 20441 98.5647 169.0328 0012840 97.5910 262.6730 14.30080853321607
LO-19
1 20442U 90005G 96081.77479822 -.00000003 00000-0 15726-4 0 09883
2 20442 98.5662 169.4936 0013138 96.0536 264.2145 14.30188048321628
FO-20
1 20480U 90013C 96082.13894290 -.00000028 00000-0 16117-4 0 08729
2 20480 99.0383 123.5066 0540599 321.8626 34.5352 12.83232098286726
AO-21
1 21087U 91006A 96081.87799199 .00000094 00000-0 82657-4 0 07046
2 21087 82.9385 26.3214 0036452 87.6059 272.9256 13.74566620258017
UO-22
1 21575U 91050B 96082.15384277 -.00000003 00000-0 13365-4 0 06776
2 21575 98.3628 151.0956 0007493 158.7912 201.3599 14.37015829245562
KO-23
1 22077U 92052B 96082.01575660 -.00000037 00000-0 10000-3 0 05712
2 22077 66.0764 11.9702 0009175 322.3940 37.6426 12.86295458169592
KO-25
1 22828U 93061F 96082.10810452 -.00000049 00000-0 -22401-5 0 04418
2 22828 98.5857 159.4095 0010877 106.8190 253.4142 14.28133357097685
IO-26
1 22826U 93061D 96082.10643378 -.00000023 00000-0 81061-5 0 04763
2 22826 98.5909 159.3566 0009369 120.3288 239.8810 14.27797673129576
AO-27
1 22825U 93061C 96082.10351631 -.00000021 00000-0 91381-5 0 04854
2 22825 98.5905 159.2053 0009014 120.8289 239.3772 14.27689645129564
PO-28
1 22829U 93061G 96082.12355553 .00000019 00000-0 24981-4 0 04663
```

2 22829 98.5880 159.4781 0010592 107.2665 252.9678 14.28114316129600

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
March 26, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #85
****

597. Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: mwcook@cris.com
Message-ID: <4j487a$mhc@tribune.cris.com>
Source record: 22761
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

Hyakutake Comet Radio Bounce Test Results

Based on poor ionization at VHF, it appears that
Hyakutake Comet bounce is doubtful. Never the
less, last night I made a concerted effort. Here
are the results:

- System used was my 2mtr EME station and the FFTDSP42
program. EME Signal echo detection S/N margin is
20+ dB with FFTDSP42 integration set to 1.

- For the comet bounce test, integration was set to
8 for a detection increase of 4.5 dB. Total
system S/N EME echo margin was aprox 25 dB.

- A continuous 1500 watt, 144 Mhz carrier was
transmitted for 45 Seconds. The receive period was
75 Seconds. Any reflection from the comet should
have been visible as a line trace during a portion
of the display receive window.

- Transmit offsets of 0, +1, +2, -1, -2 Khz were tried
during the test period to allow for various doppler
effects.

- After an hour of testing, no traces were seen. It
is possible that some pointing error existed during
the test since we had cloud cover and I could not
do a visual validation.

- I used the "Home Planet" program and the latest
comet position within the Arcturus star group.
It would be nice if one of the astronomy programs
would provide AZ EL pointing information
for celestial objects. During the test period,
the EME array was moved over a +/- 10 degree range
in AZ and EL.

It looks like thunderstorms for tonight so it is doubtful
that I'll be able to make additonal tests for the perigee
night.

Details on the EME station and FFTDSP program used for the
test is available on my web page.

de Mike, AF9Y
http://www.webcom.com/af9y
Work: mwcook@itt.com
Home: mwcook@cris.com

598. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: wblair@rmii.com
Message-ID: <4j48ka$b18_001@slip22163.rmii.com>
Source record: 22762

In article <4j1td8$jnh@ns1.thpl.lib.fl.us>,
sfton@scfn.thpl.lib.fl.us (Keith OBrien) wrote:
:Anyone recommend a Satellite tracking program that will display multiple
:objects on the screen and track both of them. STSPlus will only put one
:at a time on the screen, as well as others I have tried. During the
:present STS76 and Mir mission, it be nice to track both when they not
:docked together. WinOrbit 2.8 will display a secondary satellite, but
:will only update the track of one object. Keith O'Brien

Try Satspy. It's great! There are so many things that you can do with
your mouse and its left and right buttons in this program that I'm _still_
discovering neat things (i.e. its user interface is excellent).

The Satspy web page is at: http://www.usa.net/acappella/satspy/satspy.htm

Be sure to download the satellite element set available there, too.

599. Email Subscribe

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: Troy Nichols <101601.3050@CompuServe.COM>
Message-ID: <4j4elflsm1@mhade.production.compuserve.com>
Source record: 22763

Will somebody please send me the address used to subscribe to this group in order to get articles as email vice USENET. Please send replies to my email address.
Thanx
KE6VNI

600. Re: Shuttle re-broadcast freqs/NYC

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: gazers@bc.cybernex.net
Message-ID: <DosG5t.Eq@news2.new-york.net>
Source record: 22764

sreymann@radar-sci.jpl.nasa.gov wrote:

>I'll be working the STS-76 mission in Houston, but I expect to be travelling
>during the mission to the New York City/NJ area for a funeral. Can anyone
>give me some two-meter frequencies to monitor NASA Select audio in the
>NYC/LI/NNJ area?

In NYC/NNJ try 146.6100
On LI, 448.425

Hope this helps......

Robbie
I am the Nexus one
I want more life
fucker I ain't done

- Rob Zombie

601. Re: Homebrew sat. tracking controller?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DoruIo.4zA@pe1chl.ampr.org>
Source record: 22765

In <4ipon4$1cc@due.unit.no> joachimp@stud.unit.no (Joachim Alexander Pihl) writes:

>We are in need of a satelite tracking controller, and naturally, we want
>to build it ourselves. We already have Satscan scanning software, and
>we know it is capable of talking to a rotor controller, but we do not
>know what format the data output is, and what kind of handshaking it
>expects. Does anyone know?

>If not: does anyone know of other tracking programs that are easy to use,
>yet still have a documented way of talking to the controller. Buying
>an interface is out the question, given the fact that this club (LA1K)
>consists mainly of engineering students.

For years, I have used an old Epson PX-8 handheld CP/M machine to
track satellites. I used a homemade BASIC program derived from the
wellknown "basic orbits" by W3IWI.
It interfaces to an AMSAT-DL rotor interface, but of course it is
easy to modify the program to control something else.

So, if you have one of these machines (or something similar) laying
around somewhere, it is a cheap solution.

There are also single-chip micro designs, like the TrackBox, that you
can build yourself.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

602. Re: Smooth antenna tracking vice stop-n-go ??

Newsgroup: rec.radio.amateur.space
Date: 1996-03-24 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DorusK.510@pe1chl.ampr.org>
Source record: 22766

In <1996Mar22.155645.7159@nosc.mil> feistjf@ writes:

> I am curious if there exist an satellite antenna tracking software/hardware
>that enables smooth (continous increments) vice the stop-n-go action. I think
>that I remembered seeing one a while back that had a ramping software with a
>hardware mod available?? I have an EMOTO az/el system and would like to
>try something in this configuration. I currently run WISP but can adapt if
>required.

When you use a tracking program for which source is available, it should
not be too difficult to convert to continuous motion by calculating
the direction change rate and feeding it to the motors (as a first
approximation) instead of doing start/stop operation.
I sort of remember reading about a system that did this (by ON6UG? or
G3RUH maybe?), but I have no details.

It should certainly operate much smoother, especially on those large
rotators and with big arrays. When my system was still operative, I
often looked at the swings of antenna direction triggered each time
the azimuth was updated, and thought "something ought to be done about
that..."

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

603. Re: Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-25 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar25.011458.18765@ke4zv.atl.ga.us>
Source record: 22670

In article <DooF20.M9n@pe1chl.ampr.org> pe1chl@wab-tis.rabobank.nl writes:
>
>You will also need to use a lot of transmit power to get sufficient ERP.
>Many stations use about 30W in a yagi, so you would need about 250W
>for comparable ERP.
>(the ERP is not really needed when looking at the sat sensitivity specs,
>but unfortunately there is often a lot of QRM on the uplink)

And unfortunately, advocating running more power just aggrevates the
QRM problem. It is certainly the selfish answer, but it may be the
wrong system answer. A better user management protocol would be a
better system answer.

It's the age old question in amateur radio, dominate or cooperate.
Domination seems to usually win, and that's probably not a good
thing overall.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

604. NORAD Two-Line Orbital Element Set: Space Shuttle (96085.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-25 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4j7alo$n7d@blackbird.afit.af.mil>
Source record: 22671

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 76
1 23831U 96018A 96085.25042824 -.00000505 00000-0 00000+0 0 144
2 23831 51.6428 184.5446 0004348 102.8248 272.9670 15.57856552 463
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

605. Re: Nasa Shuttle on WA3NAN ?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-25 00:00:00 UTC
From: william.r.jones.1@gsfc.nasa.gov
Message-ID: <4j6gtj$shs@post.gsfc.nasa.gov>
Source record: 22672

In article <Keith.882.0137122B@unix.asb.com>, Keith@unix.asb.com (Keith Knipschild - LI
,N.Y) says:
>
>A couple of years back, I heard NASA used a SCPC audio channel, Is
>this still true ? I ask because Nasa Select's audio is sometime
>different from WA3NAN (Amateur Radio Broadcast). Wa3nan calls
>there broadcast " Nasa Contract Audio "..
>

'NAN uses the Shuttle Mission Audio feed that is transmitted from JSC
to other NASA centers. Yes, it is a SCPC circuit that is carried
under contract by GE Americom. Note that this circuit is established
to distribute the Mission Audio to the NASA centers, not to
broadcast to the general public (small RO terminals). What this
means is that unlike most private radio feeds that a home (TVRO)
SCPC receiver can tune in, the Mission Audio circuit is transmitted
at a power level much lower, since it is designed to be received
by earth stations with 30 foot dishes.

606. Re: Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-25 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DouL1z.4nJ@pe1chl.ampr.org>
Source record: 22673

In <1996Mar25.011458.18765@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>In article <DooF20.M9n@pe1chl.ampr.org> pe1chl@wab-tis.rabobank.nl writes:
>>
>>You will also need to use a lot of transmit power to get sufficient ERP.
>>Many stations use about 30W in a yagi, so you would need about 250W
>>for comparable ERP.
>>(the ERP is not really needed when looking at the sat sensitivity specs,
>>but unfortunately there is often a lot of QRM on the uplink)

>And unfortunately, advocating running more power just aggrevates the
>QRM problem. It is certainly the selfish answer, but it may be the
>wrong system answer. A better user management protocol would be a
>better system answer.

The QRM is not from fellow satellite users, Gary...

The main source of QRM seems to be taxi-cab and similar usage of
the 2M band in countries where amateur radio is not popular and
the government is not concerned with international agreements.

But there is also usage by amateurs not knowing about satellites.

Increasing ERP is really the only way to overcome this QRM, because
there is no feedback mechanism to the cause.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

607. JVFAX and weather sats

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4j8i0p$ov@nms.telepost.no>
Source record: 22674

Hi folks!
I'm trying to use JVFAX version 7.1A to receive weather fax direct form NOAA/MET sats, but I have som problems, and I hope I can get som help here!

I have used the 'original' interface described in the JVFAX docs, and everything is working ok. The problem is that I get 'banana' pictures due to the doppler effect (?). To do this job, I need a syncronous interface. In the last edition of RIG magazine an interface was published. I made my PCB and tried it together with JVFAX - no luck! The interface seems to be working ok - I'm not sure but I suppose the 'amplityde' of the received signal should represent the gray level (?). In HF the frquency is representing the gray level. Am I right?

The RIG interface is connected to the printer port, and I have configured JVFAX to use 'BidPortIRQ' with the correct address and IRQ. I get signals indicated in the 'monitor window', but it's impossible to adjust the gray level between white and black by adjusting the amplityde on the incomming signal. I have tried a 'live' signal, and also an audio generator, both results in only noise!

Does anyone use this interface, or this configuration in JVFAX?

All tips are welcome!

de Karl Jan LA3FY

608. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: Michael J Wooding <vhf-comm@g6iqm.demon.co.uk>
Message-ID: <IEoEFOA3dzVxEwEk@g6iqm.demon.co.uk>
Source record: 22675
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

In article <4j487a$mhc@tribune.cris.com>, Mike Cook - AF9Y
<mwcook@cris.com> writes
>Based on poor ionization at VHF, it appears that
>Hyakutake Comet bounce is doubtful. Never the
>less, last night I made a concerted effort. Here
>are the results:

Very interesting Mike and I applaud your efforts.

All I want to do however is see the darn thing!

Mike

Michael J Wooding vhf-comm@g6iqm.demon.co.uk - CompuServe: 100441,377
WWW: http://www.eolas.co.uk/ag/vhfcomm.htm (hambits.htm & hamclip.htm)
WWW: http://www.clearlight.com/~vhfcomm
Tel: (0)1788 890365 Fax: (0)1788 891883
KM Publications, 5 Ware Orchard, Barby, Nr.Rugby, CV23 8UF, UK
VHF Communications Magazine - Especially Covering VHF, UHF and Microwaves

609. Re: 6 meter EME

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: dbcntcas@teleport.com
Message-ID: <dbcntcas-2603960838350001@ip-pdx12-26.teleport.com>
Source record: 22676

6M EME is not common, but there are a few hardy souls on that mode. I will say it does take a strong station to pull it off though. I was listening on the US end when W7HAH worked OH2BC a couple of years ago. 'BC had 4 yagis and Shep had a single M Squared. Minimum 6M EME: M2 + KW. Good DX.
de Dave, N7DB (CN85)

--
Dave Bernhardt dbcntcas@teleport.com

610. Re: Using Omni directional antennas for Pacsasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar26.183222.28093@ke4zv.atl.ga.us>
Source record: 22677

In article <DouL1z.4nJ@pe1chl.ampr.org> pe1chl@wab-tis.rabobank.nl writes:
>In <1996Mar25.011458.18765@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:
>
>>In article <DooF20.M9n@pe1chl.ampr.org> pe1chl@wab-tis.rabobank.nl writes:
>>>
>>>You will also need to use a lot of transmit power to get sufficient ERP.
>>>Many stations use about 30W in a yagi, so you would need about 250W
>>>for comparable ERP.
>>>(the ERP is not really needed when looking at the sat sensitivity specs,
>>>but unfortunately there is often a lot of QRM on the uplink)
>
>>And unfortunately, advocating running more power just aggrevates the
>>QRM problem. It is certainly the selfish answer, but it may be the
>>wrong system answer. A better user management protocol would be a
>>better system answer.
>
>The QRM is not from fellow satellite users, Gary...
>
>The main source of QRM seems to be taxi-cab and similar usage of
>the 2M band in countries where amateur radio is not popular and
>the government is not concerned with international agreements.
>
>But there is also usage by amateurs not knowing about satellites.
>
>Increasing ERP is really the only way to overcome this QRM, because
>there is no feedback mechanism to the cause.
>
>Rob

I should have noted your geographical location, Rob. My comments
may be inappropriate for your situation. However, in the US,
those types of signals are not an issue, because those types of
operations won't be in the footprint of a LEO bird, so most of
the QRM *is* from other satellite operators, and advocating
running more power does aggrevate the situation.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

611. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4j7is3$h01@news.mhv.net>
Source record: 22678

In article <4j1td8$jnh@ns1.thpl.lib.fl.us>, sfton@scfn.thpl.lib.fl.us (Keith OBrien) wrote:
>Anyone recommend a Satellite tracking program that will display multiple
>objects on the screen and track both of them. STSPlus will only put one
>at a time on the screen, as well as others I have tried. During the
>present STS76 and Mir mission, it be nice to track both when they not
>docked together. WinOrbit 2.8 will display a secondary satellite, but
>will only update the track of one object. Keith O'Brien
>

STSORBIT Plus does the trick. Point your web browser to:
http://spacelink.msfc.nasa.gov

I believe it's in the instructional materials area.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

612. Re: Wanted: updated keps for STS-76 & MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4j7j1i$h01@news.mhv.net>
Source record: 22679

In article <4j14uu$8el@Mournblade.InterL.net>, melvlytt@interl.net wrote:
>
>
>Hello,
>
>My local packet BBS doesn't have current keps for the current SAREX mission
>or MIR. Could someone please post or e-mail the current information?
>
>Thanks es 73 de Mel, KB0EZT
>E-mail: melvlytt@interl.net
>
>
>
>`[1;30;43mNet-Tamer V 1.00.0 - Test Drive
>

Get on the shuttle element set e-mail list. Everytime the orbital data changes you get the latest. Send to listserv@ucsd.edu the message: subscribe shuttle-elts

You'll get confirmation rather quickly.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

613. >>>>HELP - Small VHF Xmitter for Airborne Telemetry<<<<

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: BlueSky@tiac.net
Message-ID: <315853B1.5FD5@tiac.net>
Source record: 22680

Can someone help me by pointing me to a schematic or an article of a small VHF transmitter? It is
to be used to relay telemetry from a series of high altitude rockets. Following are the (desired)
specs:

Frequency: 2m band or nearby; XTAL controlled;
RF Power: 50-250 mW output;
Supply: 9-12 VDC (battery);
Modulation: N/A

Complexity (ie. size and weight) should be as low as possible, as should the cost - lets face it -
the typical life of these devices will be measured in minutes. I would preffer to build the xmitters myself as integral part of a telemetry package.

I have hundreds of various scanner crystals that fit in this category. They have fundamental
frequencies around 16MHz, but I don t really know if I can use them for this project.

I would very much appreciate any help in this matter. I can be also reached at

mailto:BlueSky@TIAC.net

My thanks to all those who reply!

73s

Chris (WR1F)

614. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4j9n29$r3k@news.jf.intel.com>
Source record: 22681

How long is Phase 3D expected to last once it get launched?

I'm rather dismayed that Phase 3C (AO-13) is not expected to
last out this year and I haven't even had a chance to transmit
to it yet. That one was launched in 1988? Seems like yesterday.

At least AO-10 will still be up!

--
jgarver@ichips.intel.com I don't speak for Intel

615. STS-76...anyone worked shuttle/MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: BKille@gnn.com
Message-ID: <4j9t69$5v5@news-e2c.gnn.com>
Source record: 22682

Has anyone worked SAREX on the current shuttle mission STS-76 from either the shuttle Atlantus or MIR? I havent heard them yet, but it seems the best passes here are either when I am at work or in the middle of the night so I havent had many chances to listen. :-(

Virtually, Bruce WA4JAV

616. ARLK021 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk021.1996@arrl.org>
Source record: 22683
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK021
ARLK021 Keplerian data

ZCZC SK21
QST de W1AW
Keplerian Bulletin 21 ARLK021
From ARRL Headquarters
Newington, CT March 26, 1996
To all radio amateurs

SB KEP ARL ARLK021
ARLK021 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76
1 23831U 96018A 96086.65667824 -.00000505 00000-0 00000+0 0 186
2 23831 51.6500 177.4957 0004375 102.9443 244.7518 15.57801059 684
Mir
1 16609U 86017A 96086.20986123 .00003663 00000-0 54808-4 0 04761
2 16609 51.6463 179.7290 0005708 126.6849 233.4675 15.57852765577077
HST
1 20580U 90037B 96086.18522610 .00000417 00000-0 26027-4 0 08147
2 20580 28.4679 32.0795 0006090 26.9200 333.1701 14.91031859126180
AO-10
1 14129U 83058B 96086.38855436 -.00000079 00000-0 10000-3 0 4088
2 14129 26.3219 217.6042 5989029 1.8359 359.5676 2.05880164 68168
RS-10/11
1 18129U 87054A 96085.64411629 .00000021 00000-0 67576-5 0 02011
2 18129 82.9242 210.2716 0013128 31.6692 328.5250 13.72363186438719
UO-11
1 14781U 84021B 96085.99019763 .00000119 00000-0 27999-4 0 08842
2 14781 97.7941 80.4376 0012042 2.9925 357.1344 14.69437513645436
RS-12/13
1 21089U 91007A 96086.39280375 .00000056 00000-0 42564-4 0 8763
2 21089 82.9183 250.7295 0030665 102.4421 258.0189 13.74068025257662
AO-13
1 19216U 88051B 96085.28891472 .00000145 00000-0 18837-3 0 1723
2 19216 57.3231 127.2829 7391350 35.0568 356.4309 2.09736433 28072
```

```
UO-14
1 20437U 90005B 96086.13073658 .00000002 00000-0 17661-4 0 01733
2 20437 98.5463 170.6918 0011921 82.3707 277.8846 14.29914885322185
RS-15
1 23439U 94085A 96085.63766421 -.00000039 00000-0 10000-3 0 01326
2 23439 64.8186 158.1973 0163275 213.7659 145.2779 11.27524169051365
AO-16
1 20439U 90005D 96086.09170907 .00000038 00000-0 31613-4 0 09825
2 20439 98.5616 172.7379 0012242 84.8015 275.4567 14.29970169322199
DO-17
1 20440U 90005E 96086.12218737 .00000012 00000-0 21304-4 0 09889
2 20440 98.5635 173.3621 0012391 83.2611 276.9971 14.30111496322220
WO-18
1 20441U 90005F 96086.11027687 .00000015 00000-0 22749-4 0 09800
2 20441 98.5643 173.2997 0012839 84.7517 275.5137 14.30081310322223
LO-19
1 20442U 90005G 96086.11236758 .00000074 00000-0 45118-4 0 09891
2 20442 98.5659 173.7626 0013150 83.7664 276.5026 14.30189330322245
FO-20
1 20480U 90013C 96086.11507741 -.00000021 00000-0 32712-4 0 08680
2 20480 99.0384 126.7319 0540574 312.8646 42.8228 12.83232271287232
AO-21
1 21087U 91006A 96086.17267506 .00000094 00000-0 82657-4 0 6898
2 21087 82.9387 23.1435 0036677 75.7384 284.7831 13.74566704258605
UO-22
1 21575U 91050B 96086.12269101 .00000040 00000-0 27677-4 0 6754
2 21575 98.3621 154.9502 0007469 146.4743 213.6906 14.37016954246135
KO-23
1 22077U 92052B 96086.05877950 -.00000037 00000-0 10000-3 0 05672
2 22077 66.0766 3.5075 0009000 319.8133 40.2207 12.86295328170119
KO-25
1 22828U 93061F 96086.10160190 .00000072 00000-0 46330-4 0 04408
2 22828 98.5856 163.3360 0010859 94.7564 265.4892 14.28134970098254
IO-26
1 22826U 93061D 96086.10087259 .00000008 00000-0 20734-4 0 04735
2 22826 98.5904 163.2828 0009735 109.7514 250.4731 14.27798127130147
AO-27
1 22825U 93061C 96086.09825617 .00000030 00000-0 29658-4 0 04773
2 22825 98.5902 163.1313 0009062 108.9407 251.2779 14.27690489130139
PO-28
1 22829U 93061G 96086.11710880 .00000042 00000-0 34167-4 0 04623
2 22829 98.5874 163.4030 0010734 96.0080 264.2350 14.28115046130177

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
March 30, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

617. NORAD Two-Line Orbital Element Set: Space Shuttle (96086.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4j9u1c$st3@blackbird.afit.af.mil>
Source record: 22684

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 76
1 23831U 96018A 96086.25042824 -.00000506 00000-0 00000+0 0 179
2 23831 51.6460 179.5325 0004739 122.1696 105.6440 15.57890805 618
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

618. Albany, NY SAREX Contact Rescheduled

Newsgroup: rec.radio.amateur.space
Date: 1996-03-26 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <ZhKIFPH.sanderman@delphi.com>
Source record: 22685

FOR IMMEDIATE GENERAL RELEASE Page 1 of 3

Preparations are nearly complete at Bethlehem Central High School for Friday morning's scheduled amateur radio contact with space shuttle astronaut Kevin P. Chilton. Several students at the Delmar school have already been through a "dress rehearsal", readying their questions for the Atlantis Commander.

The question and answer session has been planned for nearly three years by members of the Albany Amateur Radio Association in cooperation with NASA, the American Radio Relay League, and school officials. Bethlehem senior Geoff Phillips, himself a ham radio operator, suggested the contact to school's science department.

Four of the six Atlantis astronauts are also ham radio operators. Commander Chilton will use the same ham radio equipment aboard the shuttle to talk to the students that was used to establish communications with the Russian Mir space station and coordinated the docking of the two spacecraft over the weekend.

Technical preparations at the school are also approaching completion for the contact, which has now been re-scheduled for 6:58 AM Friday. A sophisticated amateur radio station, complete with computerized tracking equipment which automatically points an array of specialized antennas at the shuttle as it passes overhead, has been set up in the school's library.

Unlike last summer's Shuttle Amateur Radio EXperiment contact at the Schenectady Museum & Planetarium, this operation will use direct air-to-ground communications with Atlantis. David Jones of Albany, who is coordinating the technical issues for this

"SAREX" contact, notes that the Schenectady effort involved a telephone and satellite link as the shuttle flew over South Africa. On this mission, Atlantis will fly nearly directly overhead.

But as the Atlantis crew works on its mission objectives in space, its the amateur radio and educational aspects of the flight that seem to be attracting a lot of attention here on the ground. Several hams from the Bennington area, members of the Southern Vermont Amateur Radio Club, have been assisting Jones with assembling equipment and coordinating operations with NASA.

It's a rare opportunity for students to get a first-hand, hands-on experience with the space program. The mix of space travel and communications involve facets of mathematics, geography, astronomy, physics, computer science, and the communications arts. And excitement at the school is increasing as the time approaches.

The national news service "This Week in Amateur Radio", which originates from the Albany area, will carry the student's questions and astronauts answers live via satellite to hams across the US and Canada. WA3NAN, the ham station at the Goddard Space Flight Center in Greenbelt, Maryland, will transmit the contact worldwide on "short wave" frequencies. A UHF radio link from the school to a ham station in Stillwater will facilitate regional and national "broadcast" of the contact.

From Stillwater, the signal will be sent to a satellite uplink station near Knoxville, Tennessee and back to the Albany club's repeater in the Helderbergs. Locally, ham radio enthusiasts and scanner listeners can listen in on 145.17 and 145.19 MHz.

The Shuttle Amateur Radio EXperiment is sponsored by the American Radio Relay League, of Newington, Connecticut, AMSAT - the Radio Amateur Satellite Corporation, and NASA, and supported by the Federal Communications Commission.

END END END

Stephan M. Anderman, WA3RKB
ARRL Public Information Coordinator, Eastern New York Section
email: sanderman@delphi.com
packet: WA3RKB @ WA2UMX.FN32AW.ENY.NY.USA.NA
phone: 518/664-6809

Note: The contact will be carried in the Albany area on the Albany ARA KM2H repeater on 145.19 MHz and on the Troy ARA NY2U repeaters on 145.17 and 444.225 MHz. In addition, it can be heard throughout North America on the Anik E-2 commercial communications satellite at 107 degrees west longitude, transponder 18 (9B vertical), 5.8 MHz wide-band analog audio. As noted in the release, WA3NAN plans to air the contact on their usual HF frequencies. Coverage is now scheduled to begin at 6:40 AM EST on Friday, March 29th.

619. Re: Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4ja148$4q1@news.mhv.net>
Source record: 22686

In article <ve2cz.19.3152982E@hookup.net>, ve2cz@hookup.net (Chris Willson) wrote:
>Can anyone tell me what frequencies I should be listening on to hear Shuttle
>comms? (Yes I have the tracking program, and up to date elements)
>
>Chris Willson, VE2CZ

On Shortwave (HF) 3.860, 7.185,14.285, 14.295,21.390, 21.395 and 28.650
WA3NAN Goddard amateur radio club. HAve they been on the air by the way? I
haven't heard them yet.

For Sarex LISTEN on 145.840
Uplinks are 144.450 and 144.470

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

620. Re: Mir Contact

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: kd4hrt@gate.net
Message-ID: <4ja1om$1km0@news.gate.net>
Source record: 22687

I would appreciate any information on where to send my QSL Card for a Mir Contact. I made a contact Monday morning with the American Female Ham on 145.550 simplex from the Mir.
Where do I send my QSL Card?
Are they sending out QSL Cards for contacts or Photos? Do we send out our cards in regular business envelopes with a stamped self addressed envelope, or in larger envelopes?
Thanks for your help, 73, Doug

621. Thanks for packet checksum software

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: djmullen@facstaff.wisc.edu
Message-ID: <4ja6tv$210i@news.doit.wisc.edu>
Source record: 22688

Thanks to MANY people, I now have source code for calculating
packet checksums.

Thanks and 73,
Dave Mullenix, N9LTD

622. Wanted Receiver for 137 Mhz, or a KIT for homebrew!

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4ja156$skl@ping1.ping.be>
Source record: 22689

Hello all of you in this area.

Can someone help me with my problem?

I like to receive the next satellites: NOAA, METEOR. But for to
receive these sat's you must have a receiver at 137 Mhz.

Now I'm loking for some information where I can buy me sutch receiver.

A homebrew kitt wil also do !!

All information and reactions in case with my problem is WELKOM !!!!

Thanks already for those who will respons to my letter.

you can also send mail via FidoNet : Geert Pirens 2:292/115.9

73!

Geert Pirens, ONL2057

623. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4jaiqo$1lf@dfw-ixnews6.ix.netcom.com>
Source record: 22690
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

All it should take to see the comet is a clear night and knowing where to look. I live within 10 km of downtown Houston. This is one of the worst light polution areas on the earth. After failing to find the comet on Wed. night for not knowing where to look, I found it on Thurs. night directly between arturus and the horizon. About half way around 11 pm local time. Once I knew where to look, I was able to see it even without my glasses (and my vision runs near 20/200.) The disconcerting thing about comets is that they appear to be smudges on the celestial sphere. You develope an uncontrolled urge to try and reach up and polish the skies. This must be why the ancients ascribed malevolence to them... Since Friday, it has been cloudy and the comet viewing bad.

In <IEoEFOA3dzVxEwEk@g6iqm.demon.co.uk> Michael J Wooding
<vhf-comm@g6iqm.demon.co.uk> writes:
>
>In article <4j487a$mhc@tribune.cris.com>, Mike Cook - AF9Y
><mwcook@cris.com> writes
>>Based on poor ionization at VHF, it appears that
>>Hyakutake Comet bounce is doubtful. Never the
>>less, last night I made a concerted effort. Here
>>are the results:
>
>Very interesting Mike and I applaud your efforts.
>
>All I want to do however is see the darn thing!
>
>Mike
>
>Michael J Wooding vhf-comm@g6iqm.demon.co.uk - CompuServe:
100441,377
>WWW: http://www.eolas.co.uk/ag/vhfcomm.htm (hambits.htm & hamclip.htm)
>WWW: http://www.clearlight.com/~vhfcomm
>Tel: (0)1788 890365 Fax: (0)1788 891883
>KM Publications, 5 Ware Orchard, Barby, Nr.Rugby, CV23 8UF, UK
>VHF Communications Magazine - Especially Covering VHF, UHF and
Microwaves

--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

624. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: Tom Clark <clark@tomcat.gsfc.nasa.gov>
Message-ID: <3158C95B.3B6E@tomcat.gsfc.nasa.gov>
Source record: 22691

Jim Garver wrote on the rec.radio.amateur.space newsgroup:
>
> How long is Phase 3D expected to last once it get launched?
>
> I'm rather dismayed that Phase 3C (AO-13) is not expected to
> last out this year and I haven't even had a chance to transmit
> to it yet. That one was launched in 1988? Seems like yesterday.
>
> At least AO-10 will still be up!

The reason AO-13 will "crash" later this year is that its orbit is subject to repeated gravitational "jerks" by the Sun and Moon. These perturbations cause the eccentricity of the orbit to change, and the satellite will literally bang intop the earth. The demise has absolutely nothing to do with atmospheric drag (which is what caused the Chinese satellite to re-enter recently).

If there is enough motor capability available, a high-eccentricity satellite like P3D and AO-13 can be give counter nudges to keep it from crashing. AO-13 had only limited motor capability used 8 years ago to place it into its final orbit. P3D will have a second very innovative motor onboard. The second small motor uses ordinary ammonia as a "fuel" and passes the ammonia thru an electric arc. The arc-jet motor looks very much like a large hollow spark plug. Some of the spacecraft's ~800 watts of electric power provides the thrust by heating the ammonia in the arc jet.

The lifetime of an elliptical orbit satellite cannot be easily prediicted since the solar/lunar "jerks" make the orbit be a chaotic system. If you know the current state, you can forecast its behavior, but you cannot define an "end state" and define a unique path to get there. For AO-13, small changes in the initial launch and motor burn conditions could have led to the satellite crashing a couple of years ago, or they could have led to an orbit that would have allowed the satellite to live into the next millenium.

Regarding the "crash" date, several of us (including Victor Kuedelka in Austria, James Miller in the UK and I) have done independent "impact" calculation. We all agree that the "Chicken Little" date is in the first half of December. During its last month, it is likely that the satellite will begin tumbling and heating up, so it will probably become useless sometime in November.

73 de Tom, W3IWI

625. Re: STS-76...anyone worked shuttle/MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: JWFuhr@virginia.k12.mn.us
Message-ID: <NEWTNews.827937838.4875.JFuhr@JFuhr.Virginia.k12.mn.us>
Source record: 22692

Hi, I worked MIR on 3/24/96 at 11:58 UTC. Talked to Chili for a little bit. Only heard him talk to one other person before he talked to me, then silence. Haven't had a chance to listen since then. 73's Jim, KD0GC

626. Re: Thanks for packet checksum software

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: ken.thompson@KS.Symbios.COM
Message-ID: <ken.thompson.1182.00094FAC@KS.Symbios.COM>
Source record: 22693

>Subject: Thanks for packet checksum software
>Date: 27 Mar 1996 01:50:55 GMT

>Thanks to MANY people, I now have source code for calculating
>packet checksums.

>Thanks and 73,
>Dave Mullenix, N9LTD

Dave,
Who sent you the information? I would be interested in seeing it. Working on a balloon project over a year ago, I asked for the same info. of the group here and got nothing. Even contacted a couple of people at TAPR. No help. Some research on HDLC and TCP as well as studying some tranceiver chip specifications got me started. But I had to put a logic analyzer on a TNC to get the final answers. Kind of frustrating. From scratch, I have basic and 68hc11 code both for the CRC used in packet. Is there any published text on the subject?
Ken.
N0ITL

627. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4jc4n7$b5f@news.mhv.net>
Source record: 22694
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

In article <IEoEFOA3dzVxEwEk@g6iqm.demon.co.uk>, Michael J Wooding
<vhf-comm@g6iqm.demon.co.uk> wrote:
>In article <4j487a$mhc@tribune.cris.com>, Mike Cook - AF9Y
><mwcook@cris.com> writes
>>Based on poor ionization at VHF, it appears that
>>Hyakutake Comet bounce is doubtful. Never the
>>less, last night I made a concerted effort. Here
>>are the results:
>
>Very interesting Mike and I applaud your efforts.
>
>All I want to do however is see the darn thing!
>
>Mike
>

Look to the north - North-west after sundown. It's a bright fuzzy glow. You
really can't miss it! Use binoculars once you find it. It's quite a sight!!!!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

628. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: gsharp@tesser.com
Message-ID: <4jciso$cnh@meg.tesser.com>
Source record: 22695
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

mwcook@cris.com (Mike Cook - AF9Y) wrote:

> Hyakutake Comet Radio Bounce Test Results
>
>
>
> - I used the "Home Planet" program and the latest
> comet position within the Arcturus star group.
> It would be nice if one of the astronomy programs
> would provide AZ EL pointing information
> for celestial objects. During the test period,
> the EME array was moved over a +/- 10 degree range
> in AZ and EL.

Try COSMOS/2 for OS/2. It shows AZ EL information for
where ever the mouse pointer is positioned on the celestial
map.

Gerald Sharp KD0GS

629. NORAD Two-Line Orbital Element Set: Space Shuttle (96086.91709491)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4jcj8q$47o@blackbird.afit.af.mil>
Source record: 22696

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 76
1 23831U 96018A 96086.91709491 -.00000505 00000-0 00000+0 0 205
2 23831 51.6489 176.1903 0004186 101.7136 267.3879 15.57800922 727
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

630. Unix Satellite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-27 00:00:00 UTC
From: cmlong@mtu.edu
Message-ID: <4jbocm$685@techsrv1.tech>
Source record: 22697

I am looking for a text based satellite tracker for unix. I
heard that Sattrack was for Unix, but one needs to run x windows
to use it. I don't have x windows, and that is why I need something
text based.

Thanks in advance for any help.

Mike - KB8WPE

--
/\
\ Michael Long || Public Relations Manager /
/ Callsign: KB8WPE || for HARC (W8YY) \
\ Email: cmlong@mtu.edu || Email: harc-l@mtu.edu /
/ Phone: (906)487-5664 || Majors: EET and EMT \
\/

631. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DoyEGG.4uy@cix.compulink.co.uk>
Source record: 22698

Dear all

I know this must appear like a silly question, but why launch lots of expensive sophisticated satellites every few years?

Why not send up one new, ultra simple satellite or possibly pairs each month? build them in a production line.

IE. operational life 6~18 months before re-entry, and make a few of them geostationary?!

Let's keep the budget to 5~15K pounds sterling EACH. Use redundant capacity in any launch vehicle....

That way we'd have plenty of capacity for all.....

Suggest spec.

Controlled by an pic-chip or 8bit cpu? 6502/1802/z80 etc...

most basic attitude control (Could a spray~can be used?), if any..one or two transponders for UHF/SHF (linear transponder? old tech but worth improving) etc. If the sat is geostationary and positioned for maximum exposure to the sun, then I assume battery requirements are reduced. Could cosmic radiation be used to provide electrical power?) etc. Could standard chassis be developed and mass~produced? I have often wondered if radioactive power sources have been considered, eg use a beta~emitter in a small electric pile/battery as used in pacemakers heart~regulators, these are very small, reliable and the radiation is minimal.

Has anybody considered reversible fuel cells, in sunlight use solar panels to electrolyses water into H and O2. When in darkness, convert into a fuel cell and produce electricity+heat+water again.

I would be very happy to donate personal funds for this kind of development (I could be asking for trouble here!)

Steve (a new novice member of Amsat UK)
G7VFY
Tel 0956-544202.

632. NAVSPASUR Fence - 216.980 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: bheaton@fibr.net
Message-ID: <315a5ea0.8907956@nimitz.fibr.net>
Source record: 22699

All,

I am looking for info regarding the NAVSPASUR fence operating
at 216.980 Mhz. I had been looking for info for the last couple
months and just saw a mention of it in Popular Communications. There
was some discussion (on DRIG) of experiments at using it to refine
elsets for OSCAR birds.

The article mentions transmitters in Texas (Kickapoo Lake I
believe), Alabama and Arizona. The only thing I have been able to
find thats even close is the AFSPACECOM PAVE PAWS phased array radar
system. Its sites are listed as Mass, Calif, Texas, and Georgia.
This is most likely a mircowave system, however.

I am interested in detecting satellites crossing the fence and
would appreciate any data available on the subject. If there is
enough interest I can try to put together a summary or possibly a FAQ
if one doesn't already exist. Thanks in advance for your assistance..

73s N5VFF -- BDH

633. Re: Wanted Receiver for 137 Mhz, or a KIT for homebrew!

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4jdktg$j8b@nms.telepost.no>
Source record: 22700

In article <4ja156$skl@ping1.ping.be>, Geert.Pirens@ping.be says...
>
>Hello all of you in this area.
>
>
>Can someone help me with my problem?
>
>I like to receive the next satellites: NOAA, METEOR. But for to
>receive these sat's you must have a receiver at 137 Mhz.
>
>Now I'm loking for some information where I can buy me sutch receiver.
>
>A homebrew kitt wil also do !!
>
>All information and reactions in case with my problem is WELKOM !!!!
>
>Thanks already for those who will respons to my letter.
>
>you can also send mail via FidoNet : Geert Pirens 2:292/115.9
>
>73!
>
>Geert Pirens, ONL2057
>
>

Hi again Geert!
I know that RIG members had the possibility to buy a rather cheap one as a kit - RIGsat-RX1, but at the time I know that a frien of mine tried to get one of these, but they did not sell any more kits because they didn't have any more MF-filters. You can still buy such filters, but they are VERY expencive. You could try to contact the RIG magazine editor by E-mail. His address is peter@ascotrig.demon.co.uk. The also have a homepage I think - I dont remember the address - I found It: http://www.bbc.co.uk/john_wxpics/rig/index.html
Another place to check for a really good RX is the one from Timestep, Box 2001, Newmarket CB8 8XB England. Tel. 0440 820040 fax 0440 820281. Their RX is very good, and the price is £185 +p&p £6

A suitable rx was also described in QST 1989(???) that one was built around the Plessy SL6640. I'm building this one now - the only problem is to get a cheap xtal filter. I have found an old 10.7MHz filter with 50kHz bandwith (??) in an old taxi tranceiver. I hope this one will work. I can supply you with drawing if you are interested. I suppose I could scan it

and send it via E-mail?

73's de Karl Jan LA3FY

634. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: stephens@ngis.geod.emr.ca
Message-ID: <DozDGs.5Kx@emr1.emr.ca>
Source record: 22701

Stephen Walters (oddjob@cix.compulink.co.uk) wrote:
: Dear all

: I know this must appear like a silly question, but why launch lots of
: expensive sophisticated satellites every few years?

: Why not send up one new, ultra simple satellite or possibly pairs each
: month? build them in a production line.

: IE. operational life 6~18 months before re-entry, and make a few of them
: geostationary?!

: Let's keep the budget to 5~15K pounds sterling EACH. Use redundant
: capacity in any launch vehicle....

: That way we'd have plenty of capacity for all.....

: Suggest spec.

: Controlled by an pic-chip or 8bit cpu? 6502/1802/z80 etc...

: most basic attitude control (Could a spray~can be used?), if any..one or
: two transponders for UHF/SHF (linear transponder? old tech but worth
: improving) etc. If the sat is geostationary and positioned for maximum
: exposure to the sun, then I assume battery requirements are reduced.
: Could cosmic radiation be used to provide electrical power?) etc. Could
: standard chassis be developed and mass~produced? I have often wondered if
: radioactive power sources have been considered, eg use a beta~emitter in
: a small electric pile/battery as used in pacemakers heart~regulators,
: these are very small, reliable and the radiation is minimal.

: Has anybody considered reversible fuel cells, in sunlight use solar
: panels to electrolyses water into H and O2. When in darkness, convert
: into a fuel cell and produce electricity+heat+water again.

: I would be very happy to donate personal funds for this kind of
: development (I could be asking for trouble here!)

: Steve (a new novice member of Amsat UK)
: G7VFY
: Tel 0956-544202.

You have come in at one half of the problem of space business for
30 years. In terms of value for money you spend about half on the
satellite and half on the launch. With launches costing about
$4000 to $10000 a pound (sorry about U.S. units) then you build
satellites that cost about the same, and maybe pack as much goodies
into that payload. It does not make sense to make really cheap

satellites that are going to cost a lot to launch. The proposal you make is similar to the thinking behind Iridium and GlobeStar. Lots of small satellites in a constellation. However, after early low cost projections, their costs have risen back to the 1/2 and 1/2 regime. Your suggestions will not fly until the launch costs come down radically. In other words if you want to see such things in your lifetime you had better support efforts like NASA's X-33 to reduce the cost of launching into space by an order of magnitude.

--
Dave Stephenson
Geological Survey of Canada * 99% of Usenet Postings are
Ottawa, Ontario, Canada * noise. This is my
Internet: stephens@ngis.geod.emr.ca * contribution!

635. Re: Unix Satellite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: Jeff Shykula N2XGL <jshykula@charon.phys.rpi.edu>
Message-ID: <315A9644.29C2@charon.phys.rpi.edu>
Source record: 22702

Mike wrote:

> I am looking for a text based satellite tracker for unix. I
> heard that Sattrack was for Unix, but one needs to run x windows
> to use it. I don't have x windows, and that is why I need something
> text based.

I have a copy of SatTrack V1.0 from Manfred Bester, DL5KR.
It works very well on a vt100 terminal connected to a Sun 3/60.
Manfred is up to version 3.1 (3.5 due soon?) which runs on X.
I believe that SatTrack V1.0 is still available from
ftp://ftp.ucsd.edu/hamradio/sat/

73

Jeff - N2XGL
--
Jeff T. Shykula AKA "The Koola" jshykula@charon.phys.rpi.edu
Rensselaer Polytechnic Institute Koretz Laboratory
Bio-Physics Department N2XGL 518-276-6492 (office)
Troy - NY - 12180

636. Re: STS-76...anyone worked shuttle/MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4jei30$qsk@news.mhv.net>
Source record: 22703

In article <4j9t69$5v5@news-e2c.gnn.com>, BKille@gnn.com (Bruce Kille) wrote:
> Has anyone worked SAREX on the current shuttle mission STS-76 from either
> the shuttle Atlantus or MIR? I havent heard them yet, but it seems the best
> passes here are either when I am at work or in the middle of the night so I
> havent had many chances to listen. :-(
>
> Virtually, Bruce WA4JAV
>
>

I'm in the same boat! I listen to the 6am passes but nothing. Just our luck
huh?

Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

637. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: gerheim@sonalysts.com
Message-ID: <4jeid3$en3@hatch.sonalysts.com>
Source record: 22704

trandall@mhv.net wrote:
> In article <4j1td8$jnh@ns1.thpl.lib.fl.us>, sfton@scfn.thpl.lib.fl.us (Keith OBrien)
wrote:
> >Anyone recommend a Satellite tracking program that will display multiple
> >objects on the screen and track both of them. STSPlus will only put one
> >at a time on the screen, as well as others I have tried. During the
> >present STS76 and Mir mission, it be nice to track both when they not
> >docked together. WinOrbit 2.8 will display a secondary satellite, but
> >will only update the track of one object. Keith O'Brien
> >

> STSORBIT Plus does the trick. Point your web browser to:
> http://spacelink.msfc.nasa.gov

> I believe it's in the instructional materials area.

> Tom

Also, try getting REAL95.ZIP from the AMSAT ftp site. It's designed
to run on an HP95LX palmtop.

****
Dr. Al Gerheim, N4QN | I cried because I had | Sonalysts Inc. POB 280
gerheim@sonalysts.com | no shoes till I met a | 215 Parkway North
1 (800) 526-8091 X218 | man who had no class. | Waterford CT 06385
****

638. keplerian help

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: JohnJay@usa.pipeline.com
Message-ID: <4jeqhq$l5r@news1.h1.usa.pipeline.com>
Source record: 22705
Cross-posted to: rec.radio.amateur.space,

Am just starting to play with a sat. tracking program. Have received the ARRL keplerian report. Is there a document that explains what it all means??

the program I have will inport in AMSAT or NASA format, but not ARRL, as far as I can tell. However, it does have a manual input I can use, but I need to understand what all the data is in the ARRL report.

At the moment I'm using LogSat for Windows.
Thanks,
John KD2BW

639. NORAD Two-Line Orbital Element Set: Space Shuttle (96088.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4jf6vi$aom@blackbird.afit.af.mil>
Source record: 22706

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 76
1 23831U 96018A 96088.25042824 -.00000505 00000-0 00000+0 0 237
2 23831 51.6466 169.5068 0004416 125.2505 166.0502 15.57750897 922
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

640. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-28 00:00:00 UTC
From: Michael J Wooding <vhf-comm@g6iqm.demon.co.uk>
Message-ID: <141hxBAGLxWxEw4y@g6iqm.demon.co.uk>
Source record: 22707
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

In article <4jc4n7$b5f@news.mhv.net>, trandall@mhv.net writes
> Look to the north - North-west after sundown. It's a bright fuzzy glow. You
>really can't miss it! Use binoculars once you find it. It's quite a sight!!!!
>
>Tom

Hi Tom,

It wasn't that I didn't know where to look, it was just that over here
in middle England it had been 10/10 cloud for over 14 days. However,
two clear nights Tuesday and Wednesday this week and as you say it is
quite a sight.

Regards ... Mike

Michael J Wooding vhf-comm@g6iqm.demon.co.uk - CompuServe: 100441,377
WWW: http://www.eolas.co.uk/ag/vhfcomm.htm (hambits.htm & hamclip.htm)
WWW: http://www.clearlight.com/~vhfcomm
Tel: (0)1788 890365 Fax: (0)1788 891883
KM Publications, 5 Ware Orchard, Barby, Nr.Rugby, CV23 8UF, UK
VHF Communications Magazine - Especially Covering VHF, UHF and Microwaves

641. Re: Unix Satellite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: anilsson@tartarus.uwa.edu.au
Message-ID: <4jfiev$575@styx.uwa.edu.au>
Source record: 22708

Mike (cmlong@mtu.edu) wrote:
: I am looking for a text based satellite tracker for unix. I
: heard that Sattrack was for Unix, but one needs to run x windows
: to use it. I don't have x windows, and that is why I need something
: text based.
:
Sattrack is text based although in the last few releases it came
with a x-windows graphical display. Works fine. (at least the last
time I tried it.)

Andrew VK6JBL anilsson@tartarus.uwa.edu.au

642. Re: Unix Satellite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: Manfred Bester <manfred@ssl.berkeley.edu>
Message-ID: <4jg46i$j8e@agate.berkeley.edu>
Source record: 22709

cmlong@mtu.edu (Mike) wrote:
>I am looking for a text based satellite tracker for unix. I
>heard that SatTrack was for Unix, but one needs to run x windows
>to use it. I don't have x windows, and that is why I need something
>text based.
>
>Thanks in advance for any help.
>
>Mike - KB8WPE

Mike:

Even though SatTrack has X Window Color graphics, you can compile the
software for usage without X Windows and then get pure VT100 or HP style text
output only. All that requires is changing one variable in the Makefile.
Give it a try, the latest version (V3.1) of the source code including the
most recent patches is available from the SatTrack web page at:

http://www.primenet.com/~bester/sattrack.html

This web page also shows examples of the text and graphics screens.

-Manfred

--
Manfred Bester http://ssl.berkeley.edu/isi_www/satpasses.html
Space Sciences Laboratory manfred@ssl.berkeley.edu
University of California
Berkeley, CA 94720

643. Sat Antenna question

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: ghansen@accessone.com
Message-ID: <ghansen.705.315B87C9@accessone.com>
Source record: 22710

I have just started out having fun with RS-10 and RS-15. I am using a 5 element quad for the 2 meter uplink. What I am wondering is should it be vertical or horizontal polarity? Would it help if I remounted it at a 45 degrees up angle?

Thanks in advance.

Glenn - KB7PKC

Look for me around 29.380.

644. Re: Tracking Multiple Sats Program

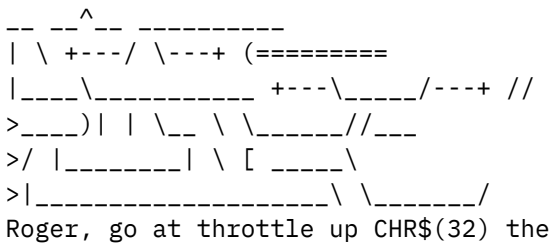
Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4jgfdr$3un@paperboy.ids.net>
Source record: 22711

In article <4j1td8$jnh@ns1.thpl.lib.fl.us> Keith OBrien,
sfton@scfn.thpl.lib.fl.us writes:
>Anyone recommend a Satellite tracking program that will display multiple
>objects on the screen and track both of them.

Traksat for the PC will track up to six satellites at a time.

Orbittrack for the Macintosh will track literally thousands
simultaneously (limited by the memory in your computer and its speed)

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

645. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: rwerner@usit.net
Message-ID: <4jgosq$h59@gaia.ns.utk.edu>
Source record: 22712

Philip Chien <kc4yer@amsat.org> wrote:

>In article <4j1td8$jnh@ns1.thpl.lib.fl.us> Keith OBrien,
>sfton@scfn.thpl.lib.fl.us writes:
>>Anyone recommend a Satellite tracking program that will display multiple
>>objects on the screen and track both of them.

>Traksat for the PC will track up to six satellites at a time.

>Orbittrack for the Macintosh will track literally thousands
>simultaneously (limited by the memory in your computer and its speed)
Where can one get tracksat for the PC?
Thanks,
Bob Werner
rwerner@usit.net

646. Returned mail: User unknown

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: MAIL-DAEMON@oes.CA.GOV
Message-ID: <9603291749.AA25517@nic.teale.ca.gov>
Source record: 22713

```
----- Transcript of session follows -----
mail: No group id of 'mail'
554 <tking@oes1>... unknown mailer error 16
550 User unknown

----- Unsent message follows -----
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Fri, 29 Mar 96 09:38 PST
Received: by mail.ucsd.edu; id EAA08185
sendmail 8.6.12/UCSD-2.2-sun
Fri, 29 Mar 1996 04:30:32 -0800 for ham-space-list
Received: by mail.ucsd.edu; id EAA08174
sendmail 8.6.12/UCSD-2.2-sun
Fri, 29 Mar 1996 04:30:29 -0800 for ham-space-ddist
Errors-To: ham-space-relay@UCSD.EDU
Content-Length: 15153
Content-Type: text
Sender: ham-space-relay@UCSD.EDU
Precedence: List
Message-Id: <199603291230.EAA08174@mail.ucsd.edu>
Date: Fri, 29 Mar 96 04:30:28 PST
>From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #91
To: Ham-Space@UCSD.EDU

Ham-Space Digest Fri, 29 Mar 96 Volume 96 : Issue 91

Today's Topics:
Albany, NY SAREX Contact Rescheduled
Hyakutake Comet Radio Bounce Test Results
keplerian help
NORAD Two-Line Orbital Element Set: Space Shuttle (96086.91709491)
NORAD Two-Line Orbital Element Set: Space Shuttle (96088.25042824)
STS-76...anyone worked shuttle/MIR?
Tracking Multiple Sats Program
Unix Satellite Tracking (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
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We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 26 Mar 96 23:56:15 -0500
>From: "Stephan M. Anderman" <sanderman@delphi.com>
Subject: Albany, NY SAREX Contact Rescheduled

FOR IMMEDIATE GENERAL RELEASE Page 1 of 3

Preparations are nearly complete at Bethlehem Central High School for Friday morning's scheduled amateur radio contact with space shuttle astronaut Kevin P. Chilton. Several students at the Delmar school have already been through a "dress rehearsal", readying their questions for the Atlantis Commander.

The question and answer session has been planned for nearly three years by members of the Albany Amateur Radio Association in cooperation with NASA, the American Radio Relay League, and school officials. Bethlehem senior Geoff Phillips, himself a ham radio operator, suggested the contact to school's science department.

Four of the six Atlantis astronauts are also ham radio operators. Commander Chilton will use the same ham radio equipment aboard the shuttle to talk to the students that was used to establish communications with the Russian Mir space station and coordinated the docking of the two spacecraft over the weekend.

Technical preparations at the school are also approaching completion for the contact, which has now been re-scheduled for 6:58 AM Friday. A sophisticated amateur radio station, complete with computerized tracking equipment which automatically points an array of specialized antennas at the shuttle as it passes overhead, has been set up in the school's library.

Unlike last summer's Shuttle Amateur Radio EXperiment contact at the Schenectady Museum & Planetarium, this operation will use direct air-to-ground communications with Atlantis. David Jones of Albany, who is coordinating the technical issues for this

"SAREX" contact, notes that the Schenectady effort involved a telephone and satellite link as the shuttle flew over South Africa. On this mission, Atlantis will fly nearly directly overhead.

But as the Atlantis crew works on its mission objectives in space, its the amateur radio and educational aspects of the flight that seem to be attracting a lot of attention here on the ground. Several hams from the Bennington area, members of the Southern Vermont Amateur Radio Club, have been assisting Jones with assembling equipment and coordinating operations with NASA.

It's a rare opportunity for students to get a first-hand, hands-on experience with the space program. The mix of space travel and communications involve facets of mathematics, geography, astronomy, physics, computer science, and the communications arts. And excitement at the school is increasing as the time approaches.

The national news service "This Week in Amateur Radio", which originates from the Albany area, will carry the student's questions and astronauts answers live via satellite to hams across the US and Canada. WA3NAN, the ham station at the Goddard Space Flight Center in Greenbelt, Maryland, will transmit the contact worldwide on "short wave" frequencies. A UHF radio link from the school to a ham station in Stillwater will facilitate regional and national "broadcast" of the contact.

From Stillwater, the signal will be sent to a satellite uplink station near Knoxville, Tennessee and back to the Albany club's repeater in the Helderbergs. Locally, ham radio enthusiasts and scanner listeners can listen in on 145.17 and 145.19 MHz.

The Shuttle Amateur Radio EXperiment is sponsored by the American Radio Relay League, of Newington, Connecticut, AMSAT - the Radio Amateur Satellite Corporation, and NASA, and supported by the Federal Communications Commission.

END END END

Stephan M. Anderman, WA3RKB
ARRL Public Information Coordinator, Eastern New York Section
email: sanderman@delphi.com
packet: WA3RKB @ WA2UMX.FN32AW.ENY.NY.USA.NA
phone: 518/664-6809

Note: The contact will be carried in the Albany area on the Albany ARA KM2H repeater on 145.19 MHz and on the Troy ARA NY2U repeaters on 145.17 and 444.225 MHz. In addition, it can be heard throughout North America on the Anik E-2 commercial communications satellite at 107 degrees west longitude, transponder 18 (9B vertical), 5.8 MHz wide-band analog audio. As noted in the release, WA3NAN plans to air the contact on their usual HF frequencies. Coverage is now scheduled to begin at 6:40 AM EST on Friday, March 29th.

Date: 24 Mar 1996 19:36:10 GMT
>From: mwcook@cris.com (Mike Cook - AF9Y)
Subject: Hyakutake Comet Radio Bounce Test Results

Hyakutake Comet Radio Bounce Test Results

Based on poor ionization at VHF, it appears that Hyakutake Comet bounce is doubtful. Never the less, last night I made a concerted effort. Here are the results:

- System used was my 2mtr EME station and the FFTDSP42 program. EME Signal echo detection S/N margin is 20+ dB with FFTDSP42 integration set to 1.

- For the comet bounce test, integration was set to 8 for a detection increase of 4.5 dB. Total system S/N EME echo margin was aprox 25 dB.

- A continuous 1500 watt, 144 Mhz carrier was transmitted for 45 Seconds. The receive period was 75 Seconds. Any reflection from the comet should have been visible as a line trace during a portion of the display receive window.

- Transmit offsets of 0, +1, +2, -1, -2 Khz were tried during the test period to allow for various doppler effects.

- After an hour of testing, no traces were seen. It is possible that some pointing error existed during the test since we had cloud cover and I could not do a visual validation.

- I used the "Home Planet" program and the latest
comet position within the Arcturus star group.
It would be nice if one of the astronomy programs
would provide AZ EL pointing information
for celestial objects. During the test period,
the EME array was moved over a +/- 10 degree range
in AZ and EL.

It looks like thunderstorms for tonight so it is doubtful
that I'll be able to make additonal tests for the perigee
night.

Details on the EME station and FFTDSP program used for the
test is available on my web page.

de Mike, AF9Y
http://www.webcom.com/af9y
Work: mwcook@itt.com
Home: mwcook@cris.com

Date: 28 Mar 1996 19:50:18 GMT
>From: JohnJay@usa.pipeline.com (John Chapman)
Subject: keplerian help

Am just starting to play with a sat. tracking program. Have received the
ARRL keplerian report. Is there a document that explains what it all
means??

the program I have will inport in AMSAT or NASA format, but not
ARRL, as far as I can tell. However, it does have a manual input I can
use, but I need to understand what all the data is in the ARRL report.

At the moment I'm using LogSat for Windows.
Thanks,
John KD2BW

Date: 27 Mar 1996 23:33:46 GMT
>From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96086.91709491)

The most current orbital elements from the NORAD two-line element sets are
carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

```
******************************************************************************

STS 76
1 23831U 96018A 96086.91709491 -.00000505 00000-0 00000+0 0 205
2 23831 51.6489 176.1903 0004186 101.7136 267.3879 15.57800922 727
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: 28 Mar 1996 23:22:26 GMT
>From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96088.25042824)

The most current orbital elements from the NORAD two-line element sets are
carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

******************************************************************************

STS 76
1 23831U 96018A 96088.25042824 -.00000505 00000-0 00000+0 0 237
2 23831 51.6466 169.5068 0004416 125.2505 166.0502 15.57750897 922
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Thu, 28 Mar 96 17:28:03 GMT
>From: trandall@mhv.net
Subject: STS-76...anyone worked shuttle/MIR?

In article <4j9t69$5v5@news-e2c.gnn.com>, BKille@gnn.com (Bruce Kille) wrote:
> Has anyone worked SAREX on the current shuttle mission STS-76 from either
> the shuttle Atlantus or MIR? I havent heard them yet, but it seems the best
> passes here are either when I am at work or in the middle of the night so I
> havent had many chances to listen. :-(
>
> Virtually, Bruce WA4JAV
>
>

I'm in the same boat! I listen to the 6am passes but nothing. Just our luck
huh?
```

Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

Date: 28 Mar 1996 17:31:15 GMT
>From: gerheim@sonalysts.com (Al Gerheim)
Subject: Tracking Multiple Sats Program

trandall@mhv.net wrote:
> In article <4j1td8$jnh@ns1.thpl.lib.fl.us>, sfton@scfn.thpl.lib.fl.us (Keith OBrien)
wrote:
> >Anyone recommend a Satellite tracking program that will display multiple
> >objects on the screen and track both of them. STSPlus will only put one
> >at a time on the screen, as well as others I have tried. During the
> >present STS76 and Mir mission, it be nice to track both when they not
> >docked together. WinOrbit 2.8 will display a secondary satellite, but
> >will only update the track of one object. Keith O'Brien
> >

> STSORBIT Plus does the trick. Point your web browser to:
> http://spacelink.msfc.nasa.gov

> I believe it's in the instructional materials area.

> Tom

Also, try getting REAL95.ZIP from the AMSAT ftp site. It's designed
to run on an HP95LX palmtop.

****
Dr. Al Gerheim, N4QN | I cried because I had | Sonalysts Inc. POB 280
gerheim@sonalysts.com | no shoes till I met a | 215 Parkway North
1 (800) 526-8091 X218 | man who had no class. | Waterford CT 06385
****

Date: 27 Mar 1996 10:55:02 -0500
>From: cmlong@mtu.edu (Mike)
Subject: Unix Satellite Tracking

I am looking for a text based satellite tracker for unix. I
heard that Sattrack was for Unix, but one needs to run x windows
to use it. I don't have x windows, and that is why I need something
text based.

Thanks in advance for any help.

Mike - KB8WPE

--
/\
\ Michael Long || Public Relations Manager /
/ Callsign: KB8WPE || for HARC (W8YY) \
\ Email: cmlong@mtu.edu || Email: harc-l@mtu.edu /
/ Phone: (906)487-5664 || Majors: EET and EMT \
\/

Date: 29 Mar 1996 02:38:22 GMT
>From: anilsson@tartarus.uwa.edu.au (Andrew Gareth Nilsson)
Subject: Unix Satellite Tracking

Mike (cmlong@mtu.edu) wrote:
: I am looking for a text based satellite tracker for unix. I
: heard that Sattrack was for Unix, but one needs to run x windows
: to use it. I don't have x windows, and that is why I need something
: text based.
:
Sattrack is text based although in the last few releases it came
with a x-windows graphical display. Works fine. (at least the last
time I tried it.)

Andrew VK6JBL anilsson@tartarus.uwa.edu.au

Date: Thu, 28 Mar 1996 08:38:12 -0500
>From: Jeff Shykula N2XGL <jshykula@charon.phys.rpi.edu>
Subject: Unix Satellite Tracking

Mike wrote:

> I am looking for a text based satellite tracker for unix. I
> heard that Sattrack was for Unix, but one needs to run x windows
> to use it. I don't have x windows, and that is why I need something
> text based.

I have a copy of SatTrack V1.0 from Manfred Bester, DL5KR.
It works very well on a vt100 terminal connected to a Sun 3/60.
Manfred is up to version 3.1 (3.5 due soon?) which runs on X.
I believe that SatTrack V1.0 is still available from
ftp://ftp.ucsd.edu/hamradio/sat/

73

Jeff - N2XGL
--
Jeff T. Shykula AKA "The Koola" jshykula@charon.phys.rpi.edu
Rensselaer Polytechnic Institute Koretz Laboratory
Bio-Physics Department N2XGL 518-276-6492 (office)
Troy - NY - 12180

End of Ham-Space Digest V96 #91
****

647. Space Horizons conference, May 3-4, 1996, Boston

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: David_Joshua_Goldstein@brown.edu
Message-ID: <4jha6p$61h@cocoa.brown.edu>
Source record: 22714

Space Horizons: A Summit on Emerging Applications, Missions, and Technology
Boston, Massachusetts, May 2-4, 1996

Sponsored by AeroAstro / Boston University Center for Space Physics /
Launchspace / National Space Society / New Space

The Space Horizons Summit is the first to address in a hands on, workshop setting, the fundamental changes now occurring in the way humans operate in and use space. We stand at a crossroads - In what directions can and will the space community proceed from here? For two days, experts, leaders, and visionaries from across a spectrum of disciplines in the space program and industry will meet in an interactive "think tank" to discuss emerging applications and markets, developing technologies, and the future of the space industry and community.

Our time is one of turmoil and redefinition in the space sector. The economics of space is changing. As space and defense budgets shrink, government and space industry are changing the way they do business. In addition, global competition has become a significant factor for the space industry. A growing market has already emerged in communications, small satellites, remote sensing, space biotechnology, and launch vehicles. Small and reengineered companies are proposing and enacting a myriad of new initiatives in these areas. At the same time, new terrestrial and space technologies are driving space activity towards new applications and methods.

Out of these changing budgets, needs, economics, and technologies will emerge the next generation of space applications, programs, and commercial ventures. You can just sit back and watch this new era unfold. Or you can help to create it.

The two day Summit will take place May 3 - 4, 1996, at Boston University and the Hyatt Regency Cambridge. In addition, a pre-summit seminar entitled, "New Approaches to Economics, Design, Development and Maintenance of Space Systems", will be held on May 2nd.

The Space Horizons Summit will gather some of the new space initiative's best minds and most visionary pioneers in an informal, creative setting to study and to uncover opportunities, ideas, directions, and possibilities for the future. Participants will be confronted with and discuss emerging opportunities for space applications in areas such as remote sensing, communications, science, mission support and education. The Space Horizons conference is unique in its interactive format, with numerous small working groups and interactive sessions to grapple with the challenges and opportunities facing the space community today.

At the conclusion of the summit, you will have gained a new outlook on many aspects of space:
- possibilities for viable space ventures and applications;
- potential new commercial space initiatives that the market will demand and support;
- improved understanding of developing technologies and ways to apply them to both emerging and established opportunities;
- knowledge and connections necessary to bring your concepts and ideas to reality;
- a visionary perspective on new ways of "doing space";
- an appreciation of how issues such as education, the media, and responsibility in space development can be advantageously integrated into space efforts;
- exposure to the thoughts and ideas of many of the brightest, most visionary leaders in space - and a chance to interact with them in an informal, problem-solving setting.

At Space Horizons you will work closely with leaders from all segments of the space community - industry leaders, technical innovators and visionaries, investors and market experts, educators, government planners, university researchers - an interdisciplinary mix representative of all aspects of space activity.

The pre-summit seminar, led by three respected leaders in the fields of space transportation and microsatellites, will be held May 2nd. Starting with a clean sheet of paper, this special one-day course begins surveying the state of the art in minimum mission technologies. It will examine the approaches available to space mission planners and developers to achieve minimum cost and therefore to enable a new generation of space initiatives. The result is a dramatic savings over conventional system designs coupled with enhanced reliability and a program structure designed to be attractive to sources of capital. The approaches demonstrated are equally applicable to scientific, remote sensing and military one of a kind and cluster space systems.

The conference and seminar provides an opportunity to seed contemporary space activity with a new generation of initiatives and applications. If you have an interest in innovative ideas, an interest in the future of space, creative visions, and new technologies, this conference is for you. Weï¿½re looking forward to your participation at the Space Horizons Summit - helping to plot a new course in space.

Registration information is at the end of this message.

Space Horizons Summit Schedule
(subject to change)

Thursday, May 2 (optional)
8:00 AM Continental Breakfast and Morning Registration

9:00 AM New Approaches to Economics, Design, Development, Deployment, and Maintenance of Space Systems: A workshop on minimizing the cost of space transportation, space systems and operations, and on maximizing economic returns from space.

Rick Fleeter, Ph.D., President, AeroAstro, LLC.
Marshall H. Kaplan, Ph.D., Chairman, Launchspace, Inc.
Steve Newman, MBA, President, Launchspace, Inc.

Friday, May 3
8:00 AM Continental Breakfast and Morning Registration

9:00 AM Convocation and Keynote Speaker: Colonel Simon "Pete" Worden, commander, 50th Space Wing, Air Force Space Command

10:00 AM
- Access to Space, Dr. Marshall H. Kaplan, Chairman, Launchspace, Inc.
- Scientific Applications, Dr. Supriya Chakrabarti, Professor, Boston University Center for Space Physics

12:00 PM Lunch

1:30 PM
- Remote Sensing Applications, Dr. John Mustard, Professor, Brown University Department of Geological Sciences
- Governmenti¿½s Role in the Future, Mr. Alan Ladwig, Associate Administrator, NASA Policy and Plans

3:45 PM
- Media and the Public, Ms. Lori Garver, Executive Director, National Space Society
- Opportunities for Small Countries, Mr. Sven Grahn, Swedish Space Corporation

5:45 PM Reception and Mixer

Saturday, May 4
8:00 AM Continental Breakfast

9:00 AM
- Next Generation Communications Concepts, Dr. James Stuart, Vice President for Space Infrastructure, Teledesic Corporation
- Robotics Applications, Dr. Red Whittaker, Director, Field Robotics Center, Carnegie Mellon University

11:15 AM
- Education and Outreach, Dr. Paul J. Coleman, Jr., President, Universities Space Research Association
- Financing Space Ventures, Mr. Robert D. Leppo, Director, Belisarius Fund

1:15 PM Luncheon and Speaker

2:30 PM
- Responsible Space Development, Mr. Leonard David, Space News Correspondent
- Future Space Industries, Mr. Charlie Chafer, Founder, Celestis Corporation

To register, call Spectrum Management Group at +1 301 353-0022.

For more information, contact:

David Goldstein
Space Horizons Chair
phone: +1 401 331-8975
fax: +1 401 331-0438
email: David_Goldstein@brown.edu
WWW: http://www.newspace.com/horizons

648. Re: Homebrew sat. tracking controller?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: Jack Davis <jedavis@deltanet.com>
Message-ID: <NEWTNews.828157994.16237.jed@Deltanet.deltanet.com>
Source record: 22715

In Article<DoruIo.4zA@pe1chl.ampr.org>, <rob@pe1chl.ampr.org> writes:
> Newsgroups: rec.radio.amateur.space
> Path: news.deltanet.com!news.deltanet.com!uunet!in1.uu.net!newsfeed.internetmci.com!EU.net!sun4nl!rnzll3!sys3.pe1chl!rob
> From: rob@pe1chl.ampr.org (Rob Janssen)
> Subject: Re: Homebrew sat. tracking controller?
> X-Newsreader: NN version 6.5.0 (NOV)
> Reply-To: pe1chl@wab-tis.rabobank.nl
> Organization: PE1CHL
> Message-ID: <DoruIo.4zA@pe1chl.ampr.org>
> References: <4ipon4$1cc@due.unit.no>
> Date: Sun, 24 Mar 1996 12:25:35 GMT
> Lines: 31
>
> In <4ipon4$1cc@due.unit.no> joachimp@stud.unit.no (Joachim Alexander Pihl) writes:
>
>
> >We are in need of a satelite tracking controller, and naturally, we want
> >to build it ourselves. We already have Satscan scanning software, and
> >we know it is capable of talking to a rotor controller, but we do not
> >know what format the data output is, and what kind of handshaking it
> >expects. Does anyone know?
>
> >If not: does anyone know of other tracking programs that are easy to use,
> >yet still have a documented way of talking to the controller. Buying
> >an interface is out the question, given the fact that this club (LA1K)
> >consists mainly of engineering students.
>
> For years, I have used an old Epson PX-8 handheld CP/M machine to
> track satellites. I used a homemade BASIC program derived from the
> wellknown "basic orbits" by W3IWI.
> It interfaces to an AMSAT-DL rotor interface, but of course it is
> easy to modify the program to control something else.
>
> So, if you have one of these machines (or something similar) laying
> around somewhere, it is a cheap solution.
>
> There are also single-chip micro designs, like the TrackBox, that you
> can build yourself.
>
> Rob
> --
>
+-----------------------------------+-----------------------------------+

> | Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local)
|
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU
|
>
+-------------------------------------+-------------------------------------+
TAPR _might_ have a few TrakBox kits left. I sent them some about a week ago.

Why reinvent the wheel? These are used the world over and most popular
software used on the birds support it.

de WA4EJR

649. Comment 03/29/96 4:16pm

Newsgroup: rec.radio.amateur.space
Date: 1996-03-29 00:00:00 UTC
From: Ken.Ernandes@333.woodybbs.com
Message-ID: <400_9603300743@woodybbs.com>
Source record: 22716

IMPORTANT -- PLEASE POST ASAP !!!

The Satellite Communications Demonstration scheduled for 8:00 AM on 30-MAR-96 at Huntington Town Hall has been cancelled due to extenuating circumstances. Those interested in re-scheduling this event should contact Ken Ernandes, N2WWD via mail message or check in to the AMSAT Satellite Net Tuesday evening(s) at 8:00 PM -- WA2SNQ repeater, 147.075 MHz (+600 KHz split), 4Z PL (136.5 CTCSS). I regret any inconvenience this may cause.

--
|Fidonet: Ken Ernandes 1:2619/333
|Internet: Ken.Ernandes@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

650. NORAD Two-Line Orbital Element Set: Space Shuttle (96089.25042824)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ji5q9$fbi@blackbird.afit.af.mil>
Source record: 22617

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 76
1 23831U 96018A 96089.25042824 -.00000512 00000-0 00000+0 0 281
2 23831 51.6462 164.4958 0007147 136.7223 6.6885 15.58374390 1080
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

651. NORAD Two-Line Orbital Element Sets (TLE784)

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ji5u7$fbs@blackbird.afit.af.mil>
Source record: 22618

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #784 -
Alouette 1
1 00424U 62049A 96087.22689125 .00000056 00000-0 55172-4 0 1847
2 00424 80.4592 4.6163 0021538 251.3911 108.4889 13.67864609671137
ATS 1
1 02608U 66110A 96085.17454944 -.00000377 00000-0 10000-3 0 9617
2 02608 14.6261 353.7318 0008724 75.7438 284.3307 1.00378849 24028
ATS 3
1 03029U 67111A 96089.20403301 -.00000115 00000-0 10000-3 0 4734
2 03029 14.8986 0.6403 0009653 270.7653 243.4707 1.00272851103960
Starlette
1 07646U 75010A 96087.27005166 -.00000121 00000-0 16262-4 0 9584
2 07646 49.8294 111.9682 0205816 319.8854 38.6975 13.82190978 67637
LAGEOS
1 08820U 76039A 96087.33330210 -.00000015 00000-0 10000-3 0 1812
2 08820 109.8579 357.9735 0043160 145.7544 214.5897 6.38664799208602
ETS-2
1 09852U 77014A 96085.29867192 -.00000303 00000-0 10000-3 0 672
2 09852 13.1353 33.9341 0001724 124.7808 235.2188 1.00001658 16804
GOES 2
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2 11054 62.9076 262.6589 0046238 180.1561 179.8165 1.93505134127004
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Cosmos 1383
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2 13367 98.0849 142.0741 0008145 36.7301 323.4453 14.57176078728824
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Cosmos 1447
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Kvant-1
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Meteor 2-16
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Meteor 2-17
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DMSP B5D2-4
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2 18822 98.3883 284.4330 0005237 237.2905 122.7769 14.23184615423100
Glonass 34
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Glonass 36
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METEOSAT 3
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AO-13
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OKEAN 1
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Meteor 3-2
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2 19336 82.5361 224.6446 0018322 80.2987 280.0205 13.16976582368649
Glonass 39
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NOAA 11
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TDRS 2
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Glonass 41
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GPS BII-03
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Kvant-2
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Feng Yun1-2
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Meteor 2-20
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2 20826 82.5297 349.1167 0014973 31.0894 329.1152 13.83628420277582
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Glonass 47
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2 21218 64.9424 326.2596 0007233 297.0320 62.9324 2.13102589 38802
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Meteor 3-4
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NOAA 12
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OKEAN 3
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2 21701 56.9832 81.5508 0005973 110.1316 250.0360 14.96496164247975
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2 22014 54.8516 171.9120 0091922 322.2497 37.1523 2.00556193 20748
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2 23835 34.8877 344.7747 6047483 193.3230 138.1286 4.05294837 66
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```

Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

652. Mac Ham Users Group

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: john@wd1v.mv.com
Message-ID: <john-3003960409530001@wd1v.mv.com>
Source record: 22619

"Macnet Roster" (ver. 739) has just been updated and is now a stand-alone application! The version number = the number of hams using Macs.

"Macnet Roster" lists:

o CALL SIGN @ HOME PBBS
o FULL NAME
o ADDRESS
o CITY, STATE, ZIP
o INTERNET ADDRESS
o MACS USED
o RADIOS USED
o SOFTWARE USED
o PASSIONS
o COMMENTS

of every known amateur radio operator in the world that uses a Mac computer.

You can use "Macnet Roster" to find other Mac users that you can then communicate with directly. Compare notes on software, applications, ideas, hints and kinks, and make new ham friends that use the same computer you do. (You already know how cool you are - imagine accessing "the rest of us"!)

If you'd like the latest "Macnet Roster":

Send me a formatted disk in a self addressed and stamped disk mailer that is in a large envelope clearly marked "ROSTER".

Or connect to my home page via the WWW

http://www.mv.com/ipusers/wd1v

Put YOUR INFO (via EMAIL or disk using TEACH TEXT) if you'd like to be included in the "Macnet Roster" or send an update to your stats to me via pkt or email anytime.

John D. Seney |_|_|_|_| e-mail: john@wd1v.mv.com
144 Pepperidge Dr |_| |_| www http://www.mv.com/ipusers/wd1v
Manchester, NH 03103-6150 |_|_ _|_| wireless: wd1v@wb1dsw.nh.usa.noam
Voice Mail: 603-533-3472 | | | | | skytel page: 5956779@skymail.com

653. G4NJH Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <315cfc3f.5002930@news.innotts.co.uk>
Source record: 22620

Just a reminder that these pages have recently been updated.

http://www.innotts.co.uk/~asperges/

If you have a particular interest that is not covered, how about
writing for them yourself and I will include it, with proper credits
etc?

73 de
Jeremy G4NJH
asperges@innotts.co.uk
[Home, Am Radio, SWL pages: http://www.innotts.co.uk/~asperges/]

654. Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <315cfc75.5056929@news.innotts.co.uk>
Source record: 22621

Just a reminder that these pages have recently been updated.

http://www.innotts.co.uk/~asperges/

If you have a particular interest that is not covered, how about
writing for them yourself and I will include it, with proper credits
etc?

73 de
Jeremy G4NJH
asperges@innotts.co.uk
[Home, Am Radio, SWL pages: http://www.innotts.co.uk/~asperges/]

655. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: Bruce Burke <eaim103@email.mot.com>
Message-ID: <315D5023.61CB@email.mot.com>
Source record: 22622

Al Gerheim wrote:
>
> trandall@mhv.net wrote:
> > In article <4j1td8$jnh@ns1.thpl.lib.fl.us>, sfton@scfn.thpl.lib.fl.us (Keith OBrien)
wrote:
> > >Anyone recommend a Satellite tracking program that will display multiple
> > >objects on the screen and track both of them. STSPlus will only put one
> > >at a time on the screen, as well as others I have tried. During the
> > >present STS76 and Mir mission, it be nice to track both when they not
> > >docked together. WinOrbit 2.8 will display a secondary satellite, but
> > >will only update the track of one object. Keith O'Brien
> > >
>
> > STSORBIT Plus does the trick. Point your web browser to:
> > http://spacelink.msfc.nasa.gov
>
> > I believe it's in the instructional materials area.Yes, it is, under software/pc
>
> > Tom
>
> Also, try getting REAL95.ZIP from the AMSAT ftp site. It's designed
> to run on an HP95LX palmtop.There is now a shareware program called logsat for windows
which will do
multiple sats in a single window or multiple window, or
all kinds of combos thereof. It also has logging and call lookup capability.

The authors also clain it is compatible with KC Tracker.
It also has some dipole antenna modeling capabilities and some
basic propagation tools.

I think they are asking 50 bucks for it.

It is available on the web, but I seemed to have misplaced the URL....

73,

Bruce, WB4YUC

656. Re: Phase 3D to launch this year?

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Dp2zBt.2x0@cix.compulink.co.uk>
Source record: 22623

goodness, no flames.....

657. Why satellites are still so expensive: REPOST.

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Dp2zBv.2xp@cix.compulink.co.uk>
Source record: 22624

Dear all

I know this must appear like a silly question, but why launch lots of expensive sophisticated satellites every few years?

Why not send up one new, ultra simple satellite or possibly pairs each month? build them in a production line.

IE. operational life 6~18 months before re-entry, and make a few of them geostationary?!

Let's keep the budget to 5~15K pounds sterling EACH. Use redundant capacity in any launch vehicle....

That way we'd have plenty of capacity for all.....

Suggest spec.

Controlled by an pic-chip or 8bit cpu? 6502/1802/z80 etc...

most basic attitude control (Could a spray~can be used?), if any..one or two transponders for UHF/SHF (linear transponder? old tech but worth improving) etc. If the sat is geostationary and positioned for maximum exposure to the sun, then I assume battery requirements are reduced. Could cosmic radiation be used to provide electrical power?) etc. Could standard chassis be developed and mass~produced? I have often wondered if radioactive power sources have been considered, eg use a beta~emitter in a small electric pile/battery as used in pacemakers heart~regulators, these are very small, reliable and the radiation is minimal.

Has anybody considered reversible fuel cells, in sunlight use solar panels to electrolyses water into H and O2. When in darkness, convert into a fuel cell and produce electricity+heat+water again.

I would be very happy to donate personal funds for this kind of development (I could be asking for trouble here!)

Steve (a new novice member of Amsat UK)
G7VFY
Tel 0956-544202.

658. Re: NAVSPASUR Fence - 216.980 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Mar30.171434.17085@ke4zv.atl.ga.us>
Source record: 22625

In article <315a5ea0.8907956@nimitz.fibr.net> bheaton@fibr.net writes:
>All,
>
> I am looking for info regarding the NAVSPASUR fence operating
>at 216.980 Mhz. I had been looking for info for the last couple
>months and just saw a mention of it in Popular Communications. There
>was some discussion (on DRIG) of experiments at using it to refine
>elsets for OSCAR birds.
>
> The article mentions transmitters in Texas (Kickapoo Lake I
>believe), Alabama and Arizona. The only thing I have been able to
>find thats even close is the AFSPACECOM PAVE PAWS phased array radar
>system. Its sites are listed as Mass, Calif, Texas, and Georgia.
>This is most likely a mircowave system, however.

70cm actually. PAVE PAWS is an early warning radar. It is frequency agile and uses a steered phased array at very high power. It makes a raucus buzzing noise. The one in Georgia (Robbins AFB) is inactive, and likely to stay that way. The high ERP was determined to be actively dangerous to nearby aircraft, like the SAC B-52 bombers taking off and landing at Robbins. The other sites may or may not still be in use.

NAVSPASUR is a different animal. It is a CW signal (not Morse, a real continous carrier) on 216.983 MHz aimed straight up in a fan pattern aligned with a line of latitude, IE east-west. There are three transmission sites, Jordan Lake AL, lat 32.659 long 86.264, Kickapoo Lake TX, lat 33.558 long 98.7367, and Gila River AZ, lat 33.11 long 112.03.

Phase slaved interferometers at remote receive sites give 3D position, and doppler measurements give range rate. With this information, an orbit for the object can be calculated. Because of the way the sites are staggered longitudinally, any satellite with an inclination of 33 degrees or more will show up on successive orbits through 2 or more of the fences. That allows the initial orbital element set to be refined.

You can use these signals to check and correct satellite element sets. Use your satellite prediction program to find out the time the satellite should cross one of these latitudes and be in a mutual footprint with your station and one of these sites, aim your antennas at the predicted position, and measure the actual AOS, LOS, and doppler of the reflected signal. The offset of this actual data from the predicted data can then be used to correct the element set.

Of course if the satellite has an active beacon, and you know its
frequency precisely, you can do the same thing without resort to
NAVSPASUR. It is most useful for locating passive targets.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

659. Re: Hyakutake Comet Radio Bounce Test Results

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: mda@cam-orl.co.uk
Message-ID: <4jk5nm$nin@lyra.csx.cam.ac.uk>
Source record: 22626
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,uk.radio.amateur

I just want to thank you to AF9Y for his interesting post.
This is what I like to see on this newsgroup.
Keep up the good work.

Mike Addlesee
G1TFK

660. 2 axis stepping motor for tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: timhynde@ix.netcom.com
Message-ID: <4jjhmj$6jf@dfw-ixnews2.ix.netcom.com>
Source record: 22627

Hello:

I have two stepping motor drives that I would like to use for
sattelite tracking. I need an interface to a tracking program. I have
the following available in the motor drives.

* BASIC programming language, can do most math funtions.
* 16 digital inputs (I can read them as a binary word as well)
* RS-232 (the drive has left,right,mid string funtions so I can strip
any incomming strings for appropriate data.)

Any thoughts on a sat tracking program? One that outputs the AZ/EL
information serially would be ideal.

Tim Hynde, ka8ddz

661. ARLK022 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk022.1996@arrl.org>
Source record: 22628
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK022
ARLK022 Keplerian data

ZCZC SK22
QST de W1AW
Keplerian Bulletin 22 ARLK022
From ARRL Headquarters
Newington, CT March 30, 1996
To all radio amateurs

SB KEP ARL ARLK022
ARLK022 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-76
1 23831U 96018A 96089.54903935 -.00000512 00000-0 00000+0 0 293
2 23831 51.6487 163.0008 0007083 134.7994 245.0315 15.58423948 1137
Mir
1 16609U 86017A 96089.54568641 -.00012426 00000-0 -15760-3 0 4629
2 16609 51.6488 163.0169 0003597 146.4152 213.5364 15.57770249577593
AO-10
1 14129U 83058B 96086.38855436 -.00000079 00000-0 10000-3 0 4088
2 14129 26.3219 217.6042 5989029 1.8359 359.5676 2.05880164 68168
RS-10/11
1 18129U 87054A 96086.88355020 .00000020 00000-0 53343-5 0 01868
2 18129 82.9241 209.3551 0013080 28.3182 331.8680 13.72363193438888
UO-11
1 14781U 84021B 96088.03302773 .00000105 00000-0 25639-4 0 8727
2 14781 97.7948 82.3903 0011779 357.0263 3.0872 14.69437913645735
RS-12/13
1 21089U 91007A 96086.90252710 .00000039 00000-0 25222-4 0 08798
2 21089 82.9185 250.3516 0030671 101.0009 259.4595 13.74067893257736
AO-13
1 19216U 88051B 96086.24247172 -.00000082 00000-0 19279-3 0 1735
2 19216 57.3247 127.1019 7391090 35.2055 356.4329 2.09739254 28091
UO-14
1 20437U 90005B 96087.11037409 .00000011 00000-0 20899-4 0 01766
2 20437 98.5463 171.6531 0012079 80.2662 279.9848 14.29915088322326
```

```
RS-15
1 23439U 94085A 96088.20978957 -.00000039 00000-0 10000-3 0 1220
2 23439 64.8191 154.0384 0163297 213.3084 145.7480 11.27524232 51651
AO-16
1 20439U 90005D 96087.14128165 .00000024 00000-0 26147-4 0 09866
2 20439 98.5613 173.7692 0012206 81.4990 278.7579 14.29970214322347
DO-17
1 20440U 90005E 96087.10169105 .00000021 00000-0 24751-4 0 09724
2 20440 98.5635 174.3258 0012461 80.4963 279.7609 14.30111697322361
WO-18
1 20441U 90005F 96087.08980124 .00000038 00000-0 31551-4 0 09841
2 20441 98.5642 174.2632 0012891 81.7624 278.5027 14.30081638322362
LO-19
1 20442U 90005G 96087.09181786 .00000053 00000-0 37211-4 0 09712
2 20442 98.5656 174.7255 0013237 81.2845 278.9806 14.30189386322389
FO-20
1 20480U 90013C 96087.05064148 -.00000013 00000-0 50934-4 0 08714
2 20480 99.0382 127.4904 0540549 310.7450 44.7902 12.83232393287358
AO-21
1 21087U 91006A 96086.82779545 .00000094 00000-0 82657-4 0 06925
2 21087 82.9385 22.6577 0036755 74.1312 286.3868 13.74566743258695
UO-22
1 21575U 91050B 96087.09749618 .00000045 00000-0 29344-4 0 06777
2 21575 98.3617 155.8960 0007417 143.9012 216.2696 14.37017227246276
KO-23
1 22077U 92052B 96086.99178458 -.00000037 00000-0 10000-3 0 05694
2 22077 66.0766 1.5539 0009019 319.4474 40.5872 12.86295382170230
KO-25
1 22828U 93061F 96087.15252012 .00000102 00000-0 58479-4 0 04455
2 22828 98.5854 164.3683 0010823 91.3320 268.9093 14.28135583098404
IO-26
1 22826U 93061D 96087.15203953 .00000035 00000-0 31650-4 0 04641
2 22826 98.5901 164.3156 0009797 106.8772 253.3487 14.27798538130294
AO-27
1 22825U 93061C 96087.14950235 .00000035 00000-0 31639-4 0 04648
2 22825 98.5901 164.1642 0009092 106.1389 254.0787 14.27690706130284
PO-28
1 22829U 93061G 96087.09798040 .00000015 00000-0 23479-4 0 04652
2 22829 98.5876 164.3681 0010856 93.8666 266.3723 14.28114881130310

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
April 2, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

662. WTB: McIntosh Stereo Equipment

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: Bill Stewart <bstewart@ntrnet.net>
Message-ID: <315E040A.7144@ntrnet.net>
Source record: 22629

Looking for McIntosh Stereo equipment. 1960-1980 MC2105, MC2100, MC2505,
C26, C28, MR77, MR78, etc.
Bill Stewart 919-782-5232 Raleigh, NC

663. email address

Newsgroup: rec.radio.amateur.space
Date: 1996-03-30 00:00:00 UTC
From: Rhett Spencer <N7DGL@PoBox1.com>
Message-ID: <315DDD68.66D@PoBox1.com>
Source record: 22630

F.Y.I.

Dual address email boxes

http://www.wwwholesale.com/pobox1/73.htm

73 N7DGL

--
****
Rhett Spencer (801)654-0611 Voice
390 West 910 South (801)654-3555 FAX
Heber City, Utah 84032-2478 http://www.wwwholesale.com/rhett/wife.html

664. Re: NAVSPASUR Fence - 216.980 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-03-31 00:00:00 UTC
From: bheaton@fibr.net
Message-ID: <315f084a.227053194@nimitz.fibr.net>
Source record: 22631

Gary,

Thanks for the info. I managed to pull a data sheet on PAVE
PAWS from the USAFSPACECOM server, but was coming up black on
NAVSPASUR. Another ham sent me a bunch of the text of a 1991
discussion about it that I remembered. Its got some references that I
need to look up, but I should be ready to copy pings shortly.

THX, BDH

gary@ke4zv.atl.ga.us (Gary Coffman) wrote:

>In article <315a5ea0.8907956@nimitz.fibr.net> bheaton@fibr.net writes:
>>All,
>>
>> I am looking for info regarding the NAVSPASUR fence operating
>>at 216.980 Mhz. I had been looking for info for the last couple
>>months and just saw a mention of it in Popular Communications. There
>>was some discussion (on DRIG) of experiments at using it to refine
>>elsets for OSCAR birds.

>NAVSPASUR is a different animal. It is a CW signal (not Morse, a
>real continous carrier) on 216.983 MHz aimed straight up in a fan
>pattern aligned with a line of latitude, IE east-west. There are
>three transmission sites, Jordan Lake AL, lat 32.659 long 86.264,
>Kickapoo Lake TX, lat 33.558 long 98.7367, and Gila River AZ,
>lat 33.11 long 112.03.
>
>Phase slaved interferometers at remote receive sites give 3D position,
>and doppler measurements give range rate. With this information, an
>orbit for the object can be calculated. Because of the way the sites
>are staggered longitudinally, any satellite with an inclination of
>33 degrees or more will show up on successive orbits through 2 or more
>of the fences. That allows the initial orbital element set to be
>refined.

Now this is interesting. There was some discussion of slave receiver
sites. I don't suppose anyone has any info on locations?
BDH

665. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-03-31 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <315EC023.311D@primenet.com>
Source record: 22632

Bruce Burke wrote:
>
> Al Gerheim wrote:
> >
> > trandall@mhv.net wrote:
> > > In article <4j1td8$jnh@ns1.thpl.lib.fl.us>, sfton@scfn.thpl.lib.fl.us (Keith OBrien) wrote:
> > > >Anyone recommend a Satellite tracking program that will display multiple
> > > >objects on the screen and track both of them. STSPlus will only put one
> > > >at a time on the screen, as well as others I have tried. During the
> > > >present STS76 and Mir mission, it be nice to track both when they not
> > > >docked together. WinOrbit 2.8 will display a secondary satellite, but
> > > >will only update the track of one object. Keith O'Brien
> > > >
> > >
> > > STSORBIT Plus does the trick. Point your web browser to:
> > > http://spacelink.msfc.nasa.gov
> > >
> > > I believe it's in the instructional materials area.Yes, it is, under software/pc
> > >
> > > Tom
> > >
> > Also, try getting REAL95.ZIP from the AMSAT ftp site. It's designed
> > to run on an HP95LX palmtop.There is now a shareware program called logsat for windows which will do
> multiple sats in a single window or multiple window, or
> all kinds of combos thereof. It also has logging and call lookup capability.
>
> The authors also clain it is compatible with KC Tracker.
> It also has some dipole antenna modeling capabilities and some
> basic propagation tools.
>
> I think they are asking 50 bucks for it.
>
> It is available on the web, but I seemed to have misplaced the URL....
>
> 73,
>
> Bruce, WB4YUC

Logsat's URL is:

http://www.netwide.net/logsat

Great program!
--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

666. * * * AFFORDABLE QSL CARDS * * *

Newsgroup: rec.radio.amateur.space
Date: 1996-03-31 00:00:00 UTC
From: MMcanally@gnn.com
Message-ID: <4jmklc$fce@news-e2b.gnn.com>
Source record: 22633

After some checking, I found out that QSL cards cost anywhere from $70.00 to $450.00 per 1000 cards to be printed up. I also found out that you are pretty limited to the color of card, artwork and color of ink to choose from. I have been printing cards for my ham

friends for some time now and I have been encouraged by my friends

to branch out and advertise a little.

I can print 1000 cards with black ink for only $50.00. Why should you order your cards from me? Because $50.00 is it! No shipping charges, no setup charges, no hidden costs. PLUS...you have your choice of 13 card colors, unlimited artwork, and you can have up to FIVE different layouts per order. Want color ink? For example, do you want a red, white and blue US flag on your cards? That would only be $65.00 per 1000, with 13 card colors to choose from,

up to FIVE different layouts, and unlimited artwork in black or colors.

Your card color choices are white, blue, yellow, pink, green, ivory, peach, gray, and the following eyepopping flourescents: yellow, pink, green, blue, and red. Artwork is too numerous to list all designs here, but just some examples would be an ARRL logo, ARES logo, SKYWARN logo, flags of all 50 states, maps of all 50 states, antennas and radios, flags and maps of US territories and foreign countries and 1000's more...
Custom artwork available at NO ADDITIONAL CHARGE!!! Just tell me what you want!!!

Reply via private email for a FREE sample snail mailed to you today!

To place an order call Mark at (904) 626-2450 or FAX (904)626-7686 or you can mail check or money order to:

McAnally and Associates
6223 Hwy 90
Suite 301
Milton, FL 32570-1708

667. Re: NAVSPASUR Fence - 216.980 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-03-31 00:00:00 UTC
From: diamond@interserf.net
Message-ID: <4jn1di$so@ns.interserf.net>
Source record: 22634

bheaton@fibr.net (Brian D Heaton) wrote:

>All,

> I am looking for info regarding the NAVSPASUR fence operating
>at 216.980 Mhz. I had been looking for info for the last couple
>months and just saw a mention of it in Popular Communications. There
>was some discussion (on DRIG) of experiments at using it to refine
>elsets for OSCAR birds.

First of all, its now called NAVSPACECOM fence (since late 1993) but
we still call it the SPASUR fence (grin)

A person from Florida (the name escapes me) had used the Lake Kickapoo
transmitter for following satellites. Again, I'll have to look up the
name at work on Monday.

> The article mentions transmitters in Texas (Kickapoo Lake I
>believe), Alabama and Arizona. The only thing I have been able to
>find thats even close is the AFSPACECOM PAVE PAWS phased array radar
>system. Its sites are listed as Mass, Calif, Texas, and Georgia.
>This is most likely a mircowave system, however.

The Fence has 3 frequencies:
Gila River (Phoenix) Arizona - 216.97 MHz
Lake Kickapoo (Archer City) Texas - 216.98 MHz
Jordan Lake (Wetumpka) Alabama - 216.99 MHz

receivers throughout the southern US (too many to mention here)

> I am interested in detecting satellites crossing the fence and
>would appreciate any data available on the subject. If there is
>enough interest I can try to put together a summary or possibly a FAQ
>if one doesn't already exist. Thanks in advance for your assistance..

Well, I'm in development of a web page (one of these days they'll put
it on line!)

If you want more details, let me know. I work for the fence on a daily
basis. E-mail me at the address below.

David Perrussel
E-mail: diamond@interserf.net

668. Still time to get your Phase 3D donations to Amsat.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-01 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4jn731$rom@news.mcn.net>
Source record: 22635

Do it today!

Amsat-na / Phase 3D
850 Sligo Ave Suite 600
Silver Spring, Md

or

Amsat-na / Phase 3D
P.O. Box 27
Washington, D.C.

669. RS-12 Tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-01 00:00:00 UTC
From: red5or7@aol.com
Message-ID: <4jp8eg$p0g@newsbf02.news.aol.com>
Source record: 22636

I apologize in advance if this is a dumb question, but are there any on-line sources for tracking programs? Specifically, I enjoy using RS-12, and would like to have a program on my PC that would allow me to track the bird. ANY help anyone can provide is greatly appreciated! Thank you, Scott N7LRA.

670. Re: JVFAX

Newsgroup: rec.radio.amateur.space
Date: 1996-04-01 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4jp9i7$t5c@service2.uky.edu>
Source record: 22637

In article <4jlm9j$ks8@nms.telepost.no>, skontorp@telepost.no (Karl Jan Skontorp) says:
>
>Hi!
>Can anyone confirm that JVFAX with the following configuration is working
>ok?
>I use an interface - syncronous-parallell connected to LPT1, and JVFAX is
>configured with 'BidPrintIRQ' with correct address and interrupt.
>I only get two different gray levels, and I wonder if JVFAX with this
>configuartion have been tried out by anyone else?
>
>73's de Karl Jan LA3FY
>
I am using the A&A NOAA wefax decoder feeding the printer port with
JVFAX 7.0. The A&A has 8bits of output, but I have never been able to
get a standard printer port to accept data on the I/O pins. I have had
great succes using the 5 status inputs(for 2^5=32grey scale)on several
different pc/printer card combos (I have modifed an early "real IBM"
so that I get the full 8bits. and it is nice but it was a real pain to
do the mod).
To use an data output pin as an input pin is a bit tricky. Some older or
cheaper cards just do not handle incoming data very well. There are
about 3 different "style" cards, and each requires a slightly different
method to enable reading data. A friend has an add-on 8bit A>D converter
and he just about had to write a different IO for every different pc or
card. I have never been 100% sure that the JVFAX program can actually
read data using any and all cards. I have suspected that it works great
with some cards but not with any that I have tried.
In the early stages of "debuging" the A&A card I used a DB25 with LEDs
(for each data bit) to show that the "demodulator" was working properly.
Good luck and good viewing.

671. Re: RS-12 Tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4jr2ld$1er@news.mhv.net>
Source record: 22638

In article <4jp8eg$p0g@newsbf02.news.aol.com>, red5or7@aol.com (Red5or7) wrote:
>I apologize in advance if this is a dumb question, but are there any
>on-line sources for tracking programs? Specifically, I enjoy using RS-12,
>and would like to have a program on my PC that would allow me to track the
>bird. ANY help anyone can provide is greatly appreciated! Thank you, Scott
>N7LRA.

Go to HTTP://www.cts.com/browse/garym/elements

However at the moment that page isn't working. Gary what's the problem?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

672. Re: NAVSPASUR Fence - 216.980 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: ken.thompson@Symbios.COM
Message-ID: <ken.thompson.1191.0008989D@Symbios.COM>
Source record: 22639

>Now this is interesting. There was some discussion of slave receiver
>sites. I don't suppose anyone has any info on locations?

One cannot get the data from them so why wonder on their locations?
One can monitor the reflections as objects pass through the upward beams.
kt

673. test... please ignore

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: "David M. Swan" <swan@nstn.ca>
Message-ID: <Pine.AMI.3.91.960402121902.17730848A-100000@ts1-02.knt.iSTAR.ca>
Source record: 22640

I'd like to join this newsgroup but I'm having trouble with my news reader/poster. If this makes it, you'll hear more from me :-)

Sorry about the waste of bandwidth.

73 VE1DMS (David)

674. Re: RS-12 Tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: bheaton@fibrcom.com
Message-ID: <4jrqd5$elc@nimitz.fibr.net>
Source record: 22641

The site www.amsat.org has links to several tracking programs.
BDH

red5or7@aol.com (Red5or7) wrote:

>I apologize in advance if this is a dumb question, but are there any
>on-line sources for tracking programs? Specifically, I enjoy using RS-12,
>and would like to have a program on my PC that would allow me to track the
>bird. ANY help anyone can provide is greatly appreciated! Thank you, Scott
>N7LRA.

675. AMD Ham Club

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: brian@dvorak.amd.com
Message-ID: <Dp93Ks.HEC@txnews.amd.com>
Source record: 22642
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.amateur.packet

(I sure hope I got this constrained to AMD only!)

If you're a ham and you work at AMD, please read this!

We're starting an amateur radio club at AMD Austin. If you're in Austin, send me (or Curtis.Doss) e-mail for more info. We're just getting organized to ask AMD for space and support, so your interest is important.

If you're not in Austin, we'd like to know about any non-Austin AMD ham clubs (or hams, for that matter).

Brian McMinn, N5PSS
brian.mcminn@amd.com

676. Re: email address

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: Lloyd Colston <colston@viagrafix.com>
Message-ID: <31613CF5.1A@viagrafix.com>
Source record: 22643

Rhett Spencer wrote:
>
> F.Y.I.
>
> Dual address email boxes
>
> http://www.wwwholesale.com/pobox1/73.htm
>
> 73 N7DGL
>
> --
> **
> Rhett Spencer (801)654-0611 Voice
> 390 West 910 South (801)654-3555 FAX
> Heber City, Utah 84032-2478 http://www.wwwholesale.com/rhett/wife.html

Don't mean to rain on your parade but AMSAT offers the mail redirect service for free. My email address that follows me from provider to provider is kc5fm@amsat.org

--
****
K
C Lloyd Colston kc5fm@amsat.org
5 Pryor, OK USA colston@viagrafix.com
F Jesus is Lord Living to serve
M http://www.angelfire.com/free/KC5FM.html
****

677. ARLK023 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk023.1996@arrl.org>
Source record: 22644
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK023
ARLK023 Keplerian data

ZCZC SK23
QST de W1AW
Keplerian Bulletin 23 ARLK023
From ARRL Headquarters
Newington, CT April 2, 1996
To all radio amateurs

SB KEP ARL ARLK023
ARLK023 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96093.13822551 .00001308 00000-0 23918-4 0 04846
2 16609 51.6476 145.0099 0004343 147.6263 212.4986 15.57772229578159
HST
1 20580U 90037B 96093.07974867 .00000427 00000-0 27089-4 0 07923
2 20580 28.4677 347.7672 0006275 97.4239 262.7069 14.91035832127212
AO-10
1 14129U 83058B 96086.38855436 -.00000079 00000-0 10000-3 0 4088
2 14129 26.3219 217.6042 5989029 1.8359 359.5676 2.05880164 68168
RS-10/11
1 18129U 87054A 96093.37235236 -.00000084 00000-0 -10798-3 0 1896
2 18129 82.9247 204.5589 0012851 12.9444 347.2053 13.72362452439778
UO-11
1 14781U 84021B 96093.07200440 .00000043 00000-0 15069-4 0 08766
2 14781 97.7955 87.2024 0011562 340.6696 19.4047 14.69439002646477
RS-12/13
1 21089U 91007A 96092.94638782 .00000059 00000-0 45849-4 0 08931
2 21089 82.9189 245.8686 0030543 84.0716 276.3922 13.74068181258565
AO-13
1 19216U 88051B 96092.44051510 .00000344 00000-0 23077-3 0 1778
2 19216 57.3177 125.7760 7395316 35.6587 356.4229 2.09740651 28226
UO-14
1 20437U 90005B 96093.19812554 .00000017 00000-0 23300-4 0 01949
2 20437 98.5450 177.6271 0012182 65.3339 294.9117 14.29915974323195
```

```
RS-15
1 23439U 94085A 96093.17665350 -.00000039 00000-0 10000-3 0 01266
2 23439 64.8181 146.0062 0163344 212.4666 146.6129 11.27524167052213
AO-16
1 20439U 90005D 96093.15882880 -.00000022 00000-0 81193-5 0 09733
2 20439 98.5611 179.6863 0012327 66.0203 294.2270 14.29970159323205
DO-17
1 20440U 90005E 96093.18860636 -.00000026 00000-0 65964-5 0 09892
2 20440 98.5624 180.3107 0012522 65.4849 294.7640 14.30111941323234
WO-18
1 20441U 90005F 96093.17684444 .00000000 00000-0 16819-4 0 00024
2 20441 98.5636 180.2497 0012985 64.9761 295.2770 14.30081987323235
LO-19
1 20442U 90005G 96093.17840516 -.00000030 00000-0 52355-5 0 09848
2 20442 98.5653 180.7144 0013406 64.7465 295.5108 14.30189235323252
FO-20
1 20480U 90013C 96093.52166386 .00000008 00000-0 99527-4 0 8679
2 20480 99.0364 132.7350 0540110 296.0534 58.5957 12.83232649288184
AO-21
1 21087U 91006A 96093.16062424 .00000094 00000-0 82657-4 0 06943
2 21087 82.9391 17.9727 0037068 57.2172 303.2565 13.74567007259564
UO-22
1 21575U 91050B 96093.15520975 .00000030 00000-0 24427-4 0 06988
2 21575 98.3550 161.7727 0007609 124.7875 235.4023 14.37017866247149
KO-23
1 22077U 92052B 96093.13406873 -.00000037 00000-0 10000-3 0 05952
2 22077 66.0782 348.6982 0009959 319.0454 40.9812 12.86295710171023
KO-25
1 22828U 93061F 96093.17779498 -.00000023 00000-0 80654-5 0 04584
2 22828 98.5839 170.2868 0011163 75.9805 284.2622 14.28135052099267
IO-26
1 22826U 93061D 96093.17873111 .00000014 00000-0 23096-4 0 04731
2 22826 98.5889 170.2361 0010009 89.3634 270.8673 14.27799181131155
AO-27
1 22825U 93061C 96093.17665150 -.00000020 00000-0 95484-5 0 04797
2 22825 98.5890 170.0844 0009481 90.0326 270.1943 14.27690691131147
PO-28
1 22829U 93061G 96093.26346104 -.00000017 00000-0 10442-4 0 4556
2 22829 98.5864 170.4259 0010934 76.4087 283.8312 14.28115601131193

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
April 6, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

678. Radio Telemetry Module?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: mkudra@cris.com
Message-ID: <4jscho$fqc_001@news.cris.com>
Source record: 22645

We are searching for a module or small board to provide real-time telemtry transmissions from high-powered model rockets.

This unit would need to be:

a) Licensed or legitimately usable unlicensed in several countries,
b) Interfaceable to an altimeter/accelerometer CPU,
c) capable of transmissions to a range of 50K feet.

Any leads will be greatly appreciated.

BTW, we are not 'radio-knowledgeable' people, so if there is a more suitable newsgroup to target, please let us know.

Thanks,
Malcolm

679. Re: Shortwave etc database program....

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: Phil Keller <philk@wco.com>
Message-ID: <3161C76E.3DA@wco.com>
Source record: 22646
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

```
And the Cost is ????

-Phil-

Charles Bolland wrote:
>
> Sir,
>
> A stand alone IBM compatible Broadcasting Radio Station Database
> program for Longwave, Mediumwave, or Shortwave. 4000 records...
> Completely read/write and updateable...
>
> If you'd like a copy, send your EMail address and Postal Address
> which will be used to pass you more detailed information on
> the full featured program....
>
> The above program will be sent via EMAIL...
>
> All information will be kept confidential....
>
> Chuck
>
> KA4PRF

--
====================================
"Those who avoid decapitation,
leave more offspring."
-Carl Sagan-
====================================
Phil Keller N6MWC
mailto:philk@wco.com
```

680. Re: RS-12 Tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-02 00:00:00 UTC
From: RusAnd@RAnderson.virginia.k12.mn.us
Message-ID: <NEWTNews.828493655.9532.Russ@RAnderson.virginia.k12.mn.us>
Source record: 22647

Try the amsat home page..winorbit for windows is an excellent program..

681. CFP, 1996 AMSAT-NA Symposium

Newsgroup: rec.radio.amateur.space
Date: 1996-04-03 00:00:00 UTC
From: daveb@soliton.physics.arizona.edu
Message-ID: <4jsu1u$tta@news.ccit.arizona.edu>
Source record: 22648

1996 AMSAT Annual Meeting and Space Symposium
Call For Papers

Holiday Inn, City Center
Tucson, AZ
November 8-10, 1996

The 1996 AMSAT Annual Meeting and Space Symposium will be held on
November 8-10, 1996 at the Holiday Inn, City Center in Tucson, AZ.
This is the first call for papers to authors who wish to submit papers
for this event. As always, the scope of the papers should be on topics
of interest to the amateur satellite service.

Topics may include, but are certainly not limited to:

The Life and Times of AO-13
Building a Phase-3D Ground Station
Phase-3D Construction Topics
DSP-93 Integration
AMSAT Field Operations
What's Next for AMSAT After Phase-3D?

We also would like to solicit topics from the AMSAT community. In
other words, what topics would YOU like to see presented at this year's
Annual Meeting?

Abstracts from authors should be submitted by June 15, 1996. Final
versions of all papers should be received by August 15, 1996.

Submissions and inquiries should be made to Dave Burnett, WD8KRV:

By Internet: wd8krv@amsat.org

By Mail: G. D. Burnett
4809 E. Pima #223
Tucson, AZ 85712

Information about the Annual Meeting home page will be included in a
future announcement. We look forward to seeing you at the Annual Meeting!

73,
Dave Burnett WD8KRV
wd8krv@amsat.org

--
Dave Burnett | daveb@physics.arizona.edu
Department of Physics | http://www.physics.arizona.edu/~daveb
University of Arizona | AX.25 WD8KRV@WB7TLS.AZ.USA.NOAM

"We demand rigidly defined areas of doubt and uncertainty!"

682. AO-13 schedule ?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-03 00:00:00 UTC
From: ik2wxx@cyberg.it
Message-ID: <316238bf.74038@news.interbusiness.it>
Source record: 22649

Where can I find on Internet the current AO-13 schedule and attitude
???

Thanks.....

Roberto Sonzogni

E-mail: ik2wxx@cyberg.it
WEB: http://www.cyberg.it/u/sonzogni/sonzogni.html

683. re: 137 MHz sat rx

Newsgroup: rec.radio.amateur.space
Date: 1996-04-03 00:00:00 UTC
From: pguello@wpo.uwsuper.edu
Message-ID: <pguello.332.0@wpo.uwsuper.edu>
Source record: 22650

Someone was looking for a 137 MHz receiver for weather satellites. It was last week sometime and I don't recall who it was. Anyway Hamtronics makes a board level receiver for 137MHz and it's available kit or assembled.

684. Re: Radio Telemetry Module?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-04 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DpBtoy.ErK@cix.compulink.co.uk>
Source record: 22651

Kamtronics have just brought out a telementry module to go with their range of Packet TNC. Apparently this unit has a number of a/d inputs etc and can be used, with a suitable sensor to measure barometric pressure and acceleration. Ideal for that little ballistic missile project you've been working on.

Steve/G7VFY.

685. Re: 137 MHz sat rx

Newsgroup: rec.radio.amateur.space
Date: 1996-04-04 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4jvt3a$arv@bbcnews.rd.bbc.co.uk>
Source record: 22652

Paul Guello (pguello@wpo.uwsuper.edu) wrote:
: Someone was looking for a 137 MHz receiver for weather satellites. It was
: last week sometime and I don't recall who it was. Anyway Hamtronics makes a
: board level receiver for 137MHz and it's available kit or assembled.

The Remote Image Group (RIG) do a pcb as well. Ask Peter Wakelin about it.
Hi email adress is peter@ascotrig.demon.co.uk

J.
--

****
* John Boyer, BBC Research & Development Department *
* Kingswood Warren, Tadworth, Surrey, KT20 6NP *
* email: john.boyer@rd.bbc.co.uk *
* phone: 01737 836580 fax: 01737 836665 *
****

686. Re: Why satellites are still so expensive: REPOST.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-04 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DpBv35.J5n@cix.compulink.co.uk>
Source record: 22653

How about building out own Rockets?....perhaps not....!

687. TAPR GPS Group Purchase

Newsgroup: rec.radio.amateur.space
Date: 1996-04-04 00:00:00 UTC
From: Greg Jones <wd5ivd@tapr.org>
Message-ID: <4jv4st$jbm@uunews.computize.com>
Source record: 22654

TAPR offers group GPS purchase 4/1/96

TAPR working with Bob Bruninga, WB4APR, will be making a group purchase
on
Garmin 20 GPS units.

For full details on the purchase as well as information regarding the
unit,
please see the following web page http://www.tapr.org/gps

The price will be:
$165.00 US for members of TAPR
or
$175.00 US for non-members

This kit will include:
* Garmin GPS-20 (MultiTrac8 sensor) engine (1.83" x 2.74" x .45")
The Garmin GPS-20 is similar to the Garmin GPS-45

* RF pig tail with connector for unit
(one end is the MCX male connector
and the other end will be non-connected - see below)

* power/data cable with connector shell and pins
(The connector is a subminiature PCB edge connector
and will need to be built - see below)

* Documentation

TAPR will be taking orders for 50 units, which is the minimum purchase.
Once 50 units have been purchased TAPR will order the Garmin units.
TAPR will deposit money when the units are ordered from Garmin and ship
when the units arrive from Garmin. It is expected that the demand will
be high, thus a short period should be required to receive the 50 orders.

Please note: This is not an enclosed/sealed unit. It is assumed that
the purchasers will be installing the unit in another enclosure for normal
and/or experimental operations.

No 10% Discount for TAPR Members. Due to the nature of the purchase,
the $165 purchase price for TAPR members represents the membership
discount.

If you would like to order one of these units, you can
e-mail tapr@tapr.org,
phone (817) 383-0000, or
fax (817) 566-2544.

Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

These units will be useful with current APRS software and the upcoming TAC
(Totally Accurate Clock) kit that Tom Clark, W3IWI, has begun discussing with TAPR to do as a kit in the future. For more on the TAC project check: ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/

Questions concerning the unit and details on the buy will be handled on the TAPR APRS Special Interest Group list. To subscribe,
send e-mail to:
listserv@tapr.org.
In the message type
subscribe aprssig YourFirstName YourLastName.
The server will then send you a message back. Announcements on the status of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling
---
* Shipping and Handling within the US will be $7.00 US
by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a quote on the shipping to your country. TAPR uses International Express Mail, unless the purchaser requires something else.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org
---

688. Wanted:Transverters

Newsgroup: rec.radio.amateur.space
Date: 1996-04-05 00:00:00 UTC
From: Bootlegger@msn.com
Message-ID: <00001ff1+000008e2@msn.com>
Source record: 22655

Wanted:

Transverters to be used with my Yaesu FT-1000MP.
I am looking for any FTV-107R or FTV-707 transverters
or anything that will put me on 6 meters, 2 meters or
70 centimeters. I would also like to find any Microwave
Modules transverters that I could use too. Any suggestions
for 6 meters would be appreciated too. Contact Bob N9MSS
at (618)939-7581 or e-mail at Bootlegger@msn.com

73 de N9MSS Bob

689. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-05 00:00:00 UTC
From: Satoshi Manabe <satoshi@maui.net>
Message-ID: <31657FE7.582A@maui.net>
Source record: 22656

Keith OBrien wrote:
>
> Anyone recommend a Satellite tracking program that will display multiple
> objects on the screen and track both of them. STSPlus will only put one
> at a time on the screen, as well as others I have tried. During the
> present STS76 and Mir mission, it be nice to track both when they not
> docked together. WinOrbit 2.8 will display a secondary satellite, but
> will only update the track of one object. Keith O'Brien

Actually, STSPlus does track multiple satellites (up to 32 at a time).

From the main menu, press [F10] [F3] then [F2] repeatedly until it shows
the "Both" or "Sats" setting for "Display TDRS and real time satellites."

Took me about 2 months until I found out about it. BTW, current ver is 9607.

73, de WH6CTO
satoshi@maui.net

Satoshi Manabe
Kihei, Maui, Hawaii

690. NORAD Two-Line Orbital Element Sets (TLE788)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4k46mr$5k8@blackbird.afit.af.mil>
Source record: 22657

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #788 -
Alouette 1
1 00424U 62049A 96095.41912524 .00000056 00000-0 55172-4 0 1861
2 00424 80.4565 356.5340 0021333 225.9308 134.0082 13.67865073672253
ATS 1
1 02608U 66110A 96094.14044883 -.00000373 00000-0 10000-3 0 9628
2 02608 14.6247 353.6371 0008711 76.3471 283.7283 1.00374326 24112
ATS 3
1 03029U 67111A 96095.20745353 -.00000112 00000-0 10000-3 0 4767
2 03029 14.8988 0.5746 0009425 271.1902 250.2485 1.00272672104028
Starlette
1 07646U 75010A 96096.09098423 -.00000143 00000-0 36874-6 0 9602
2 07646 49.8295 77.1594 0205580 349.0466 10.5984 13.82190659 68855
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Cosmos 1602
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Kvant-1
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RS-10/11
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DMSP B5D2-4
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2 18822 98.3882 291.6014 0005347 211.6032 148.4825 14.23185401424177
Glonass 34
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2 19163 65.2268 88.3217 0008302 162.3130 197.7250 2.13102196 60674
Glonass 36
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2 19165 65.2097 88.2695 0000789 161.7372 198.3054 2.13101927 61296
METEOSAT 3
1 19215U 88051A 96 95.30001470 .00000000 00000-0 10000-3 0 2520
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AO-13
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Meteor 3-2
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NOAA 11
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TDRS 2
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Nadezhda 1
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2 20103 82.9608 162.8018 0036148 258.5172 101.1923 13.73863429338602
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Meteor 3-3
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2 20305 82.5493 175.0080 0008730 123.4221 236.7662 13.04418758308696
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Kvant-2
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SPOT 2
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Kristall
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Feng Yun1-2
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Meteor 2-20
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Glonass 47
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Glonass 48
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Meteor 3-4
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1996019C
1 23835U 96019C 96095.99893222 .00052462 59963-6 13561-2 0 120
2 23835 34.8898 339.4982 6041609 200.9189 116.6454 4.06032992 367
1996020A
1 23839U 96020A 96095.61792442 -.00000144 00000-0 00000+0 0 53
2 23839 21.8470 346.7006 7002312 185.5957 157.3736 2.23967487 11
1996020B
1 23840U 96020B 96095.60857773 -.00000143 00000-0 00000+0 0 18
2 23840 21.9526 344.8095 6996645 187.4062 150.2536 2.24185931 18
--
```

Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

691. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-04-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4k46qo$5kl@blackbird.afit.af.mil>
Source record: 22658

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

692. Radio Broadcasting Database LW MW, SW

Newsgroup: rec.radio.amateur.space
Date: 1996-04-05 00:00:00 UTC
From: Charles Bolland <chuck@flinet.com>
Message-ID: <3165F362.7A45@flinet.com>
Source record: 22659
Cross-posted to: rec.radio.amateur.equipment,rec,radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc.,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave

A Stand alone IBM compatible Broadcasting Radio Station Database Program for longwave, Mediumwave, and Shortwave. Over 4,000 records included already. Completely, read/write and update-able.

If you would like a copy, send your Mailing Address - the one you receive letters with - and your E-mail address. The program will be sent back via E-mail to you within 24 hours.

Your mailing address will be used to send you further details on a full featured database program called Voyageur. All information is confidential.....!

Hope to hear from you.

Chuck Bolland
chuck@flinet.com

P.O. BOX 18402
WEST PALM BEACH, FL 33416

KA4PRF

693. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: argon@onramp.net
Message-ID: <argon-0604960707400001@argon.onramp.net>
Source record: 22660

Try SkyChart 2000. It will import nasa files and track zillions of satellites. It will do track in realtime and plot the course. It comes with a demo file that tracks all of the GPS's. It's shareware and findable on line.

Kyle

In article <31657FE7.582A@maui.net>, Satoshi Manabe <satoshi@maui.net> wrote:

.Keith OBrien wrote:
.>
.> Anyone recommend a Satellite tracking program that will display multiple
.> objects on the screen and track both of them.....

694. Re: AO-13 schedule ?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: colston@viagrafix.com
Message-ID: <4k65p4$lb@ionews.ionet.net>
Source record: 22661

ik2wxx@cyberg.it (Roberto Sonzogni) wrote:

>Where can I find on Internet the current AO-13 schedule and attitude
>???

You can find AO-13 pass predictions at

http://www.acs.ncsu.edu/scripts/HamRadio/sattrack.perl

and you can just type in your QTH and select a satellite

```
**********************************************************
K
C Lloyd Colston kc5fm@amsat.org
5 Pryor, OK USA colston@viagrafix.com
F Jesus is Lord Living to serve
M http://www.angelfire.com/free/KC5FM.html
**********************************************************
```

695. Re: AO-13 schedule ?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.OSF.3.91.960406094232.4556I-100000@biggulp.callamer.com>
Source record: 22662

try: http://www.grove.net/~tkelso

On Wed, 3 Apr 1996, Roberto Sonzogni wrote:

> Where can I find on Internet the current AO-13 schedule and attitude
> ???
>
> Thanks.....
>
>
> Roberto Sonzogni
>
> E-mail: ik2wxx@cyberg.it
> WEB: http://www.cyberg.it/u/sonzogni/sonzogni.html
>
>

696. ARLK024 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk024.1996@arrl.org>
Source record: 22663
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK024
ARLK024 Keplerian data

ZCZC SK24
QST de W1AW
Keplerian Bulletin 24 ARLK024
From ARRL Headquarters
Newington, CT April 6, 1996
To all radio amateurs

SB KEP ARL ARLK024
ARLK024 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96096.15335268 .00001336 00000-0 24279-4 0 05275
2 16609 51.6470 129.9034 0004398 155.8577 204.2619 15.57776172578627
AO-10
1 14129U 83058B 96093.67373864 -.00000142 00000-0 10000-3 0 04090
2 14129 26.3003 216.4285 5992601 3.6677 359.1205 2.05883895068313
RS-10/11
1 18129U 87054A 96095.63249349 .00000047 00000-0 35276-4 0 01916
2 18129 82.9252 202.8896 0012848 6.9496 353.1836 13.72363682440089
UO-11
1 14781U 84021B 96096.06815124 .00000069 00000-0 19503-4 0 08900
2 14781 97.7953 90.0622 0011357 331.3448 28.7112 14.69439963646916
RS-12/13
1 21089U 91007A 96095.64063625 .00000056 00000-0 42895-4 0 08844
2 21089 82.9189 243.8698 0030634 76.9786 283.4793 13.74068385258936
AO-13
1 19216U 88051B 96095.30108507 .00000560 00000-0 26337-3 0 01801
2 19216 57.3193 125.2728 7396646 35.8163 356.3991 2.09742852028299
UO-14
1 20437U 90005B 96096.13703881 -.00000003 00000-0 15459-4 0 01827
2 20437 98.5450 180.5115 0012216 57.1531 303.0831 14.29916050323614
RS-15
1 23439U 94085A 96096.10355468 -.00000039 00000-0 10000-3 0 01415
2 23439 64.8181 141.2728 0163529 211.9222 147.1712 11.27524183052544
```

```
AO-16
1 20439U 90005D 96096.16759988 .00000030 00000-0 28302-4 0 09885
2 20439 98.5611 182.6454 0012394 57.2834 302.9542 14.29970840323634
DO-17
1 20440U 90005E 96096.12711444 -.00000012 00000-0 12001-4 0 09754
2 20440 98.5623 183.2008 0012583 57.5004 302.7347 14.30112283323657
WO-18
1 20441U 90005F 96096.18538093 .00000003 00000-0 18033-4 0 09860
2 20441 98.5634 183.2089 0013025 56.5679 303.6747 14.30082330323662
LO-19
1 20442U 90005G 96096.18671591 -.00000020 00000-0 91522-5 0 09777
2 20442 98.5598 183.6691 0013255 57.8536 302.3934 14.30189516323686
FO-20
1 20480U 90013C 96096.09449830 -.00000030 00000-0 14264-4 0 08819
2 20480 99.0361 134.8206 0540060 290.2065 64.1737 12.83232429288515
AO-21
1 21087U 91006A 96096.14505584 .00000094 00000-0 82657-4 0 07045
2 21087 82.9394 15.7649 0037072 48.7215 311.7078 13.74567177259970
UO-22
1 21575U 91050B 96096.14925165 -.00000004 00000-0 12872-4 0 06860
2 21575 98.3547 164.6797 0007815 116.3744 243.8246 14.37017794247572
KO-23
1 22077U 92052B 96096.16633540 -.00000037 00000-0 10000-3 0 05793
2 22077 66.0785 342.3509 0009976 317.6340 42.3904 12.86295675171410
KO-25
1 22828U 93061F 96096.12036881 -.00000044 00000-0 -40331-6 0 04464
2 22828 98.5839 173.1794 0011188 68.3452 291.8904 14.28134926099680
IO-26
1 22826U 93061D 96096.19207665 -.00000036 00000-0 29345-5 0 04853
2 22826 98.5888 173.1978 0010056 81.7249 278.5079 14.27798914131585
AO-27
1 22825U 93061C 96096.19022480 -.00000031 00000-0 51410-5 0 04664
2 22825 98.5889 173.0459 0009550 82.1956 278.0323 14.27690703131578
PO-28
1 22829U 93061G 96096.13601184 .00000002 00000-0 18281-4 0 04661
2 22829 98.5862 173.2495 0010961 67.9882 292.2463 14.28116084131605

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
April 9, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

697. satalette frequency

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: quad@net-connect.net
Message-ID: <4k6ugq$8me@news.net-connect.net>
Source record: 22664

There was a posting of satalittes transmitting in the 150 mhz . would you e
mail them to me thankls

698. Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-06 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <31675328.4497@primenet.com>
Source record: 22665

I have a friend that just acquired an XT and would like to track satellites. Can someone recommend a program that will work on this machine with CGA Monitor. Thanks in advance for any assistance.

--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

699. DSP2232 or DSP-93

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: bsmith@msn.com
Message-ID: <4k7fha$q97@news.internetmci.com>
Source record: 22567
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

OK, and greetings. Trying to put together an automated SAT sattion. Have had the DSP-93 for about 9 months now and trying to get things going. Have the PACCOMM TNC and thought loading PSK and FSP modems would be a lot easier than it seems to be.

Also, at least on my DX cluster @ 9600 - I seem to be getting much better throughput on my MFJ/G3RUH combo then on the DSP-93 using the FSK18 modem. I have the thing tuned for 1Vpp input so I think it is tuned as well as possible. Using an ICOM 820H BTW.

Here's my question(s):
Should I get a DSP2232?
Will the TAPR TNC do a better job of Swapping modems and loading OBJs.
How does the 2232 compare to the DSP-93 or MFJ-G3RUH interms of performance - don't want to shell out a grand and go backwards.

Thanks in advance for any advice or ideas you may have.

73 de N3FTU, Bob

700. Radio Meteor Obs. Bull. March 1996: no Hyakutakids

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.63.31678ADD@vvs.innet.be>
Source record: 22568

Radio Meteor Observation Bulletin No. 32 April 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA, Bratislava
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

March 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Mar	UT											
1996	20h	21	22	23	00	01	02	03	04	05	06	07
1- 2	13	18	31	33	33	35	35	39	51	60	58	70
2- 3	17	19	45	47	53	69	63	56	61	43	60	57
3- 4	28	37	43	54	41	32	38	50	54	55	81	78
4- 5	14	29	34	46	66	57	61	71	76	96	147	148
5- 6	15	34	31	40	27	27	31	32	37	35	50	44
6- 7	20	28	46	38	53	53	67	60	59	59	84	58
7- 8	-	-	-	-	-	-	-	-	-	-	-	-
8- 9	16	59	44	32	-	-	-	-	-	-	-	-
9-10	13	21	48	45	48	41	34	49	43	38	51	45

```
10-11 | 47 18 47 49 46 59 69 69 66 53 86 75
11-12 | - - - - - - - - - - - -
12-13 | - - - - - - - - - - - -
13-14 | - - - - - - - - - - - -
14-15 | - - - - - - - - - - - -
15-16 | 25 68 60 46 47 44 47 61 47 56 74 45
16-17 | 8 29 38 48 55 63 38 47 53 70 57 64
17-18 | 26 43 53 55 66 78 63 64 52 62 71 60
18-19 | - 16 47 53 51 73 69 56 63 86 89 93
19-20 | 31 47 54 58 43 49 51 69 71 58 60 83
20-21 | 30 48 60 41 57 57 71 55 68 81 66 84
21-22 | 25 51 71 59 78 58 50 64 64 62 99 84
22-23 | 29 31 61 52 60 58 77 77 51 62 77 86
23-24 | 20 48 58 68 74 53 64 66 69 71 91 91
24-25 | 35 57 60 74 60 58 76 71 83 90 90 83
25-26 | 40 50 54 70 82 60 59 70 67 49 97 55
26-27 | 14 38 52 46 41 53 55 55 70 62 76 55
27-28 | 14 30 48 60 61 53 58 59 63 61 68 93
28-29 | 25 61 53 65 51 65 57 90 80 105 93 68
29-30 | 11 27 51 58 54 59 62 70 64 79 78 85
30-31 | 14 28 54 38 57 52 54 65 79 95 74 -
31- 1 | 23 36 37 75 56 53 76 81 85 58 91 -
------|------------------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06 07
Mar | UT
```

- switch to summer hour during the night of March 30 - 31: local time
= UT + 2 hours

Maurice De Meyere / Chris Steyaert

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector, direction east.
Receiver: AR-8000 , SSB mode, Narrowband passband filter, no preamplifier.
Frequency: 59.250 MHz
Transmitter: 150 kW TV video carrier
in Bucaresti, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP38 program from AF9Y) on the PC where 640 channels of 2Hz width
are recorded and stored continuously. Every meteor reflection produces
a distinct whistle, which is recorded easily by the real time FFT
program in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width
is used for meteor identification, the other nearby "channels" are used
to monitor interference, which can be identified easily. If any
interference occurs, the whole 200 second recording of one frame is
skipped.

The following figures show the total length of the meteor reflections
during one hour, expressed as percentage. The number here shows
10 times this value. (e.g. 100 means 10 percent).

| Mar 1996
UT | 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30
|---
5h | , , , , , , , , , , , 84
6h | 86, 86, , 95, 94, , 99,100,123,103, 87,110
7h | 102,120,103,122,120, 94,115,109,118,113, 71,135
8h | 103,129,107,127,127,104,107,127,121,120, 74,104
9h | 92, 73, 97,122,108,108,122,121,131,123, 71,
10h | 84, 97, 78,111, 80, 89, 87,107,111,135, 54, 67
11h | 89, 66, 75, 93, , 55, 81, 89, , , 49, 66
12h | 75, 31, 48, 36, 60, 52, 38, 42, 64, , 25, 62
13h | , 28, 27, 42, 58, 39, 38, 40, 39, , 29, 33
14h | , 28, 28, 51, 36, 36, 40, 50, 40, , 23, 40
15h | , 22, 29, 55, 24, 23, 34, 42, 41, , , 53
16h | , 22, , 25, , 30, 44, 42, 37, 27, 33,
17h | , , , 30, , 24, , 28, 29, , 26,
18h | , , , 36, 34, 28, 33, 32, 33, 10, 22,
19h | , , , 30, 42, 29, 46, 45, 50, 18, ,
20h | , , , 43, 47, 42, 61, 66, 70, 29, ,
|---
UT | 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Notes:
. blank value means no data available or interference.
. local time conversion: one hour ahead of UT (06h00 UT is 07h00 local)
until March 30, 1996.
. Nothing happened (related to C/1996B2 Hyakutake), at least during my
(daytime) observing time.
Remarkably low activity, sometimes there have even been some
hours with nearly no strong (15+ seconds) reflection!
. see also: http://www.net4you.co.at/user/kuneth/info.html

Werfried Kuneth

Location: Astronomical Observatory, University of Ghent, Belgium
(3 42' 32" E, 51 01' 25" N)
Antenna (2x): 4 elements horizontal Yagi, pointed East, elevation= 30 degs
Antenna amplifier: 10dB gain, smallband resonance lambda/4 antenna filter.
Frequency: (1)=66.29 Mhz (signal) and (2)=65.3 Mhz (interference control)
Receiver (2x): modified commercial FM receiver
Data acquisition: 12 bits PC-based A/D convertor, 250 Hz sampling rate
Interference rejection:
dual setup: receiver (1) tuned at distant transmitter, receiver (2)
tuned at empty frequency. Anticoincindence measurement rejects
registration of broadbanded spurious signals (lightnings, computers,
ingition motors, etc).
Further information:

see WWW page (additional info + observational data)
http://allserv.rug.ac.be/~hdejongh/astro/meteor/meteor.html
Data format:
results are shown as total reflection time, expressed as
a percentage. The actual number shows 10 times this value.

| Feb 1996 | 10x % reflec. time | horiz: day | vert: time |

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	26	15	21	35	17	15	14	23	15	16	21	14	12	14	25
1	21	21	31	30	20	23	19	24	20	20	19	23	16	14	18
2	27	25	18	29	17	26	13	12	23	19	19	14	14	10	30
3	37	40	33	23	29	33	18	22	26	24	16	28	20	15	28
4	26	39	51	35	22	29	35	27	28	22	20	33	23	14	24
5	24	18	32	26	19	26	32	18	28	33	20	40	22	26	25
6	22	30	27	48	26	26	28	20	50	27	37	16	47	31	44
7	43	47	47	36	34	19	41	28	23	29	32	14	33	23	22
8	28	23	54	32	27	26	32	15	43	30	29	18	19	18	25
9	35	20	35	17	15	12	24	22	32	30	16	36	25	18	
10	30	32	30	21	32	14	14	14	23	39	12	19	18	18	
11	22	17	42	20	17	24	12	20	27	21	20	11	11		
12	29	14	12	15	16	12	15	21	24	21	13	12	26		
13	8	14	25	17	12	5	6	14	17	15	14	12	8	49	
14	11	8	15	16	14	8	10	4	9	38	20	5	11	8	19
15	2	7	9	23	6	10	4	7	13	12	14	10	4	32	3
16	10	11	12	16	19	8	15	10	10	16	25	9	6	36	8
17	7	9	15	18	9	14	8	16	6	13	18	14	8	10	5
18	9	11	15	18	10	7	8	17	11	9	7	13	10	7	6
19	20	14	17	22	12	10	17	13	13	14	19	16	10	22	10
20	16	16	20	21	12	16	19	12	20	17	20	18	11	22	12
21	25	19	25	24	17	23	27	32	29	21	18	30	17	26	19
22	22	22	13	22	14	14	15	23	11	21	23	14	21	23	13
23	20	37	19	20	18	17	9	27	25	26	22	16	13	19	12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

| Feb 1996 | 10x % reflec. time | horiz: day | vert: time |

	16	17	18	19	20	21	22	23	24	25	26	27	28	29
0	11	12	11	12	12	10	9	10	8	14	14	15	13	14
1	13	12	16	14	15	14	8	12	12	8	17	11	10	19
2	22	19	19	17	16	33	7	21	10	28	16	11	12	12
3	32	20	14	19	16	9	15	14	12	14	33	30	20	14
4	23	24	16	16	18	24	20	18	11	18	28	26	34	19
5	24	19	52	31	12	24	27	14	20	25	25	17	18	13
6	20	32	30	37	30	21	28	25	19	19	23	30	16	15
7	21	15	37	27	7	31	20	33	26	32	36	14	20	21

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9 | 21 13 42 13 14 8 18 16 17 30 12 14 13 8
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8 | 13 23 28 20 17 34 25 21 17 41 12 21 19 18 14
9 | 14 24 25 17 25 15 17 21 9 23 35 12 17 16 13
10 | 25 17 27 14 14 11 21 18 16 17 24 20 11 15 10
11 | 52 23 15 18 10 9 14 33 29 19 9 19 15 9 9
12 | 24 11 23 16 16 9 11 13 16 11 26 15 12 12 15
13 | 6 6 15 8 5 10 6 6 11 5 5 17 11 6 5
14 | 5 7 12 4 8 5 14 4 9 11 8 7 3 4 4
15 | 6 5 7 3 5 4 5 3 9 5 5 3 10 6 4
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17 | 5 3 8 6 8 4 2 8 6 6 2 6 10 7 7
18 | 11 3 6 3 11 7 6 4 7 9 4 7 13 5 11
19 | 9 6 10 13 9 11 6 4 11 12 7 14 11 6 6
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| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
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| Mar 1996 | 10x % reflec. time | horiz: day | vert: time |
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6 | 29 35 29 29 32 36 67 37 40 28 23 33 25 44 43 40
7 | 22 31 21 25 36 32 44 47 37 36 25 28 37 39 31 41
8 | 23 48 17 25 20 39 48 43 62 33 36 18 32 27 35 46
9 | 34 29 23 26 25 30 49 46 66 23 36 13 16 31 41 40
10 | 27 32 17 18 14 20 44 30 49 19 35 20 15 35 28 50
11 | 16 32 14 24 10 24 31 47 50 18 23 13 14 38 28 27
12 | 17 22 11 25 11 12 38 44 24 13 15 80 18 18 58 32
13 | 11 12 10 7 6 11 30 20 14 20 10 9 11 17 19 36
14 | 7 12 11 10 5 9 11 17 19 8 9 6 9 18 14 21
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-------------------------------------------------------------------
| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
```

Paul Vauterin

2. ANNOUNCEMENT

Geir Laastad/LA6LU invites to try his beacons for meteor scatter purposes:

Call MHz Antenna Direction ERP mAsl QTH Status

LA4TEN 28.211 Vertical Omni 250W 30 JP20LG QRV 24h
LA4VHF 144.890 2 * 8 el Yagi 0 degr. (North) 380W 30 JP20LG QRV 24h

(Located on the island Sotra, 60 15'36" N - 05 04'06" E)

SWL Reports is welcome! All reports via mailed QSL's will be QSL'ed
back with the beacons QSL card!

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio
meteor scatter observations and data reduction. It started in August 1993
in order to spread rapidly the Perseid results via E-mail. Since then, it
has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

4. CONTRIBUTORS / USEFUL ADDRESSES

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Krijgslaan 281(S9), B-9000 Gent, Belgium

E-mail contact: paul.vauterin@rug.ac.be

--
Christian Steyaert (RMOB9603) 7 April 1996
--

701. Satellite XCVR for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: Gary Wandrie <garyw@erols.com>
Message-ID: <4k8gfq$1pt@news7.erols.com>
Source record: 22569

Amateur Radio Equipment FOR Sale

Yaseau FT-736R 2m/440 satellite transciever with AOP-1 antenna -> $1600.00

Icom IC7100 25 Mhz to 2000 Mhz scanner with TVR-7100 -> $1150.00

Kenwood TH78A 2m/440 hand held with quick charge and spare battery -> $300.00

Texas Instrument 486DX/75 Mhz laptop, active matrix color display,
8 MB memory, 454 MB HD, SCSI ports, 2 PCMCIA ports, 4 year warranty
builtin mouse, paid $3200 in July 1995, -> make an offer

Prices do not include shipping. If you are interested in any of these items, please leave me a message at:

GaryW@erols.com

702. Re: What is sleep schedule for Mir crew?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4k8pml$soc@news.mhv.net>
Source record: 22570

In article <DpGyK0.nr@scn.org>, bd703@scn.org (SCN User) wrote:
>
>anyone know the crew schedule for mir? I dont want to waste time trying
>for a voice contact on 145.55 if they are asleep.
>
>Thanks in adavnce
>
>Kerwin, N7JGW
>

From what I understand they are asleep after 2000UTC. At least thats the
time as of a few months ago.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

703. LEARN MORE ABOUT ASTEROID IMPACT HAZARDS HERE

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: netstryder@aol.com
Message-ID: <4k93sd$7vj@newsbf02.news.aol.com>
Source record: 22571

I have set up a web page that links to verious areas on the internet. My home page will allow you to print out a petition to send to your senators. At this time I do not have the House of Representatives listed ... but we can start withthe senate.

To give you a breif overview ... A study of Near Earth Objects was proposed by several top NASA astronmers that would cost a mere $50 million of NASA's $7 Billion dollar budget. This study would withint 10 years track with relative assurance 95% of all the object that pose a threat to Earth. With operating expenses of $10million per year after the initial setup. This would also give us enough time to do something about a potential threat. This project was rejected due to budget constraints.

You can help by writing and calling your congressional representatives and telling them you want this funded. Please consider doing so as this would be in all our best interests.

Thank you: http://members.aol.com/netstryder

704. Re: What is sleep schedule for Mir crew?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: crscasio@pixi.com
Message-ID: <4k96gg$2ve@rigel.pixi.com>
Source record: 22572

The Mir crew operates on Moscos time.

Lawrence

705. Re: What is sleep schedule for Mir crew?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: crscasio@pixi.com
Message-ID: <4k96jl$2ve@rigel.pixi.com>
Source record: 22573

Sorry, it should be Moscow not Moscos. My fingers are on a different time zone than my brain.

Lawrence

706. Help: altitude measuring device for ham balloon

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: acc@pobox.com
Message-ID: <4k97g8$avp@news.mountain.net>
Source record: 22574

Me and a few of the local hams are putting together an Amateur Balloon

We are in the fist stages of equipment design and I'm the lucky (or is that unlucky) one who gets to build the instrument package. For the first flight we are going to use a Basic Stamp (I or II not sure yet) to send telemetry and collect data from onboard sensors.

I have completed the temperature sensors and i am looking for a way to determine the altitude of the balloon (low cost needed) I have heard of a few chips or rather modules by motorola that do this. If anyone can help we would be most greatful.

Thanks Brian McClure (N8PQI)
email: acc@pobox.com
phone: 304-746-0448

707. AO-27 Operational?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: Brian Webb <102670.1206@CompuServe.COM>
Message-ID: <4k99d1qds1@mhafn.production.compuserve.com>
Source record: 22575
Cross-posted to: aus.radio.amsat,de.comm.ham,rec.radio.amateur.misc,rec.radio.amateur.space,uk.radio.amateur

Yesterday (Saturday 07 APR) I tried to receive the AO-27 downlink on 436.800 MHz, but didn't hear anything. I listened from 0900 local time to 1800 using a Radio Shack PRO-2006 scanner in FM narrow mode. The receiver was programmed to search from 436.750-436.850 MHz in 5 KHz increments. The antenna was an outdoor sloping dipole for 35 MHz (it works from 30-950 MHz). Also, my squelch was set very low so a weak signal would break squelch.

Any idea what the problem is?

Brian Webb, KD6NRP

708. Re: What is sleep schedule for Mir crew?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4k7kjg$sbg@reader2.ix.netcom.com>
Source record: 22576

In <DpGyK0.nr@scn.org> bd703@scn.org (SCN User) writes:
>
>
>anyone know the crew schedule for mir? I dont want to waste time
trying
>for a voice contact on 145.55 if they are asleep.
>
>Thanks in adavnce
>
>Kerwin, N7JGW
>
It has been reported here earlier that the Mir operates on Moscow time.
They knock off about 2100z and get up about 0500z...
--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

709. Re: Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: n7tcf@primenet.com
Message-ID: <4k8et6$s28@nnrp1.news.primenet.com>
Source record: 22577

I found Traksat 2.8 very good. I think the AMSAT-NA site still has it. 2.8 is the last version that works with an XT. A co-processor (about $10 at swap meets) makes it run pretty smooth. In fact I'll send him/her this co-processor I have, I doubt I'll be setting up any XTs soon.

Jim N7TCF

In <31675328.4497@primenet.com>, Stephanie Steele <kc7dba@primenet.com> writes:
>I have a friend that just acquired an XT and would like to track
>satellites. Can someone recommend a program that will work on this
>machine with CGA Monitor. Thanks in advance for any assistance.
>
>--
>Stephanie Steele
>
>e-mail address kc7dba@primenet.com
>packet address kc7dba@kb7cfd.id.pnw.usa.noam

710. What is sleep schedule for Mir crew?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-07 00:00:00 UTC
From: bd703@scn.org
Message-ID: <DpGyK0.nr@scn.org>
Source record: 22666

anyone know the crew schedule for mir? I dont want to waste time trying for a voice contact on 145.55 if they are asleep.

Thanks in adavnce

Kerwin, N7JGW

711. Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: rasmith@voicenet.com
Message-ID: <4k9qq5$820@news.voicenet.com>
Source record: 22578

Hello everyone!

I am looking for plans to build a Quadrifilar helical antenna for APT
etc.. Anyone have any leads?

73, Richard

712. Re: AO-13 schedule ?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: bob@texas.net
Message-ID: <4k9uaf$efq@news2.texas.net>
Source record: 22579

ik2wxx@cyberg.it (Roberto Sonzogni) wrote:

>Where can I find on Internet the current AO-13 schedule and attitude
>???

http://www.amsat.org

Bob

713. WANT: Mir Keps

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: kd4hrt@gate.net
Message-ID: <4k9tk4$us2@news.gate.net>
Source record: 22580

```
Can someone pls send me the latest Mir Keps?
Unable to locate them on my local packet bbs.
Thanks
```

714. HAM SHOP - VIRTUAL MARKET

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: Adriano Sgarbi <adr@datas.it>
Message-ID: <3168DADE.3301@datas.it>
Source record: 22581

NEW !!

HAM SHOP virtual market for radio amateur.

NO commercial site !!
only for private announce !!

visit it at :

http://www.datas.it/~arg/

Advanced Radio Group

e-mail : arg@datas.it

715. Re: Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: Virginia.k12.mn.us@RAnderson.virginia.k12.mn.us
Message-ID: <NEWTNews.828970060.17006.Russ@RAnderson.virginia.k12.mn.us>
Source record: 22582

Amsat web site has Winorbit for Windows and is easy to run..

716. Re: Ham Balloon

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: 101601.3050@compuserve.COM
Message-ID: <960408191411_101601.3050_JHP126-1@CompuServe.COM>
Source record: 22583

I have seen some posts (numerous) on rec.radio.scanner (I think) about balloons. You may want to start their. Also, can you send me info on the Basic Stamp? I want to use one to fire a model rocket engine.

717. Re: AO-27 Operational?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: northup@blackdog.sw.stratus.com
Message-ID: <4kc3kl$mtm@transfer.stratus.com>
Source record: 22584
Cross-posted to: aus.radio.amsat,de.comm.ham,rec.radio.amateur.misc,rec.radio.amateur.space,uk.radio.amateur

102670.1206@CompuServe.COM (Brian Webb) writes:
: Yesterday (Saturday 07 APR) I tried to receive the AO-27 downlink
: on 436.800 MHz, but didn't hear anything. I listened from 0900
: local time to 1800 using a Radio Shack PRO-2006 scanner in FM
: narrow mode. The receiver was programmed to search from
: 436.750-436.850 MHz in 5 KHz increments. The antenna was an
: outdoor sloping dipole for 35 MHz (it works from 30-950 MHz).
: Also, my squelch was set very low so a weak signal would break
: squelch.
:
: Any idea what the problem is?
:
: Brian Webb, KD6NRP

Actually AO-27 was working quite well on Saturday April 7. I was able to make
contact with G6HRH from New England.

What I had different was a better receive system using an 11 element yaga
tracking by hand with an 18db preamp. It does not put out a strong signal
you really need to get as much gain as possible to hear it. If i'm 30 degrees
off with the beam I don't hear it.

Get a good antenna system and some tracking software and give it another try
its lots of fun

Bill

--
--

Bill Northup, N1QPR EMAIL n1qpr@amsat.org
QRP-NE #307
NorCal #1027
QRP-L #356

718. Re: Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: bulletindx@nyongwa.montreal.qc.ca
Message-ID: <DpK9A5.Cs1@nyongwa.montreal.qc.ca>
Source record: 22585

n7tcf@primenet.com wrote:
: I found Traksat 2.8 very good. I think the AMSAT-NA site still has it. 2.8 is
: the last version that works with an XT. A co-processor (about $10 at swap meets)
: makes it run pretty smooth. In fact I'll send him/her this co-processor I have, I doubt
: I'll be setting up any XTs soon.
:
: Jim N7TCF
:
: In <31675328.4497@primenet.com>, Stephanie Steele <kc7dba@primenet.com> writes:
: >I have a friend that just acquired an XT and would like to track
: >satellites. Can someone recommend a program that will work on this
: >machine with CGA Monitor. Thanks in advance for any assistance.
: >
: >--
: >Stephanie Steele
: >
: >e-mail address kc7dba@primenet.com
: >packet address kc7dba@kb7cfd.id.pnw.usa.noam
:
Greetings,

The last version of Traksat that works on an XT is 3.03, I have it running
on an old XT i have.

The fastest satellite traking program I have seen on an XT is called
QUIKTRAK, but you have to enter all the Keps manually in the program.

Good listening!

Gilles Letourneau

719. Satellite frequencies.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-08 00:00:00 UTC
From: bulletindx@nyongwa.montreal.qc.ca
Message-ID: <DpK9EB.Csx@nyongwa.montreal.qc.ca>
Source record: 22586

Greetings,

I am wondering if anyone has an accurate frequency list for all the amateur weather and navigation satellites?

I would appreciate if someone can either post it or send it E-mail.

thanks!

Gilles Letourneau

720. Shuttle 2m window antenna plans?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960408211245.11215B-100000@spacelink>
Source record: 22587

Does anybody out there have a plan for building the 2 meter FM antenna
that the shuttle crews place in the window of the orbit for SAREX contacts?
I am hoping to build one for a project at my school.
-Dick, N1MDZ

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

721. frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: aoleson@fastlane.net
Message-ID: <4kci2i$6nr@news2.nkn.net>
Source record: 22588

I am new to scanning the space frequencies and would like to know
if anyone has a listing of the space shutle frequencies and/or
freqeencies for the space station Mir. Any e-mail's would be greatly
appreciated
Thanks in advance

722. Re: Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: millerj@dnaco.net
Message-ID: <4kchot$kjk@sisko.dnaco.net>
Source record: 22589

Stephanie Steele <kc7dba@primenet.com> wrote:

>I have a friend that just acquired an XT and would like to track
>satellites. Can someone recommend a program that will work on this
>machine with CGA Monitor. Thanks in advance for any assistance.

>--
>Stephanie Steele

>e-mail address kc7dba@primenet.com
>packet address kc7dba@kb7cfd.id.pnw.usa.noam

I think STS-Plus will work I'm not sure though. Get it at
ftp.amsat.org
Hope this helps you out

Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

723. What hardware and software do I need to view UO-22 CCD pictures ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: Geert.Pirens@ping.be
Message-ID: <4kcqmi$e78@ping1.ping.be>
Source record: 22590

Hello you all,

Can someone tell me what Hardware and Software I need for viewing
UO-22 and other sat's with a CCD camera on board.

All information are WELKOM !!

73! from Belgium, JO20RX

Geert Pirens, ONL2057

724. Kenwood TS-790 Wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: tpickett@tir.com
Message-ID: <4kcti2$pc4@ramp2.tir.com>
Source record: 22591

I'm looking for a Kenwood TS-790. Unit must be in mint condition, and
9600 packet mod already done a plus! I have ham gear to trade towards
price. E-mail replies to tpickett@tir.com
73 de Tim KG8OC

725. Re: Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4kd4jt$i8l@nms.telepost.no>
Source record: 22592

In article <4k9qq5$820@news.voicenet.com>, rasmith@voicenet.com says...
>
>
>Hello everyone!
>
>I am looking for plans to build a Quadrifilar helical antenna for APT
>etc.. Anyone have any leads?
>
>
>73, Richard
>
>
Hi!
A quadrifilar helix is described in 'THE ARRL SATELITE EXPERIMENTERS
HANDBOOK'. One for WXsats is alos described in last issue of RIG journal
(RIG=Remote Image Groupe in Engalnd try their hompage
??rig-uk.demon.co.uk??)
Regards Karl Jan LA3FY

726. Re: Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: billbldc@aol.com
Message-ID: <4kdk08$ltt@newsbf02.news.aol.com>
Source record: 22593

For quadrifilar helical antenna plans, see Martin Davidoff's book, "Satellite Experimenter's Handbook," in the chapter on antennas. The book is published by the ARRl.

Bill Black, Washington, DC
BILLBLDC@AOL.COM

Bill Black, Washington, DC
BILLBLDC@AOL.COM

727. Re: Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4kdqm1$i60@bbcnews.rd.bbc.co.uk>
Source record: 22594

Karl Jan Skontorp (skontorp@telepost.no) wrote:
: In article <4k9qq5$820@news.voicenet.com>, rasmith@voicenet.com says...
: >
: >
: >Hello everyone!
: >
: >I am looking for plans to build a Quadrifilar helical antenna for APT
: >etc.. Anyone have any leads?
: >
: >
: >73, Richard
: >
: >
: Hi!
: A quadrifilar helix is described in 'THE ARRL SATELITE EXPERIMENTERS
: HANDBOOK'. One for WXsats is alos described in last issue of RIG journal
: (RIG=Remote Image Groupe in Engalnd try their hompage
: ??rig-uk.demon.co.uk??)
: Regards Karl Jan LA3FY
:
:

try http://www.bbc.co.uk/john_wxpics/rig/index.html
--

****
* John Boyer, BBC Research & Development Department *
* Kingswood Warren, Tadworth, Surrey, KT20 6NP *
* email: john.boyer@rd.bbc.co.uk *
* phone: 01737 832361 fax: 01737 836665 *
****

728. Re: Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <4kdphq$t2t@freenet-news.carleton.ca>
Source record: 22595

BILLBLDC (billbldc@aol.com) writes:
> For quadrifilar helical antenna plans, see Martin Davidoff's book,
> "Satellite Experimenter's Handbook," in the chapter on antennas. The book
> is published by the ARRl.
>
Walt Maxwell's book "Reflections" has an entire chapter devoted to the QHA.

729. Updated Satellite Web Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: sabible@greene.net
Message-ID: <4kdubg$3bv@news.preferred.com>
Source record: 22596

I have updated the History and Future Satellites web pages on the
AMSAT web server.

You can view the pages at:

A Brief History of Amateur Satellites
http://www.amsat.org/amsat/sats/n7hpr/history.html

The Future of Amateur Satellites
http://www.amsat.org/amsat/sats/n7hpr/future.html

I have also updated the present satellite pages making corrections,
changes in operating modes, and adding references.

http://www.amsat.org/amsat/sats/n7hpr/satsum.html

Thanks to:

University of Surrey's Center for Satellite Engineering Research
Small Satellites Home Page
and

Carl Gregory's, K8CG, WinOrbit's Satellite List

73, Steve N7HPR (n7hpr@amsat.org)

730. Space Horizons conference, May 3-4, Boston-- new speakers added

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: David_Joshua_Goldstein@brown.edu
Message-ID: <4ke4rj$r9n@cocoa.brown.edu>
Source record: 22597

Take a look: Additional speakers and moderators have been added, including Thomas Rogers, President of the Space Transportation Association...

Space Horizons: A Summit on Emerging Applications, Missions, and Technology
Boston, Massachusetts, May 3-4, 1996

Sponsored by AeroAstro / Boston University Center for Space Physics / Launchspace / National Space Society / New Space

The Space Horizons Summit is the first to address in a hands on, workshop setting, the fundamental changes now occurring in the way humans operate in and use space. We stand at a crossroads - In what directions can and will the space community proceed from here? For two days, experts, leaders, and visionaries from across a spectrum of disciplines in the space program and industry will meet in an interactive "think tank" to discuss emerging applications and markets, developing technologies, and the future of the space industry and community.

Our time is one of turmoil and redefinition in the space sector. The economics of space is changing. As space and defense budgets shrink, government and space industry are changing the way they do business. In addition, global competition has become a significant factor for the space industry. A growing market has already emerged in communications, small satellites, remote sensing, space biotechnology, and launch vehicles. Small and reengineered companies are proposing and enacting a myriad of new initiatives in these areas. At the same time, new terrestrial and space technologies are driving space activity towards new applications and methods.

Out of these changing budgets, needs, economics, and technologies will emerge the next generation of space applications, programs, and commercial ventures. You can just sit back and watch this new era unfold. Or you can help to create it.

The two day Summit will take place May 3 - 4, 1996, at Boston University and the Hyatt Regency Cambridge. In addition, a pre-summit seminar entitled, "New Approaches to Economics, Design, Development and Maintenance of Space Systems", will be held on May 2nd.

The Space Horizons Summit will gather some of the new space initiative's best minds and most visionary pioneers in an informal, creative setting to study and to uncover opportunities, ideas, directions, and possibilities for the future. Participants will be confronted with and discuss emerging opportunities for space applications in areas such as remote sensing, communications, science, mission support and education. The Space Horizons conference is unique in its interactive format, with numerous small working

groups and interactive sessions to grapple with the challenges and opportunities facing the space community today.

At the conclusion of the summit, you will have gained a new outlook on many aspects of space:
- possibilities for viable space ventures and applications;
- potential new commercial space initiatives that the market will demand and support;
- improved understanding of developing technologies and ways to apply them to both emerging and established opportunities;
- knowledge and connections necessary to bring your concepts and ideas to reality;
- a visionary perspective on new ways of "doing space";
- an appreciation of how issues such as education, the media, and responsibility in space development can be advantageously integrated into space efforts;
- exposure to the thoughts and ideas of many of the brightest, most visionary leaders in space - and a chance to interact with them in an informal, problem-solving setting.

At Space Horizons you will work closely with leaders from all segments of the space community - industry leaders, technical innovators and visionaries, investors and market experts, educators, government planners, university researchers - an interdisciplinary mix representative of all aspects of space activity.

The pre-summit seminar, led by three respected leaders in the fields of space transportation and microsatellites, will be held May 2nd. Starting with a clean sheet of paper, this special one-day course begins surveying the state of the art in minimum mission technologies. It will examine the approaches available to space mission planners and developers to achieve minimum cost and therefore to enable a new generation of space initiatives. The result is a dramatic savings over conventional system designs coupled with enhanced reliability and a program structure designed to be attractive to sources of capital. The approaches demonstrated are equally applicable to scientific, remote sensing and military one of a kind and cluster space systems.

The conference and seminar provides an opportunity to seed contemporary space activity with a new generation of initiatives and applications. If you have an interest in innovative ideas, an interest in the future of space, creative visions, and new technologies, this conference is for you. Weï¿½re looking forward to your participation at the Space Horizons Summit - helping to plot a new course in space.

Registration information is at the end of this message.

Space Horizons Summit Schedule
(subject to change)

Thursday, May 2 (optional)
8:00 AM Continental Breakfast and Morning Registration

9:00 AM New Approaches to Economics, Design, Development, Deployment, and Maintenance of Space Systems: A workshop on minimizing the cost of space transportation, space systems and operations, and on maximizing economic returns from space.
Rick Fleeter, Ph.D., President, AeroAstro, LLC.
Marshall H. Kaplan, Ph.D., Chairman, Launchspace, Inc.
Steve Newman, MBA, President, Launchspace, Inc.

Friday, May 3
8:00 AM Continental Breakfast and Morning Registration

9:00 AM Convocation and Keynote Speaker: Colonel Simon "Pete" Worden, Deputy Director of Requirements, Air Force Space Command

10:00 AM
- Access to Space, Dr. Marshall H. Kaplan, Chairman, Launchspace, Inc.
- Scientific Applications, Dr. Supriya Chakrabarti, Professor, Boston University Center for Space Physics

12:00 PM Lunch

1:15 PM
- Remote Sensing Applications, Dr. John Mustard, Professor, Brown University Department of Geological Sciences
- Governmenti¿½s Role in the Future:
Mr. Lionel S. Johns, Associate Director of Technology, White House Office of Science and Technology Policy
Mr. Alan Ladwig, Associate Administrator, NASA Policy and Plans

3:45 PM
- Media and the Public, Ms. Lori Garver, Executive Director, National Space Society
- Opportunities for Small Countries, Mr. Sven Grahn, Swedish Space Corporation

6:00 PM Reception and Mixer

Saturday, May 4
8:00 AM Continental Breakfast

9:00 AM
- Next Generation Communications Concepts, Dr. James Stuart, Vice President for Space Infrastructure, Teledesic Corporation
- Robotics Applications, Dr. Red Whittaker, Director, Field Robotics Center, Carnegie Mellon University

11:15 AM
- Education and Outreach, Dr. Paul J. Coleman, Jr., President, Universities Space Research Association
- Financing Space Ventures, Mr. Robert D. Leppo, Director, Belisarius Fund

1:15 PM Luncheon and Speaker: Mr. Thomas Rogers, President, Space Transportation Association

2:30 PM
- Responsible Space Development, Mr. Leonard David, Space News Correspondent

- Future Space Industries, Mr. Charlie Chafer, Founder, Celestis Corporation

To register, call Spectrum Management Group at (301) 353-0022.

For more information, contact:

David Goldstein
Space Horizons Chair
phone: 401 331-8975
fax: 401 331-0438
email: David_Goldstein@brown.edu
WWW: http://www.newspace.com/horizons

==========

** Space Horizons Summit Registration Form **

To Register Complete this form and remit with payment to: SMG, 13235 White Church Circle, Germantown, MD 20874; Tel (301) 353-0022; Fax (301) 353-0020; EMail: specgroup@aol.com

Registration Information
Name _____ Badge Name_____
Title/Position _____
Company or Agency _____
Address _____
City _____ State _____ Zip _____ Country _____
Phone _____ Fax _____
E-Mail Address _____
How did you first learn about the Space Horizons Summit?_____
_____

Choose six of the following topic sessions in order of preference, from 1 (highest) to 6 (lowest):
__ Access to Space __ Future Space Industries
__ Education and Outreach __ Financing Space Ventures
__ Government's Role in the Future __ Media and the Public
__ Next Generation Comm's Concepts __ Opportunities for Small Countries
__ Remote Sensing Application __ Responsible Space Development
__ Robotics Applications __ Scientific Applications

Are you interested in facilitating a small working group in one of these sessions? (Facilitators attend at a discounted rate.) __ Yes __ No
If yes, specify which session: _____

Registration Category
Pre-Registration On-Site Registration
Received Before 4/30 Received After 4/30
Standard __ $495.00 __ $545.00
Academia/Government/Non-Profit __ $395.00 __ $445.00
National Space Society Members __ $395.00 __ $445.00
Student (does not include meals) __ $40.00 * __ $40.00 *
Pre-Summit Seminar Attendees __ $345.00 # N/A
Total $_____

* Students must show proof of full time status and show a photocopy of valid student I.D.
# If attending both the conference and the workshop (you must pre-register) deduct an additional $50.00

**** There is a 10% discount for 4 or more registered ****
**** individuals from the same organizations. ****

__ Dietary Restrictions: Check here if you have any dietary restrictions.
__ Special Disabilities: Check here if you require special assistance or services. Please include with your registration form a written description of the special services required.

All registrations include admission to all technical sessions, opening reception, 2 continental breakfasts, all refreshment breaks, and luncheon.

** Full Payment Must Accompany Completed Registration Form. Payment must be made by check (in U.S. dollars only, drawn on U.S. bank), payable to SMG, money order, or one of the following credit cards:
__ Visa __ MasterCard __ Diners Club __ American Express __ Discover

Credit Card Number _____ Expiration Date _____
Cardholder Name _____
Cardholder Signature _____

**Refund Policy: Cancellations must be made in writing. Those received at SMG headquarters by April 1, 1996 will be subject to a $75.00 cancellation fee. No refunds will be given after April 1, 1996 and there will be no exceptions.

731. ARLK025 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk025.1996@arrl.org>
Source record: 22598
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK025
ARLK025 Keplerian data

ZCZC SK25
QST de W1AW
Keplerian Bulletin 25 ARLK025
From ARRL Headquarters
Newington, CT April 9, 1996
To all radio amateurs

SB KEP ARL ARLK025
ARLK025 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96099.10429666 .00001991 00000-0 32903-4 0 04953
2 16609 51.6467 115.1108 0004493 168.7176 191.3918 15.57793453579086
HST
1 20580U 90037B 96100.10811154 .00000403 00000-0 24600-4 0 07970
2 20580 28.4671 302.5936 0006189 169.6673 190.4048 14.91038838128265
AO-10
1 14129U 83058B 96100.47331623 -.00000208 00000-0 10000-3 0 4109
2 14129 26.2633 215.3386 5990791 5.6098 358.6896 2.05880794 68458
RS-10/11
1 18129U 87054A 96100.22568719 .00000036 00000-0 22583-4 0 1952
2 18129 82.9258 199.4974 0012443 354.5465 5.5552 13.72363784440718
UO-11
1 14781U 84021B 96100.01761586 .00000085 00000-0 22192-4 0 09001
2 14781 97.7961 93.8351 0011262 318.3398 41.6951 14.69441022647497
RS-12/13
1 21089U 91007A 96100.00968551 .00000024 00000-0 86779-5 0 08871
2 21089 82.9183 240.6289 0030675 65.3317 295.1027 13.74068302259534
AO-13
1 19216U 88051B 96100.06855162 -.00000207 00000-0 30134-3 0 01839
2 19216 57.3111 124.3194 7398038 36.2476 356.2718 2.09752873028396
UO-14
1 20437U 90005B 96100.12556124 .00000001 00000-0 17031-4 0 01856
2 20437 98.5470 184.4311 0012183 45.9623 314.2551 14.29916297324186
```

```
RS-15
1 23439U 94085A 96100.09478240 -.00000039 00000-0 10000-3 0 01479
2 23439 64.8179 134.8173 0163273 211.2395 147.8746 11.27524453052996
AO-16
1 20439U 90005D 96100.08599829 .00000013 00000-0 21990-4 0 09931
2 20439 98.5605 186.4964 0012400 47.0981 313.1240 14.29971229324196
DO-17
1 20440U 90005E 96100.11509042 -.00000011 00000-0 12594-4 0 09765
2 20440 98.5620 187.1233 0012558 47.1430 313.0791 14.30112508324229
WO-18
1 20441U 90005F 96100.10347449 .00000015 00000-0 22528-4 0 09903
2 20441 98.5627 187.0613 0012968 46.6318 313.5950 14.30082617324221
LO-19
1 20442U 90005G 96100.17447405 -.00000008 00000-0 13578-4 0 09766
2 20442 98.5602 187.5930 0013145 46.1740 314.0527 14.30190082324259
FO-20
1 20480U 90013C 96100.07072332 .00000007 00000-0 96668-4 0 08879
2 20480 99.0350 138.0431 0539947 281.1859 72.9030 12.83232687289027
AO-21
1 21087U 91006A 96100.14856414 .00000094 00000-0 82657-4 0 06973
2 21087 82.9396 12.8036 0037038 38.8635 321.5176 13.74567086260528
UO-22
1 21575U 91050B 96099.14329127 .00000017 00000-0 19896-4 0 06821
2 21575 98.3543 167.5864 0008271 109.0728 251.1356 14.37018300248000
KO-23
1 22077U 92052B 96100.05385652 -.00000037 00000-0 10000-3 0 05795
2 22077 66.0786 334.2112 0010168 316.4135 43.6077 12.86295730171917
KO-25
1 22828U 93061F 96100.11385769 .00000033 00000-0 30564-4 0 04518
2 22828 98.5771 177.0989 0011183 58.2240 302.0031 14.28136405100258
IO-26
1 22826U 93061D 96100.18650833 -.00000021 00000-0 90225-5 0 04845
2 22826 98.5879 177.1213 0010281 71.9189 288.3113 14.27799377132151
AO-27
1 22825U 93061C 96100.11487538 .00000029 00000-0 29363-4 0 04679
2 22825 98.5881 176.9007 0009618 71.8435 288.3814 14.27691599132139
PO-28
1 22829U 93061G 96100.12955775 -.00000031 00000-0 51084-5 0 04712
2 22829 98.5850 177.1717 0010942 58.8933 301.3322 14.28116147132176

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
April 13, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

732. Satellite questions

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: Victor.Vanderberg@275-17.woodybbs.com
Message-ID: <48f_9604091143@woodybbs.com>
Source record: 22599

Hello Everyone,

I have been tracking MIR and a few satellites, such
as RS-10, with the program Tracksat. It has been fun
listening to the activity and knowing when the satellite
can be heard. In my lists of KEPS(i think thats right) I
Have seen many different satellites. Where do I look to
get more information on these other sats? Information such
as frequencies for transponders or beacon frequencies. I am
interested mostly in the satellites realted to amateur radio
but i would still like information on others. I occasionally
come across an article or two in a magazine but i would like
to find a more detailed listing. On a side note.. I read of
a satellite that carrys a FM voice repeater (Oscar 21). Is this
still operational or are there any other satellites that are
similar. This is very interesting to me but there is not much
interest in satellites in my area. Any comments are welcome.
Thanks in advance.
Victor Vanderberg
KE4HGN

___ Blue Wave/QWK v2.20 [NR]

--- DB 1.58/004376
Origin: AR-Net: (804) 471-0736 (73:200/0)
--
|Fidonet: Victor Vanderberg 1:275/17
|Internet: Victor.Vanderberg@275-17.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

733. Balloon altitude measurements

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: "Darby G. Cooper" <dgcooper@iastate.edu>
Message-ID: <316B10BB.2A35@iastate.edu>
Source record: 22600

The Iowa Space Grant Consortium High Altitude Balloon Experiments in
Technology (HABET) utilizes a lightweight Motorola GPS receiver for
altitude information. A pressure sensor that is accurately calibrated
could also be used as an altimeter (simply compare measured pressure with
standard atmosphere).

You might also want to visit our web site at
http://www.public.iastate.edu/~isgc
look for the link to HABET

--
KB0VFE
Darby G. Cooper Assistant Director
Iowa Space Grant Consortium
407 Town Engineering
Iowa State University
Ames, Iowa 50011-3231
ph: 515-294-8487 fax: 515-294-3262
email: dgcooper@iastate.edu web: http://www.public.iastate.edu/~isgc
****

734. Re: Quadrifilar Helical Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4kdj2t$bss@reader2.ix.netcom.com>
Source record: 22601

In <4kd4jt$i8l@nms.telepost.no> skontorp@telepost.no (Karl Jan
Skontorp) writes:
>
>In article <4k9qq5$820@news.voicenet.com>, rasmith@voicenet.com
says...
>>
>>
>>Hello everyone!
>>
>>I am looking for plans to build a Quadrifilar helical antenna for APT
>>etc.. Anyone have any leads?
>>
>>
>>73, Richard
>>
>>
>Hi!
>A quadrifilar helix is described in 'THE ARRL SATELITE EXPERIMENTERS
>HANDBOOK'. One for WXsats is alos described in last issue of RIG
journal
>(RIG=Remote Image Groupe in Engalnd try their hompage
>??rig-uk.demon.co.uk??)
>Regards Karl Jan LA3FY
>
The same handbook also discusses the relative merits of other antennas.
The Lindeblad is particurlarly suited to satellite reception. One
problem with the Quadrifilar is that it is dificult to optimize.
Ideally, to insure the best infinite balun match and the proper
operation on the smith chart, some very expensive test eqiupment is
needed. Whereas the Lindenblad is less critical to build, has a
broader bandwidth, and a pattern more suited to low earth satellites.
A recent poster here has an extensive web site discussing the
Lindenblads. Unfortunately, I can't remember his name or URL. The
Lindenblad is not listed as such in many antenna books. Generically,
it is sometimes called a skewed pattern multiple dipole antenna...
--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

735. Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-09 00:00:00 UTC
From: Aart.Wedemeijer@pa3cpl.idn.nl
Message-ID: <243_9604092137@idn.nl>
Source record: 22602

Replying to a message of bulletindx@nyongwa.montreal.qc.ca to All:

b> The fastest satellite traking program I have seen on an XT is called
b> QUIKTRAK, but you have to enter all the Keps manually in the program.

Oh no, there's a function to import nasa-2Line elements!

Or use Instanttrack, buy it legally and you support AMSAT. It's nice, runs OK
on an XT.

Greetings, Aart!
aart.wedemeijer@pa3cpl.idn.nl
http://www.noord.bart.nl/~aartw
(Last revision: January 21)
--
| Standard disclaimer: The views of this user are strictly his own.

736. NASA retransmission?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-10 00:00:00 UTC
From: flashbyt@shore.net
Message-ID: <4kfmb0$i0v@shore.shore.net>
Source record: 22603

Is NASATV's audio rebroadcast anywhere in Massachusetts (I'm 20 miles
west of Boston)? Back in texas a couple of repeaters in D/FW would carry
it..

Thanks.
Aaron Price
---
http://www.nimbusline.org/~nimbusl http://www.shore.net/~flashbyt/
Nimbusline Free HTML Publishing FlashByte Mailing List admin
Volunteers for a better Web. News, politics, and the bizarre.

737. Common Sat tracking prog.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-10 00:00:00 UTC
From: BAACK@MAINE.MAINE.EDU
Message-ID: <96101.084544BAACK@MAINE.MAINE.EDU>
Source record: 22604

Hello all, I was wondering what the most common Shareware//freeware program bei
ng used is? I have several, but I would like to get used to using one where I
know I have some support if I need it!
Thanks, Jason N1RWY

"stuck in the web.."

738. RS-232 to TTL interfaces ...

Newsgroup: rec.radio.amateur.space
Date: 1996-04-10 00:00:00 UTC
From: tony@gcr1.com
Message-ID: <4kgmip$ou8@tetsuo.communique.net>
Source record: 22605

If you are thinking about using you PC to control
you ham rig check out my page and the FT-736R CAT
section. The unit shown is usable on all rigs that
require a RS-232 to TTL level converter to control
the rig. Kits include all connectors needed for
connection to Kenwood, Yaesu or Icom rigs and as
well as others.

Check it out ...

http://www.gcr1.com/n5gpi/

73,
N5GPI

739. Radio Station Database Program Stand Alone

Newsgroup: rec.radio.amateur.space
Date: 1996-04-11 00:00:00 UTC
From: Charles Bolland <chuck@flinet.com>
Message-ID: <316C9205.2CAC@flinet.com>
Source record: 22606
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

Sir,

It's still available. The IBM/DOS Broadcasting Radio Station Database Program for Longwave, Mediumwave, and Shortwave. Over 4,000 records included already. The program is completely read and write. Records can be added or changed. Sorts in many different formats both on your screen and printing.

If you would like a copy of the program, send your request to "chuck@flinet.com". Please include your MAILING ADDRESS. For example, your street number, city, state and zipcode. Also include your Email address.

The program will be sent to you via Email probably within 24 hours if not sooner. If you request the program and haven't received it in that period, check back with me..

Remember to send your address. Requests without a mail address will no longer be acknowledge to save time on the internet. In the past, requests without an address were reminded with a message. Usually, the reminder went unanswered anyway. If it was, the reply was sometimes very rude.

This program is free! Everything works. It has many features and they all work, not like shareware where some of the features work and others don't.

You address will be kept confidential. I will be sending you a first class letter later explaining another full featured Database program available. It's very big!

740. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-12 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <316E66BE.5019@uiuc.edu>
Source record: 22607

> Keith OBrien wrote:
> >
> > Anyone recommend a Satellite tracking program that will display multiple
> > objects on the screen and track both of them. STSPlus will only put one
> > at a time on the screen, as well as others I have tried. During the
> > present STS76 and Mir mission, it be nice to track both when they not
> > docked together. WinOrbit 2.8 will display a secondary satellite, but
> > will only update the track of one object. Keith O'Brien

WinOrbit 2.8 should update both tracks and show both footprints, if those options are turned on in the Main Window Options menu.

73!
de K8CG, Carl Gregory
(http://www.sat-net.com/winorbit/index.html)

741. looking for ksc related page.....

Newsgroup: rec.radio.amateur.space
Date: 1996-04-12 00:00:00 UTC
From: brandons@jax-inter.net
Message-ID: <4kmh0q$dsf@daily-planet.execpc.com>
Source record: 22608

i knew of this one web page that had all the info you ever wanted to know about watching the shuttle take off. it had freqs, directions, tips on where to take pictures, but of course i can't remember where it is at. i have looked all day.

can anyone help????

email: brandons@jax-inter.net

742. Re: looking for ksc related page.....

Newsgroup: rec.radio.amateur.space
Date: 1996-04-12 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4kmoiv$5ql@dfw-ixnews3.ix.netcom.com>
Source record: 22609

In <4kmh0q$dsf@daily-planet.execpc.com> brandons@jax-inter.net (brandon
sluder) writes:
>
>i knew of this one web page that had all the info you ever wanted to
>know about watching the shuttle take off. it had freqs, directions,
>tips on where to take pictures, but of course i can't remember where
>it is at. i have looked all day.
>
>can anyone help????
>
>email: brandons@jax-inter.net
>
You might be looking for "The Totally Unofficial NASA Page."

http://www.reston.com/sts-76/nasa.ksc.video.html

Of course the "sts-76" changes to the current mission number.
--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

743. Re: Satellite Tracking Program for XT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4kngrl$rt1@news.injersey.com>
Source record: 22610

```
: I have a friend that just acquired an XT and would like to track
: satellites. Can someone recommend a program that will work on this
: machine with CGA Monitor. Thanks in advance for any assistance.

The best prediction program is QUICKSAT, available at VSOHP, below.
--
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers home page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com or Jay.Respler@bytewise.org
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey
```

744. Re: WANT: Mir Keps

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4kngu9$rt1@news.injersey.com>
Source record: 22611

: Can someone pls send me the latest Mir Keps?
: Unable to locate them on my local packet bbs.

Elements for all sats can be found at VSOHP.

--
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers home page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com or Jay.Respler@bytewise.org
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

745. Re: Common Sat tracking prog.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4knhak$sce@news.injersey.com>
Source record: 22612

```
: Hello all, I was wondering what the most common Shareware//freeware
program bei
: ng used is? I have several, but I would like to get used to using one where I
: know I have some support if I need it!

The most used program, especially for visual tracking, is QUICKSAT.
--
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers home page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com or Jay.Respler@bytewise.org
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey
```

746. Wanted band modules for FT-726R Yaesu

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: sba3020@InfoNET.st-johns.nf.ca
Message-ID: <4kniv2$bpa@coranto.ucs.mun.ca>
Source record: 22613

Want to buy any band modules for the Yaesu FT-726R. Also
need a copy of a owners or service manual for the Yaesu FT-221R
2 meter all-mode transceiver.

747. ARLK026 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk026.1996@arrl.org>
Source record: 22614
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK026
ARLK026 Keplerian data

ZCZC SK26
QST de W1AW
Keplerian Bulletin 26 ARLK026
From ARRL Headquarters
Newington, CT April 13, 1996
To all radio amateurs

SB KEP ARL ARLK026
ARLK026 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96103.14576449 -.00000198 00000-0 40349-5 0 05432
2 16609 51.6482 94.8603 0004277 183.5359 176.5604 15.57809683579714
AO-10
1 14129U 83058B 96103.38756239 -.00000183 00000-0 10000-3 0 4131
2 14129 26.2779 214.8759 5995032 6.4584 358.5796 2.05878657 68519
RS-10/11
1 18129U 87054A 96102.77746090 .00000062 00000-0 51333-4 0 02016
2 18129 82.9261 197.6132 0012272 347.4638 12.6211 13.72364127441063
UO-11
1 14781U 84021B 96103.08185315 .00000133 00000-0 30303-4 0 08917
2 14781 97.7966 96.7626 0011358 308.4098 51.6090 14.69442334647944
RS-12/13
1 21089U 91007A 96102.99520164 .00000012 00000-0 -32880-5 0 08833
2 21089 82.9196 238.4153 0030762 57.7771 302.6370 13.74068140259949
AO-13
1 19216U 88051B 96102.45230478 .00000263 00000-0 31473-3 0 01840
2 19216 57.3075 123.8386 7398944 36.4558 356.2428 2.09749457028449
UO-14
1 20437U 90005B 96103.13444596 .00000042 00000-0 32990-4 0 01787
2 20437 98.5461 187.3827 0012238 37.4203 322.7861 14.29917108324619
RS-15
1 23439U 94085A 96103.11037681 -.00000039 00000-0 10000-3 0 01385
2 23439 64.8171 129.9403 0162974 210.7908 148.3376 11.27524556053338
```

```
AO-16
1 20439U 90005D 96103.16473888 .00000008 00000-0 19792-4 0 09862
2 20439 98.5603 189.5231 0012401 38.9412 321.2663 14.29971462324631
DO-17
1 20440U 90005E 96103.12356128 .00000014 00000-0 22094-4 0 09942
2 20440 98.5619 190.0828 0012580 38.5905 321.6155 14.30113021324653
WO-18
1 20441U 90005F 96103.18197455 .00000016 00000-0 23159-4 0 09861
2 20441 98.5625 190.0892 0012984 38.3317 321.8779 14.30082963324660
LO-19
1 20442U 90005G 96103.18278104 .00000030 00000-0 28370-4 0 09904
2 20442 98.5616 190.5547 0013177 36.9704 323.2386 14.30190752324680
FO-20
1 20480U 90013C 96103.11138848 -.00000065 00000-0 -64446-4 0 08798
2 20480 99.0350 140.5083 0539933 274.2913 79.6703 12.83231972289417
AO-21
1 21087U 91006A 96103.13299377 .00000094 00000-0 82657-4 0 06963
2 21087 82.9398 10.5957 0037013 30.5951 329.7353 13.74567289260937
UO-22
1 21575U 91050B 96103.18176170 .00000014 00000-0 19103-4 0 07075
2 21575 98.3544 171.5071 0008367 98.4305 261.7831 14.37018813248581
KO-23
1 22077U 92052B 96103.08612255 -.00000037 00000-0 10000-3 0 05737
2 22077 66.0785 327.8613 0010563 317.1436 42.8757 12.86295912172303
KO-25
1 22828U 93061F 96103.12648967 .00000027 00000-0 28112-4 0 04658
2 22828 98.5776 180.0595 0011249 49.3927 310.8247 14.28136716100684
IO-26
1 22826U 93061D 96103.12977181 .00000030 00000-0 29800-4 0 04793
2 22826 98.5874 180.0135 0010260 64.0793 296.1447 14.27800097132578
AO-27
1 22825U 93061C 96103.12844555 -.00000005 00000-0 15677-4 0 04846
2 22825 98.5879 179.8614 0009659 63.5834 296.6337 14.27691653132568
PO-28
1 22829U 93061G 96103.14223016 -.00000026 00000-0 69240-5 0 04620
2 22829 98.5850 180.1339 0010837 52.2648 307.9480 14.28116366132602

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
April 16, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

748. Antenna's for low orbit satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-04-13 00:00:00 UTC
From: xwtbx@aol.com
Message-ID: <4kotpn$hl5@newsbf02.news.aol.com>
Source record: 22615

I am just getting interested in working the satellites, and am a little intimidated with both the size and cost of the antennas used and their rotors. According to the Satellite Experimenter's Handbook (ARRL), I should be able to work the low earth orbit birds using ground plane antennas and the appropriate SSB trancievers. I was wondering if anyone could offer advice on the feasability of this setup.

Thanks and 73

Bill, N1TLQ

749. R0MIR active!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: bd703@scn.org
Message-ID: <Dptu1B.456@scn.org>
Source record: 22467

Shannon Lucid was on the radio Friday morning.

KD7MW in Shoreline, Wa. made a brief voice contact at 08:36 UTC April 12th.

There was more activity Sat morning around 07:38 UTC and 09:17 UTC on the
13th. There seemed to be problems with the MIR radio. Was transmitting
a continuous carrier with periodic packet bursts. Shannon finally came
on voice at 9:17 utc and was talking to N6LH about cables and resetting.

Kerwin, N7JGW

--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

750. Anyone own a Yaesu FT221R 2m Allmode?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: sba3020@InfoNET.st-johns.nf.ca
Message-ID: <4kq1ac$4b5@coranto.ucs.mun.ca>
Source record: 22468

I need a copy of a owners or service manual for a Yaesu FT-221R
2 meter All-Mode transceiver. Like to know the difference between a
FT-221 and FT-221R? If you have one any info including likes/dislikes
would be great.

751. Earth to Sky Omnidir, Commercial builder?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: gary@dycor.com
Message-ID: <4krrcf$489@hermes.oanet.com>
Source record: 22469
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

Looking for a manufacturer who can build an antenna for 900 MHz radio modem, communicating to a balloon. A pattern similar to that of a turnstile, crossed dipoles over a ground plane, for any angle communication. Presumably, the balloon could have the same thing, oriented downward. Anybody with a contact for this type of work?

Thanks, Gary Burchett, VE6BBD
gary@dycor.com

752. Trackbox Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: "Frank J. Dziurda K7SFN" <k7sfn@dziurda.reno.nv.us>
Message-ID: <4ks1fp$ldm@news.greatbasin.net>
Source record: 22470

When selecting a satellite with WISP, I keep getting the next satellite
in the list that's programed in the Trackbox.

I have heard other instances of this, and I did not have the problem
until I upgraded my computer.

Anyone remember what causes this?

Thanks

Frank K7SFN

753. AO-13 telemetry processing under Linux?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: Ed Garnett <ejg@acslink.net.au>
Message-ID: <3170612F.38E11481@acslink.net.au>
Source record: 22471

Out of interest, does anyone know if there exists a Linux utility
that will carry out telemetry processing like P3C.EXE or P3TLM.EXE??

There doesn't appear to be anything mentioned in Terry Dawsons HAM
HOWTO...

73 Ted VK1BL

754. How to get SW stations on Sat?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-14 00:00:00 UTC
From: joe@microserve.com
Message-ID: <4kpm2d$40a@crash.microserve.net>
Source record: 22616

This seems to be as good a place as any to ask this:

My brother gave me a three foot dish (just for the heck of it). Is anyone receiving any shortwave stations broadcasting via satellite? If so, what would I need, in addition to the dish, to receive these signals? I suppose I'm limited to Ku-band, but that's fine.

I've been doing ham/shortwave for about 25 years, but this is new to me. Thanks!

Joe, KQ3F
joe@joe.microserve.com

755. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: mouse@agis.ag.net
Message-ID: <4ksfbn$83a@agis.ag.net>
Source record: 22472

argon@onramp.net (Argon) wrote:

>Try SkyChart 2000. It will import nasa files and track zillions of
>satellites. It will do track in realtime and plot the course. It comes
>with a demo file that tracks all of the GPS's. It's shareware and findable
>on line.

>Kyle

>In article <31657FE7.582A@maui.net>, Satoshi Manabe <satoshi@maui.net> wrote:

>.Keith OBrien wrote:
>.>
>.> Anyone recommend a Satellite tracking program that will display multiple
>.> objects on the screen and track both of them....

Another good program is STSPLUS availible from the AMSAT FTP site
(ftp.amsat.org). it does the trick also.

Jim

756. Re: Antenna's for low orbit satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4ksoas$16c@nms.telepost.no>
Source record: 22473

In article <4kotpn$hl5@newsbf02.news.aol.com>, xwtbx@aol.com says...
>
>I am just getting interested in working the satellites, and am a little
>intimidated with both the size and cost of the antennas used and their
>rotors. According to the Satellite Experimenter's Handbook (ARRL), I
>should be able to work the low earth orbit birds using ground plane
>antennas and the appropriate SSB trancievers. I was wondering if anyone
>could offer advice on the feasability of this setup.
>
>Thanks and 73
>
>Bill, N1TLQ
>
Hi!
I have worked som of the low orbiting sats. On the RS series, I have used
a 3 element HF beam and on 2m I have used a vertical Ringo Ranger, both
working nice! The signals from RS-15 are a litle bit weaker, and a beam
antenna is better to use. On the AO-10/13, I'm using a 18 element
horisontal yagi on the up link, and a 2x10 element cross yagi on the
downlink. On the 70cm uplink I have an additional power amplifier
75-100W, and a mast head preamp on the downlink (23dB). With this
equipment it's possible to work most of the time when the sat is over the
horizon. I have even worked up to abt. 35000km with 20W on the uplink!!!
I have read somewhere that a J-pole antenna is a good solution. I have
made a dualbander 2m/70cm, and are planning to use it on the microsats,
but I havn't put it into the air yet. I have found a good description on
the net - 'The Copper Cactus Antenna' - sorry, but I'dont remember
where!!

73's and gl
de Karl Jan LA3FY
skontorp@telepost.no

757. Re: Trackbox Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4ksor9$16c@nms.telepost.no>
Source record: 22474

In article <4ks1fp$ldm@news.greatbasin.net>, k7sfn@dziurda.reno.nv.us
says...
>
>When selecting a satellite with WISP, I keep getting the next satellite
>in the list that's programed in the Trackbox.
>
>I have heard other instances of this, and I did not have the problem
>until I upgraded my computer.
>
>Anyone remember what causes this?
>
>Thanks
>
>Frank K7SFN
>
Hi Frank!
I don't know of a solution to your problem, I don't even know the
Trackbox!!! Thats why I'll ask you some qustions! ...hihi
I wonder if it's possible to get the trackbox in kit form, or is it sold
as a complete unit? If its possible with a kit, is also the circuit
diagram and the pcb layout known 'stuff'? I think I have seen an update
of the software on the net. I would like to build a trackbox (I like
building systems - not buing the complete), so any info from you would be
nice!
73's de Karl Jan LA3FY skontorp@telepost.no

758. Re: AO-27 Operational?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4kspn4$16c@nms.telepost.no>
Source record: 22475
Cross-posted to: aus.radio.amsat,de.comm.ham,rec.radio.amateur.misc,rec.radio.amateur.space,uk.radio.amateur

In article <4k99d1qds1@mhafn.production.compuserve.com>,
102670.1206@CompuServe.COM says...
>
>Yesterday (Saturday 07 APR) I tried to receive the AO-27 downlink
>on 436.800 MHz, but didn't hear anything. I listened from 0900
>local time to 1800 using a Radio Shack PRO-2006 scanner in FM
>narrow mode. The receiver was programmed to search from
>436.750-436.850 MHz in 5 KHz increments. The antenna was an
>outdoor sloping dipole for 35 MHz (it works from 30-950 MHz).
>Also, my squelch was set very low so a weak signal would break
>squelch.
>
>Any idea what the problem is?
>
>Brian Webb, KD6NRP
>
Hi!
I have not worked it, but I heard that the sat is only working when in
sunlight!
73's gl de Karl Jan LA3FY

759. Control your Satellite rig via RS-232 !!!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: tony@gcr1.com
Message-ID: <4ktqqv$u4a@tetsuo.communique.net>
Source record: 22476

If you are thinking about using you PC to control
you ham rig check out my page and the FT-736R CAT
section. The unit shown is usable on all rigs that
require a RS-232 to TTL level converter to control
the rig. Kits include all connectors needed for
connection to Kenwood, Yaesu or Icom rigs and as
well as others.

Check it out ...

http://www.gcr1.com/n5gpi/

73,
N5GPI

760. Re: Antenna's for low orbit satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Message-ID: <4ktsd9$aqi@niven.ksc.nasa.gov>
Source record: 22477

I presently use a homebrew 5/8 wave groundplane (featured in Radio Fun a couple of years ago) at 30' for the uplink to RS-10, and a 10 meter dipole at about 16' for the downlink. My rig is the Yaesu FT-290R Mk II, a great inexpensive rig for a beginner satellite operator. The only problems I have working the RS-10 bird, MIR and SAREX is that my schedule never seems to coincide with theirs! However, I do have two verified RS-10 contacts, an STS-57 SAREX QSL, and have been able to connect to R0MIR on packet several times (unfortunately could not complete the QSO's due to QRM - - darn the bad luck!). So, I would say all the elements of my station are suitable for beginning satellite operation just like the Handbook said.

761. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_829590783@rtfm.mit.edu>
Source record: 22478
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

762. Re: Antenna's for low orbit satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <3172B09C.5C7E@vogon.rain.com>
Source record: 22479

Xwtbx wrote:
>
> I am just getting interested in working the satellites, and am a little
> intimidated with both the size and cost of the antennas used and their
> rotors. According to the Satellite Experimenter's Handbook (ARRL), I
> should be able to work the low earth orbit birds using ground plane
> antennas and the appropriate SSB trancievers. I was wondering if anyone
> could offer advice on the feasability of this setup.

I have an FT736R and a GP-9 antenna.
I was surprised that I could hear FO-20 quite well, with the 25W
output of the FT736R I could just about hear my own (CW) signal.

Switching in a PA and increasing the power, I have managed a contact
(SSB) via this satellite.

One problem is that the GP-9 is a "high gain" vertical, which
essentially means that most of the power is directed towards the
horizon, so as the satellite altitude increases, the signal suffers.
it is not a nice, even coverage.

Also, sharing the same antenna for TX and RX means using a diplexer,
which means RX loss ... and it isn't (easily) possible to use a
mast-head pre-amp.

I am wondering about other antenna combinations (Lindenblad ?) - or
should I just save the money for the tower, rotator, antenas and
pre-amps ???

I was also surprised that I could copy OSCAR-10 with this set-up
(2M downlink).

I don't know if I have just been lucky, but satellite working is
easier than I imagined, and is possible with simple equipment.

On a personal note - I spend all day playing with computers, and have
had internet access for more years than I want to remember, so packet
seems terribly antiquated, unchallenging and generally boring to me. It
is rather a pity that most recent satellites are totally packet
oriented. I could be uncharitable, and say that this is due to a
generation of electrical engineers who are only comfortable with digital
techniques - and designing and building a high quality linear
transponder is more difficult than a store and forward digital mailbox
-- but, that might just be too uncharitable. Anyway, the plethora of "me
too" flying digital mailboxes, and lack of linear transponders, I find
personally dissapointing.

Philip (KC7FWB - Ex FC7JAS, Ex G8FVM)

763. NORAD Two-Line Orbital Element Sets (TLE792)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4kum59$sbt@blackbird.afit.af.mil>
Source record: 22480

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

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- Current Two-Line Element Sets #792 -
Alouette 1
1 00424U 62049A 96103.75765212 .00000048 00000-0 46315-4 0 1880
2 00424 80.4537 348.3079 0020821 203.0030 157.0184 13.67865582673399
ATS 1
1 02608U 66110A 96098.12542716 -.00000379 00000-0 10000-3 0 9635
2 02608 14.6240 353.5949 0008720 76.7781 283.2945 1.00372248 24158
ATS 3
1 03029U 67111A 96105.76205881 -.00000131 00000-0 10000-3 0 4825
2 03029 14.8995 0.4563 0009713 274.6293 97.0185 1.00273094104138
Starlette
1 07646U 75010A 96104.91193862 -.00000154 00000-0 -74127-5 0 9623
2 07646 49.8299 42.3537 0205654 18.2790 342.5355 13.82190482 70078
LAGEOS
1 08820U 76039A 96106.12425304 -.00000004 00000-0 10000-3 0 1863
2 08820 109.8597 4.4163 0043829 142.4735 217.9056 6.38665269209809
ETS-2
1 09852U 77014A 96085.29867192 -.00000303 00000-0 10000-3 0 672
2 09852 13.1353 33.9341 0001724 124.7808 235.2188 1.00001658 16804
GOES 2
1 10061U 77048A 96103.62217897 .00000044 00000-0 10000-3 0 6602
2 10061 12.2710 37.8494 0009108 135.8002 75.5333 1.00284424 13785
IUE
1 10637U 78012A 96105.84835989 -.00000196 00000-0 10000-3 0 2455
2 10637 35.6337 84.0656 1355182 55.1180 334.8071 1.00255167 19306
GPS BI-01
1 10684U 78020A 96105.68072171 -.00000083 00000-0 10000-3 0 4417
2 10684 64.9591 25.7612 0058974 163.5247 196.6397 1.98069394118155

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GPS BI-02
1 10893U 78047A 96104.33246716 -.00000001 00000-0 10000-3 0 2369
2 10893 63.1925 263.0792 0229696 14.5179 346.1067 2.01627115131501
GOES 3
1 10953U 78062A 96104.42526289 -.00000144 00000-0 10000-3 0 6440
2 10953 11.2631 40.6966 0002006 336.6040 236.2729 1.00276156 18407
SeaSat 1
1 10967U 78064A 96103.35175759 -.00000024 00000-0 36558-4 0 4789
2 10967 107.9881 38.5265 0002201 232.7966 127.2971 14.38096979931983
GPS BI-03
1 11054U 78093A 96105.41023342 -.00000019 00000-0 10000-3 0 3975
2 11054 62.8843 262.0239 0046313 179.1624 180.7758 1.93504157127422
Nimbus 7
1 11080U 78098A 96098.63196851 -.00000074 00000-0 -29361-4 0 5773
2 11080 98.9576 324.2708 0009087 152.1763 207.9885 13.83694509881410
GPS BI-04
1 11141U 78112A 96101.93790671 -.00000054 00000-0 10000-3 0 373
2 11141 64.9708 28.1876 0049957 27.8073 332.4629 1.92894708 16584
GPS BI-05
1 11690U 80011A 96102.03999700 -.00000054 00000-0 10000-3 0 111
2 11690 65.3005 27.3612 0146702 192.7662 166.8695 2.00571383132851
GPS BI-06
1 11783U 80032A 96103.49075100 .00000003 00000-0 10000-3 0 1403
2 11783 62.3378 255.8661 0226369 29.8275 331.4161 2.03456652117499
GOES 5
1 12472U 81049A 96103.89899595 -.00000049 00000-0 10000-3 0 9256
2 12472 8.0654 50.8348 0005169 39.8230 320.1978 1.00206494 12442
Cosmos 1383
1 13301U 82066A 96106.20940642 .00000058 00000-0 50527-4 0 4877
2 13301 82.9325 179.9719 0029165 54.7251 305.6582 13.68074255688764
LandSat 4
1 13367U 82072A 96104.20787682 .00000014 00000-0 13013-4 0 8816
2 13367 98.0805 157.0676 0007342 352.1245 7.9837 14.57178511731074
DMSP B5D2-1
1 13736U 82118A 96105.22520453 .00000022 00000-0 27718-4 0 9885
2 13736 98.6258 294.6383 0007874 209.3528 150.7211 14.25778117691950
IRAS
1 13777U 83004A 96106.07814882 -.00000002 00000-0 28621-4 0 2876
2 13777 98.9656 292.9173 0011714 266.7660 93.2164 13.99243329344540
Cosmos 1447
1 13916U 83021A 96103.84192763 .00000022 00000-0 73408-5 0 5822
2 13916 82.9431 239.3569 0038008 336.6918 23.2514 13.74338141654761
TDRS 1
1 13969U 83026B 96105.24051293 -.00000306 00000-0 00000+0 0 5764
2 13969 8.8674 44.3432 0004792 337.8995 198.6049 1.00422151 20745
GOES 6
1 14050U 83041A 96104.18311083 -.00000277 00000-0 10000-3 0 5044
2 14050 6.9010 54.2483 0004167 10.0661 128.4437 1.00273418105546
OSCAR 10
1 14129U 83058B 96104.35896579 -.00000167 00000-0 10000-3 0 4144
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2 14129 26.2786 214.7163 5996267 6.7096 358.5442 2.05878729 68537
LandSat 5
1 14780U 84021A 96105.76690398 -.00000007 00000-0 88405-5 0 4605
2 14780 98.3364 163.5495 0003106 111.2399 248.9131 14.57046378644696
UoSat 2
1 14781U 84021B 96104.92039437 .00000154 00000-0 33831-4 0 8769
2 14781 97.7966 98.5182 0011200 301.8533 58.1585 14.69443206648219
GPS BI-09
1 15039U 84059A 96105.81068561 -.00000087 00000-0 10000-3 0 4041
2 15039 64.6288 22.4120 0083342 18.8624 341.4380 1.92302173 86212
Cosmos 1574
1 15055U 84062A 96105.07942322 -.00000002 00000-0 -18098-4 0 7831
2 15055 82.9534 293.2222 0027839 156.9055 203.3358 13.73633738592184
GPS BI-10
1 15271U 84097A 96103.65397471 -.00000000 00000-0 10000-3 0 1374
2 15271 62.0443 256.3953 0152345 359.7833 0.1684 2.00609819 83957
Cosmos 1602
1 15331U 84105A 96102.19759726 .00000215 00000-0 22369-4 0 4668
2 15331 82.5354 175.7913 0020083 164.2295 195.9547 14.84740736623035
NOAA 9
1 15427U 84123A 96105.93900099 .00000073 00000-0 61980-4 0 6598
2 15427 98.9521 170.8091 0015545 129.3538 230.9016 14.13773723584693
GPS BI-11
1 16129U 85093A 96105.39592221 -.00000086 00000-0 10000-3 0 7164
2 16129 65.2997 26.0180 0156405 84.7994 276.9739 1.89367961 20711
Mir
1 16609U 86017A 96104.81365192 .00002059 00000-0 33761-4 0 4781
2 16609 51.6475 86.4989 0004300 188.6553 171.4323 15.57823717579973
SPOT 1
1 16613U 86019A 96105.23806766 .00000089 00000-0 62356-4 0 9285
2 16613 98.7237 174.3456 0001121 93.1616 266.9686 14.20007185211236
Cosmos 1766
1 16881U 86055A 96098.85149415 .00000141 00000-0 14117-4 0 3805
2 16881 82.5167 236.6557 0017983 205.0122 155.0229 14.83719331523418
EGP
1 16908U 86061A 96103.55658171 -.00000083 00000-0 10000-3 0 786
2 16908 50.0091 198.7824 0011556 205.4316 154.5961 12.44414199108233
NOAA 10
1 16969U 86073A 96105.72460293 -.00000002 00000-0 17293-4 0 5815
2 16969 98.5225 104.6178 0012703 174.6657 185.4660 14.24978876497567
MOS-1
1 17527U 87018A 96104.70976820 -.00000043 00000-0 00000+0 0 4021
2 17527 98.9490 168.1308 0018566 138.8937 221.3625 14.00417763465969
GOES 7
1 17561U 87022A 96105.36236956 -.00000090 00000-0 10000-3 0 8577
2 17561 2.9308 70.0237 0005157 351.2031 161.1102 1.00357589 16665
Kvant-1
1 17845U 87030A 96105.84002143 .00013521 00000-0 18425-3 0 5997
2 17845 51.6482 81.3577 0004160 191.7202 168.2881 15.57846909514241
DMSP B5D2-3
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1 18123U 87053A 96105.54534466 -.00000009 00000-0 17433-4 0 3958
2 18123 98.7738 296.8858 0015442 76.1643 284.1248 14.15436956455498
RS-10/11
1 18129U 87054A 96105.32923438 .00000070 00000-0 60771-4 0 2007
2 18129 82.9263 195.7285 0011984 340.6385 19.4310 13.72364418441413
Meteor 2-16
1 18312U 87068A 96105.34285113 .00000096 00000-0 72765-4 0 4735
2 18312 82.5571 42.7179 0013751 46.2127 314.0167 13.84075566437342
Meteor 2-17
1 18820U 88005A 96105.52869403 -.00000001 00000-0 -14436-4 0 9072
2 18820 82.5378 97.7467 0018036 102.6986 257.6192 13.84753900414713
DMSP B5D2-4
1 18822U 88006A 96105.55950572 .00000002 00000-0 19284-4 0 2311
2 18822 98.3876 300.6440 0005654 182.3486 177.7662 14.23186374425526
Glonass 34
1 19163U 88043A 96101.01440303 .00000062 00000-0 10000-3 0 695
2 19163 65.2280 88.1463 0008670 162.0947 197.9348 2.13102175 60789
Glonass 36
1 19165U 88043C 96104.35610585 .00000055 00000-0 10000-3 0 4773
2 19165 65.2182 87.9855 0000543 32.1055 327.8933 2.13101897 61473
METEOSAT 3
1 19215U 88051A 96104.58278672 -.00000136 00000-0 10000-3 0 2555
2 19215 3.1375 68.1274 0002274 148.7240 211.4525 0.96948296 16558
AO-13
1 19216U 88051B 96104.35937311 .00000443 00000-0 16279-3 0 1837
2 19216 57.3063 123.4671 7399414 36.6432 356.2375 2.09746387 28489
OKEAN 1
1 19274U 88056A 96106.14669502 .00000134 00000-0 13778-4 0 826
2 19274 82.5173 330.6140 0019016 338.4637 21.5774 14.82471091420031
Meteor 3-2
1 19336U 88064A 96103.82786788 .00000051 00000-0 10000-3 0 4738
2 19336 82.5426 212.6611 0018659 38.6677 321.5772 13.16976843370876
Glonass 39
1 19503U 88085C 96102.03949372 -.00000022 00000-0 10000-3 0 3658
2 19503 65.5913 326.9900 0005503 169.0452 191.0125 2.13101746 58915
NOAA 11
1 19531U 88089A 96105.72025319 .00000029 00000-0 40853-4 0 4701
2 19531 99.1919 122.1734 0013025 60.6151 299.6319 14.13088256389488
TDRS 2
1 19548U 88091B 96105.59744858 -.00000215 00000-0 10000-3 0 1966
2 19548 2.3678 72.4543 0001860 204.1378 226.9415 1.00274646 14891
Glonass 40
1 19749U 89001A 96103.95421034 .00000058 00000-0 10000-3 0 5864
2 19749 65.1758 87.5685 0007075 245.6478 114.2811 2.13101591 56460
Glonass 41
1 19750U 89001B 96104.00931072 .00000058 00000-0 10000-3 0 4882
2 19750 65.2043 87.6307 0007460 218.3152 141.6380 2.13101910 56488
GPS BII-01
1 19802U 89013A 96105.32679341 .00000061 00000-0 10000-3 0 2092
2 19802 55.3022 113.1901 0021823 187.7458 172.2676 2.00571735 52436
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Akebono
1 19822U 89016A 96105.50295028 .00008227 00000-0 43505-3 0 7063
2 19822 75.0907 160.8082 3750803 154.3711 230.4548 7.91125654161650
Meteor 2-18
1 19851U 89018A 96098.16292425 .00000053 00000-0 34159-4 0 4701
2 19851 82.5249 337.7206 0014396 168.6873 191.4613 13.84409353359008
MOP-1
1 19876U 89020B 96103.58161928 -.00000129 00000-0 10000-3 0 1943
2 19876 1.8557 71.3769 0020187 280.9503 79.1675 0.97110158 5986
TDRS 3
1 19883U 89021B 96101.45662338 -.00000286 00000-0 00000+0 0 2004
2 19883 0.0667 31.9763 0001661 1.4046 288.8213 1.00266987198423
GPS BII-02
1 20061U 89044A 96104.17118124 -.00000019 00000-0 10000-3 0 2111
2 20061 54.2576 289.0804 0152910 219.1017 139.7806 2.00562032 50155
Nadezhda 1
1 20103U 89050A 96105.77789925 .00000051 00000-0 38161-4 0 7383
2 20103 82.9613 155.4460 0036164 229.8750 129.9246 13.73864640339971
GPS BII-03
1 20185U 89064A 96105.01088501 .00000062 00000-0 10000-3 0 2341
2 20185 55.1022 113.6760 0028027 320.0886 39.7424 2.00550889 48742
GMS 4
1 20217U 89070A 96105.59060869 -.00000389 00000-0 10000-3 0 3483
2 20217 1.6665 75.4196 0002288 78.6128 21.5291 1.00261399 24784
INTERCOSMOS 24
1 20261U 89080A 96105.07541076 .00000078 00000-0 18839-4 0 4901
2 20261 82.5932 311.6752 1241759 187.3827 170.7368 12.47328849297910
GPS BII-04
1 20302U 89085A 96105.54253977 -.00000055 00000-0 10000-3 0 2123
2 20302 53.2610 228.8542 0024644 180.5177 179.4251 2.00564208 47553
Meteor 3-3
1 20305U 89086A 96105.23571335 .00000044 00000-0 10000-3 0 5371
2 20305 82.5460 168.7980 0008064 99.1149 261.0879 13.04413680309866
COBE
1 20322U 89089A 96102.07844554 -.00000223 00000-0 -11423-3 0 2039
2 20322 98.9424 118.4361 0008129 222.8338 137.2191 14.03456536327518
Kvant-2
1 20335U 89093A 96105.84002143 .00013521 00000-0 18425-3 0 5637
2 20335 51.6482 81.3577 0004160 191.7202 168.2881 15.57846909363252
GPS BII-05
1 20361U 89097A 96104.05906218 -.00000035 00000-0 10000-3 0 585
2 20361 55.9755 55.8442 0085370 131.4575 229.2710 2.00564371 37008
COSMOS 2054 (Altair-1)
1 20391U 89101A 96105.09017314 -.00000157 00000-0 00000+0 0 3245
2 20391 3.7286 63.9165 0002840 4.0413 150.3682 1.00277225 23353
SPOT 2
1 20436U 90005A 96104.24589821 .00000169 00000-0 10000-3 0 573
2 20436 98.7013 178.9924 0001377 95.6512 264.4819 14.20043453322626
UO-14
1 20437U 90005B 96102.22478355 .00000003 00000-0 18108-4 0 1744
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2 20437 98.5464 186.4908 0012151 40.6822 319.5278 14.29916571324483
UO-15
1 20438U 90005C 96104.22656372 -.00000032 00000-0 45510-5 0 9710
2 20438 98.5374 186.5034 0011146 39.8353 320.3677 14.29227868324642
PACSAT
1 20439U 90005D 96105.19390803 .00000021 00000-0 24988-4 0 9736
2 20439 98.5604 191.5187 0012468 33.1064 327.0897 14.29971757324920
DO-17
1 20440U 90005E 96099.20555290 -.00000014 00000-0 11401-4 0 9723
2 20440 98.5619 186.2286 0012566 49.1427 311.0853 14.30112426324093
WO-18
1 20441U 90005F 96106.19050838 .00000012 00000-0 21297-4 0 9786
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LUCH (Altair-2)
1 23426U 94082A 96105.63650095 -.00000300 00000-0 00000+0 0 3037
2 23426 1.5746 269.7904 0003137 133.5369 123.8011 1.00278950 4869
RS-15
1 23439U 94085A 96105.50511440 -.00000039 00000-0 10000-3 0 1267
2 23439 64.8162 126.0665 0162884 210.4170 148.7225 11.27524499 53607
NOAA 14
1 23455U 94089A 96105.77456754 .00000042 00000-0 47456-4 0 5661
2 23455 98.9394 51.4625 0010724 61.5595 298.6652 14.11580676 66505
Glonass 71
1 23511U 95009A 96104.02427035 -.00000021 00000-0 00000+0 0 1746
2 23511 64.6788 326.4568 0004803 214.4681 145.5427 2.13103216 8586
Glonass 72
1 23512U 95009B 96103.20414046 -.00000022 00000-0 00000+0 0 1857
2 23512 64.6811 326.4794 0006683 335.6359 24.3814 2.13101896 8565
Glonass 73
1 23513U 95009C 96105.37377082 -.00000022 00000-0 00000+0 0 1979
2 23513 64.6941 326.4201 0011610 199.5738 160.4322 2.13102877 8619
GMS 5
1 23522U 95011B 96098.62963112 -.00000292 00000-0 10000-3 0 1127
2 23522 0.4604 328.6844 0000839 156.9925 77.4308 1.00274781 3745
DMSP B5D2-8
1 23533U 95015A 96105.62382998 .00000040 00000-0 45089-4 0 4690
2 23533 98.8409 108.9093 0006057 233.1381 126.9235 14.12733056 54655
Microlab 1
1 23547U 95017C 96102.10788175 .00000177 00000-0 67056-4 0 981
2 23547 69.9871 325.7406 0015007 273.2605 86.6811 14.45512422 53972
OFEQ 3
1 23549U 95018A 96104.90370661 .00006260 00000-0 14705-3 0 2300
2 23549 143.3630 196.6033 0230598 317.5921 40.7234 15.14334450 56616
GFZ-1
1 23558U 86017JE 96106.14018063 .00003270 00000-0 42880-4 0 1170
2 23558 51.6522 71.3740 0005838 357.4919 2.6067 15.61882000580151
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2 23560 98.5463 180.2044 0001315 78.9598 281.1731 14.32247940 51418
Spektr
1 23579U 95024A 96105.84002143 .00013521 00000-0 18425-3 0 3145
2 23579 51.6482 81.3577 0004160 191.7202 168.2881 15.57846909 51563
GOES 9
1 23581U 95025A 96101.27422541 .00000063 00000-0 00000+0 0 1703
2 23581 0.0767 63.3806 0002031 273.5722 186.0642 1.00285489 15247
Helios 1A
1 23605U 95033A 96105.91689208 .00000111 00000-0 30336-4 0 2041
2 23605 98.1172 42.5437 0001722 67.9576 292.1809 14.63828594 41278
UPM SAT 1
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2 23606 98.0979 43.7220 0008840 29.5769 330.5935 14.67233533 41489
CERISE
1 23607U 95033C 96105.87890956 .00000008 00000-0 10140-4 0 811
2 23607 98.0982 43.2661 0007445 29.3831 330.7790 14.66934778 41452
TDRS 6
1 23613U 95035B 96105.40776584 .00000105 00000-0 00000+0 0 1536
2 23613 0.5527 83.3003 0002755 336.0981 139.7902 1.00275536 2745
Glonass 74
1 23620U 95037A 96105.15784136 -.00000032 00000-0 00000+0 0 1226
2 23620 64.8261 206.1167 0018216 167.8992 192.1524 2.13102589 5645
Glonass 75
1 23621U 95037B 96104.39633776 -.00000032 00000-0 00000+0 0 1269
2 23621 64.8396 206.1476 0017890 178.1132 181.9040 2.13102007 5628
Glonass 76
1 23622U 95037C 96105.86247325 -.00000029 00000-0 00000+0 0 1271
2 23622 64.8268 206.0987 0036851 164.9413 195.1788 2.13102283 5651
Prognoz-M2
1 23632U 95039A 96100.93741520 -.00001332 00000-0 00000+0 0 472
2 23632 68.9810 251.4340 8610253 319.7250 34.1030 0.26375800 676
SICH-1
1 23657U 95046A 96098.57432034 .00000100 00000-0 11999-4 0 699
2 23657 82.5318 265.5484 0026372 281.4373 78.3872 14.73462802 32438
RADARSAT
1 23710U 95059A 96104.54667132 -.00000044 00000-0 00000+0 0 1232
2 23710 98.5760 112.1441 0000938 65.0816 295.0468 14.29981897 23007
Glonass 77
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2 23734 64.8325 206.2191 0018672 323.4546 36.4396 2.13101927 2493
Glonass 78
1 23735U 95068B 96104.79208626 -.00000032 00000-0 00000+0 0 882
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Glonass 79
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2 23757 22.9770 120.7918 0013588 26.4154 333.7038 14.97631363 16005
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2 23797 48.4476 267.6509 7336130 13.3980 358.4917 2.23371984 1248
Soyuz TM-23
1 23798U 96011A 96105.84002143 .00013521 00000-0 18425-3 0 513
2 23798 51.6482 81.3577 0004160 191.7202 168.2881 15.57846909 8322
1996010E
1 23824U 96010E 96105.44735586 .00000086 00000-0 40788-3 0 409
2 23824 47.9859 268.5660 7249882 12.8025 358.5045 2.21632674 1200
IRS-P3
1 23827U 96017A 96098.88047523 -.00000044 00000-0 00000+0 0 128
2 23827 98.7967 174.1300 0021781 194.4731 165.5820 14.17750778 2505
1996017B
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2 23828 98.7975 181.0314 0030960 176.2744 183.8669 14.20254681 3486
GPS BIIA-25
1 23833U 96019A 96103.08676142 -.00000080 00000-0 00000+0 0 165
2 23833 54.7005 350.7597 0037659 149.1385 211.1166 2.00564796 365
1996019B
1 23834U 96019B 96104.52592591 .00001520 00000-0 62479-4 0 73
2 23834 35.0723 220.7497 0075185 321.1613 38.3716 15.21625709 2510
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1 23835U 96019C 96105.57736012 .00045509 91084-6 13093-2 0 291
2 23835 34.8884 332.6382 6033856 210.7571 92.8568 4.06913914 756
INMARSAT III F1
1 23839U 96020A 96105.93015685 .00000115 00000-0 00000+0 0 166
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2 23840 21.9425 344.5147 6996120 187.9188 148.3727 2.24185727 38
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1 23842U 96021A 96103.19555134 -.00000120 00000-0 00000+0 0 94
2 23842 0.6361 199.4892 0738318 359.8160 50.2811 1.10788616 06
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2 23843 51.5830 184.5623 0004428 32.9891 329.0377 16.44515913 283
1996021C
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1996021D
1 23845U 96021D 96105.41688178 -.00000149 00000-0 00000+0 0 78
2 23845 6.9577 196.3146 3949950 0.7881 359.6781 1.64346161 80
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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764. Re: frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-04-15 00:00:00 UTC
From: Jefferson <cjeffers@luminet.net>
Message-ID: <4kulvl$250@clark.zippo.com>
Source record: 22481

I have a list of ham sat freqs avaible at my web page, the adress is:
http://www.luminet.net/~cjeffers/
Then look under sat freqs. Hope this is some help

Jim Jefferson
http://www.luminet.net/~cjeffers/

765. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4kur8k$55p@news.mcn.net>
Source record: 22482
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In article <317275CE.446B@larc.nasa.gov>,
Joseph M Zawodny <j.m.zawodny@larc.nasa.gov> wrote:
>Hello,
>
> I am considering one of the following for a satellite, packet,
>and SSB contesting: FT-736R, TS-790, or IC-820H. Assume that I am only
>interested in the 2m and 70cm bands so I don't care about plug in extras
>such as additional bands and the like. What are the pro's and cons for
>each of these rigs? I will be using these with computer control, what
>information can I get FROM the radio via the computer interface? Since
>the 820 is rather new, how does the computer interface differ from the
>IC-970? Will a program that was designed for use with the IC-970 work
>with the IC-820H? I read the QST review of the 820H, but found that it
>did not address many of the items mentioned above.
>
> TIA 4 the info.
>
> Joe
>

Hi Joe,

I don't know about the other radio's, but I like the TS-790. The TS-790 could be improved some, but it is some a good radio for satellite.

73 de KB7ADL

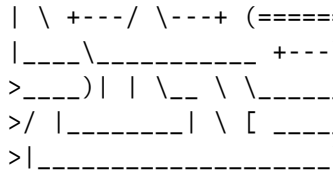
766. Re: Shuttle 2m window antenna plans?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4kurog$dik@paperboy.ids.net>
Source record: 22483

In article <Pine.SOL.3.91.960408211245.11215B-100000@spacelink> Richard David Glueck, glue9600@spacelink.msfc.nasa.gov writes:
>Does anybody out there have a plan for building the 2 meter FM antenna >that the shuttle crews place in the window of the orbit for SAREX contacts?
>I am hoping to build one for a project at my school.

The side window antenna was designed by Andy Bachler N9AB of the Motorola Amateur Radio Club. While it's well suited for the shuttle application, I wouldn't recommend it for anybody on the ground. Electrically it's the equvialent of a quarter-wave whip sticking out of the shuttle's window, but it's got about a zero db gain.

From the ground your better choices would be a beam antenna of some kind (Yagi or Quad), with a J-Pole, Eggbeater, or other omni ground plane as a backup.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

767. Re: Help: altitude measuring device for ham balloon

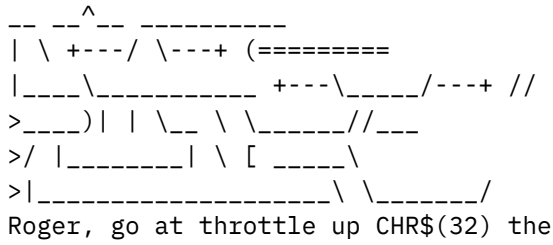
Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4kurtv$dik@paperboy.ids.net>
Source record: 22484

In article <4k97g8$avp@news.mountain.net> Brian, acc@pobox.com writes:
>Me and a few of the local hams are putting together an Amateur Balloon

>I have completed the temperature sensors and i am looking for a way to
>determine the altitude of the balloon (low cost needed) I have heard
>of a few chips or rather modules by motorola that do this.

Not exactly low cost, but certainly the jazziest method ....

Use a GPS receiver. It will give you an extremely accurate altitude,
latitude, and longitude. In fact you can purchase a combination mini
packet modem with a built-in GPS receiver which seems rather suited to
your application. As a bonus the packet capability will let you transmit
all of your telemetry while the balloon's in flight in a format which
anybody can read.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

768. Re: Shuttle 2m window antenna plans?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960415205914.22692D-100000@spacelink>
Source record: 22485

I am aware of the limitations of the antenna in service on the earth, but
I am trying to build a replica of that specific piece of shuttle hardware.
If anyone wants to send me the plans of the shuttle 2m FM window
antenna, please reply by E-mail.
Dick

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

769. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: k0gh@cris.com
Message-ID: <k0gh-1604961323040001@cnc015044.concentric.net>
Source record: 22486
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In article <4kur8k$55p@news.mcn.net>, vfiscus@mcn.net (Vince Fiscus,
KB7ADL) wrote:

> In article <317275CE.446B@larc.nasa.gov>,
> Joseph M Zawodny <j.m.zawodny@larc.nasa.gov> wrote:
> >Hello,
> >
> > I am considering one of the following for a satellite, packet,
> >and SSB contesting: FT-736R, TS-790, or IC-820H. Assume that I am only
> >interested in the 2m and 70cm bands so I don't care about plug in extras
> >such as additional bands and the like. What are the pro's and cons for
> >each of these rigs? I will be using these with computer control, what
> >information can I get FROM the radio via the computer interface? Since
> >the 820 is rather new, how does the computer interface differ from the
> >IC-970? Will a program that was designed for use with the IC-970 work
> >with the IC-820H? I read the QST review of the 820H, but found that it
> >did not address many of the items mentioned above.
> >
> > TIA 4 the info.
> >
> > Joe
> >
>
>
> Hi Joe,
>
> I don't know about the other radio's, but I like the TS-790. The TS-790
could
> be improved some, but it is some a good radio for satellite.
>
> 73 de KB7ADL

Joe,

I bought the Ic-820H to use for Satellite work and had a lot of problems with
the interfaces to control the radio's freq., mode, etc. The support from Icom
was not any help. I worked with it for 60 days and finally traded it in on a
new TS-790. I was up and running with full computer control of the radio,
antenna tracking, and Packet TNC in less than a day. I looked at the
FT-736R
but never tried it out. The TS-790 is the oldest of the group, but it does the
job as advertised.

73 from KGH

770. FS: M-8000 Decoder

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Bill Crocker <billc@mail.rust.net>
Message-ID: <3173B356.3A43@mail.rust.net>
Source record: 22487

Universal Radio M-8000v5 Communications Terminal/Decoder
for serious HF, VHF/UHF monitoring!

Provides decoding and video output to VGA monitor using
it's own, internal processor! No computer required.

The decoder includes the following capabilities:

Morse Code (CW), Baudot, RTTY, ASCII, Packet, PACTOR, Simplex
Telex Over Radio (SITOR), simplex and duplex ARQ and FEC codes,
PICCOLO code, ACARS, POSAG and GOLAY pager codes, and
Facsimile (FAX) images, and WFAX (Weather FAX)!

Includes VGA Color monitor port, printer port, AUX port,
and two audio source inputs!

This is the latest version currently sold by Universal
Radio! List price: $1,499.00, Discounted at: $1,349.00

I recently lost my job and need some fast cash, will sacrafice
for only: $800.00

Bill Crocker

771. R0MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960416141520.27285D-100000@internet>
Source record: 22488

Finally worked Mir last night at 0628 Z, and talked to Shannon.
Excellant sig and no trace of hum or packet in background so it appears
they have the radio problem solved.By the way, I am in an apartment and
use ic275h and 3 el quad, so ANY ONE can do it! Dan WA7TDZ

772. Re: Common Sat tracking prog.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-16 00:00:00 UTC
From: Andrew Stephens <cheekyprinter@enterprise.net>
Message-ID: <4l00ek$4lq@news.enterprise.net>
Source record: 22489

<BAACK@MAINE.MAINE.EDU> writes:
> Hello all, I was wondering what the most common Shareware//freeware program bei
> ng used is? I have several, but I would like to get used to using one where I
> know I have some support if I need it!
> Thanks, Jason N1RWY
>
> "stuck in the web.."
PC-TRACK I'm on 2.14 but I know there's a later version around !

Best thing since the invention of the wheel !! hi

de g0lfp, Steve
73

my e-mail rook@compulink.co.uk
(not sent from my system !!!) :-)

773. Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: chill@en.com
Message-ID: <4l1gm9$8cj@antares.en.com>
Source record: 22490

```
For some reason, I just had a 72 degree pass and I couldn't connect or
hear from R0MIR-1... I dont know why
Any info appreciated, Thanx
```

774. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4l1q9h$d7@news.injersey.com>
Source record: 22491

: >.> Anyone recommend a Satellite tracking program that will display multiple
: >.> objects on the screen and track both of them....

I find PCTRACK is the most flexible of the graphics prediction programs.

--
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers home page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com or Jay.Respler@bytewise.org
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

775. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Erik Skovgaard <Erik_Skovgaard@bc.sympatico.ca>
Message-ID: <4l20lf$l36@googol.bctel.net>
Source record: 22492

chill@en.com (Jeff Schultz) wrote:
>
>For some reason, I just had a 72 degree pass and I couldn't connect or
>hear from R0MIR-1... I dont know why
>Any info appreciated, Thanx
>

Jeff,

You are not the only one. I have tried for several days here in the
Greater Vancouver area. No luck at all.

73 de VE7MDL ....Erik.

776. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: "George J. Molnar" <gmolnar@interealm.com>
Message-ID: <3174FD25.6AB2@interealm.com>
Source record: 22493

Jeff Schultz wrote:
>
> For some reason, I just had a 72 degree pass and I couldn't connect or
> hear from R0MIR-1... I dont know why
> Any info appreciated, Thanx

They probably didn't have the rig on. Sometimes, the station is off the air while power is used for other things, while repairs are underway, or when the crew just doesn't feel like operating.

You were on the right frequency with an adequate antenna, rig, etc., AND current keplerian elements? Sometimes the station orbit is changed, which leaves us with pretty useless data -- even when it's only a week old!

Good luck & 73

--
George J. Molnar
Highlands Ranch, Colorado
Amateur Radio: KF2T@N0QCU.#NECO.CO.USA.NOAM
http://www.interealm.com/p/gmolnar/index.html

777. ARLK027 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk027.1996@arrl.org>
Source record: 22494
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK027
ARLK027 Keplerian data

ZCZC SK27
QST de W1AW
Keplerian Bulletin 27 ARLK027
From ARRL Headquarters
Newington, CT April 16, 1996
To all radio amateurs

SB KEP ARL ARLK027
ARLK027 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96107.12301084 .00003424 00000-0 51682-4 0 05069
2 16609 51.6481 74.9221 0004297 197.0167 163.0682 15.57846244580338
HST
1 20580U 90037B 96107.06951598 .00000398 00000-0 24175-4 0 08318
2 20580 28.4676 257.8351 0005876 244.3176 115.6800 14.91042441129300
AO-10
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2 14129 26.2786 214.7163 5996267 6.7096 358.5442 2.05878729068537
RS-10/11
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2 18129 82.9261 194.6504 0011637 337.2465 22.8171 13.72364559441610
UO-11
1 14781U 84021B 96107.09940676 .00000113 00000-0 26991-4 0 08928
2 14781 97.7967 100.5987 0011069 294.3851 65.6190 14.69443543648533
RS-12/13
1 21089U 91007A 96107.00015799 .00000073 00000-0 61368-4 0 08820
2 21089 82.9203 235.4450 0030830 46.8394 313.5335 13.74068888260494
AO-13
1 19216U 88051B 96106.26644069 .00000596 00000-0 22017-3 0 1841
2 19216 57.3054 123.0803 7400314 36.8038 356.2330 2.09747152 28525
UO-14
1 20437U 90005B 96107.12296490 .00000004 00000-0 18307-4 0 01793
2 20437 98.5454 191.2960 0012159 26.8092 333.3711 14.29917342325188
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RS-15
1 23439U 94085A 96107.10160556 -.00000039 00000-0 10000-3 0 01364
2 23439 64.8163 123.4847 0162712 210.1910 148.9557 11.27524568053786
AO-16
1 20439U 90005D 96107.08313501 -.00000009 00000-0 13436-4 0 09829
2 20439 98.5600 193.3750 0012446 26.9034 333.2805 14.29971654325199
DO-17
1 20440U 90005E 96107.11153302 -.00000005 00000-0 14744-4 0 09971
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WO-18
1 20441U 90005F 96107.10006462 .00000020 00000-0 24428-4 0 09814
2 20441 98.5619 193.9412 0012823 27.3781 332.8077 14.30083381325229
LO-19
1 20442U 90005G 96107.10057560 .00000032 00000-0 29205-4 0 09923
2 20442 98.5614 194.4084 0013146 27.0904 333.0977 14.30191298325240
FO-20
1 20480U 90013C 96107.08766974 -.00000077 00000-0 -92072-4 0 08772
2 20480 99.0330 143.7279 0540051 265.2488 88.6773 12.83231927289920
AO-21
1 21087U 91006A 96107.06370609 .00000094 00000-0 82657-4 0 07003
2 21087 82.9401 7.6880 0036790 20.8068 339.4568 13.74567291261475
UO-22
1 21575U 91050B 96107.15060143 .00000014 00000-0 19103-4 0 07056
2 21575 98.3549 175.3617 0008630 88.1579 272.0586 14.37019236249152
KO-23
1 22077U 92052B 96107.05139217 -.00000037 00000-0 10000-3 0 5707
2 22077 66.0790 319.5586 0010737 316.1588 43.8576 12.86296126172810
KO-25
1 22828U 93061F 96107.26009889 .00000004 00000-0 18884-4 0 4448
2 22828 98.5779 184.1213 0011258 38.5870 321.6112 14.28136877101271
IO-26
1 22826U 93061D 96107.12420040 .00000026 00000-0 28268-4 0 04785
2 22826 98.5870 183.9384 0010341 52.5591 307.6530 14.27800526133142
AO-27
1 22825U 93061C 96107.12317741 -.00000042 00000-0 47790-6 0 04813
2 22825 98.5874 183.7854 0009681 53.2880 306.9195 14.27691630133131
PO-28
1 22829U 93061G 96107.13577207 .00000030 00000-0 29477-4 0 04606
2 22829 98.5842 184.0577 0010859 40.9389 319.2607 14.28117387133174

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
April 20, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

778. Re: AO-27 Operational?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Ed Harrington <Harrington.Ed@mail.ndhm.gtegsc.com>
Message-ID: <4l3kq6$orc@europa.chnt.gtegsc.com>
Source record: 22495
Cross-posted to: aus.radio.amsat,de.comm.ham,rec.radio.amateur.misc,rec.radio.amateur.space,uk.radio.amateur

skontorp@telepost.no (Karl Jan Skontorp) wrote:
>
> In article <4k99d1qds1@mhafn.production.compuserve.com>,
> 102670.1206@CompuServe.COM says...
> >
> >Yesterday (Saturday 07 APR) I tried to receive the AO-27 downlink
> >on 436.800 MHz, but didn't hear anything. I listened from 0900
> >local time to 1800 using a Radio Shack PRO-2006 scanner in FM
> >narrow mode. The receiver was programmed to search from
> >436.750-436.850 MHz in 5 KHz increments. The antenna was an
> >outdoor sloping dipole for 35 MHz (it works from 30-950 MHz).
> >Also, my squelch was set very low so a weak signal would break
> >squelch.
> >
> >Any idea what the problem is?
> >
> >Brian Webb, KD6NRP
> >
> Hi!
> I have not worked it, but I heard that the sat is only working when in
> sunlight!
> 73's gl de Karl Jan LA3FY
>

779. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <317521C4.3B57@lanl.gov>
Source record: 22496

I haven't heard any packet activity from MIR since at least a week
before the recent US shuttle/MIR joint docking. Evidently Shannon, the
current non-ham operator of R0MIR, has been talking to folks on the
ground about what to do to get the tnc functioning again.
--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
|My views rarely (if ever) reflect those of my employers|
HTTP://nis-www.lanl.gov/~jdport/

780. Re: Trackbox Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Jack Davis <jedavis@deltanet.com>
Message-ID: <NEWTNews.829777379.19678.jed@Deltanet.deltanet.com>
Source record: 22497

In Article<4ksor9$16c@nms.telepost.no>, <skontorp@telepost.no> writes:
> Path: news.deltanet.com!uunet!in2.uu.net!gatech!newsfeed.internetmci.com!news.ac.net!new
s.cais.net!nntp.uio.no!nntp.uib.no!nntp-bergen.UNINETT.no!nntp-trd.UNINETT.no!telepost.no!
usenet
> From: skontorp@telepost.no (Karl Jan Skontorp)
> Newsgroups: rec.radio.amateur.space
> Subject: Re: Trackbox Problem
> Date: 15 Apr 1996 06:03:21 GMT
> Organization: Telenor Online Public Access
> Lines: 26
> Distribution: world
> Message-ID: <4ksor9$16c@nms.telepost.no>
> References: <4ks1fp$ldm@news.greatbasin.net>
> NNTP-Posting-Host: pc1.tonsberg-maritime.vgs.no
> Mime-Version: 1.0
> X-Newsreader: WinVN 0.93.11
>
> In article <4ks1fp$ldm@news.greatbasin.net>, k7sfn@dziurda.reno.nv.us
> says...
> >
> >When selecting a satellite with WISP, I keep getting the next satellite
> >in the list that's programed in the Trackbox.
> >
> >I have heard other instances of this, and I did not have the problem
> >until I upgraded my computer.
> >
> >Anyone remember what causes this?
> >
> >Thanks
> >
> >Frank K7SFN
> >
> Hi Frank!
> I don't know of a solution to your problem, I don't even know the
> Trackbox!!! Thats why I'll ask you some qustions! ...hihi
> I wonder if it's possible to get the trackbox in kit form, or is it sold
> as a complete unit? If its possible with a kit, is also the circuit
> diagram and the pcb layout known 'stuff'? I think I have seen an update
> of the software on the net. I would like to build a trackbox (I like
> building systems - not buing the complete), so any info from you would be
> nice!
> 73's de Karl Jan LA3FY skontorp@telepost.no
>
Karl contact TAPR and ask them if they have any TrakBox kits in stock.

If not, get back to me and I will see if I can help.

ex-TAPR TrakBox Manager
73 de WA4EJR

781. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960417121930.23337A-100000@internet>
Source record: 22498

On 17 Apr 1996, Jeff Schultz wrote:

>
> For some reason, I just had a 72 degree pass and I couldn't connect or
> hear from R0MIR-1... I dont know why
> Any info appreciated, Thanx
>
I am up late most nights doing college homework and listen for mir
passes. They havnt had packet turned on for some time. Dan WA7TDZ

782. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-17 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <31754754.214D@primenet.com>
Source record: 22499

George J. Molnar wrote:
>
> Jeff Schultz wrote:
> >
> > For some reason, I just had a 72 degree pass and I couldn't connect or
> > hear from R0MIR-1... I dont know why
> > Any info appreciated, Thanx
>
> They probably didn't have the rig on. Sometimes, the station is off the air while
> power is used for other things, while repairs are underway, or when the crew
> just doesn't feel like operating.
>
> You were on the right frequency with an adequate antenna, rig, etc., AND
> current keplerian elements? Sometimes the station orbit is changed, which leaves
> us with pretty useless data -- even when it's only a week old!
>
> Good luck & 73
>
> --
> George J. Molnar
> Highlands Ranch, Colorado
> Amateur Radio: KF2T@N0QCU.#NECO.CO.USA.NOAM
> http://www.interealm.com/p/gmolnar/index.html

Hi All,

Shannon stated that the packet station is off the air and they are
working on it. Please don't send packets when you do not hear the
downlink as it is interfering with the voice contacts that are taking
place on the same frequency. The voice contacts are available quite
often now so listen first!

--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

783. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-18 00:00:00 UTC
From: vfiscus@mcn.net
Message-ID: <4l40s6$8m4@news.mcn.net>
Source record: 22500
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In article <1996Apr15.172744.6313@ke4zv.atl.ga.us>,
gary@ke4zv.atl.ga.us (Gary Coffman) wrote:

>
>The TS-790A should be avoided for satellite use. It has *serious*
>design flaws for such usage. Not recomended. It can be Ok for
>light duty terrestrial use.
>

I disagree, while the TS-790 left some things out, it is still a good
satellite rig.

73 de KB7ADL

784. Lucid on the MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-04-18 00:00:00 UTC
From: wecare@teleport.com
Message-ID: <4l44fn$kgg@host-3.cyberhighway.net>
Source record: 22501

Finally heard Shannon Lucid, voice on 145.550 a couple nights ago. Tried, but wasn't able to chat with her, this time... I have lestened for her on every pass since, she hasn't uttered a word, at least not while over NW Oregon. I even drove up to a hill west of here, borrowed a friends repeater antenna on a great big tower and hooked up my amplifier in hopes of making a voice cntct, but again, silence..

I don't know what their schedule is up there, however I do know that they operate on Moscow time, making our pass/location fairly ideal in that it's post supper time up there when they go over, seemingly a good time for Shannon to play ham :) But still, contacts in these parts (perhaps everywhere) are a rare catch indeed...

I REALLY miss having 'ol Doc Thaggard up there, he rarely missed a night without getting on the 2m and making a zillion contacts, we had about a dozen qso's in about 2 weeks time.

Perhaps Shannon will settle in and get a bit more sociable on the 2m rig sometime soon, if not, those that do make a voice contact with her should promptly have their tape of it bronzed, as it is a rare occurance thus far.. Also, I have not heard a packet burst from MIR in a real long time, is it broken??

73's all, and keep trying!! Nothing gets your adrenalin pumping more than talking with space people <grin>

John KB7VZL

785. Space antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-04-18 00:00:00 UTC
From: Lars Briseid <lbriseid@sn.no>
Message-ID: <3176A42D.E6B@sn.no>
Source record: 22502

Hello !

What kind of space antennas are going to be mounted on the new satellites
from Iridium and Globalstar which are going to be launched -98 ?

How much are the new dualbanded (GSM/Satellite) satellitephones used to
operate with the abovementioned satellites going to cost ?

786. Re: Cant connect to MIR via pkt 72 Degree pass

Newsgroup: rec.radio.amateur.space
Date: 1996-04-18 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4l68m8$cab@newsbf02.news.aol.com>
Source record: 22503

The TNC was shut down w/ the xceiver 2/28/96 in preperation for the STS docking. As reported elsewhere in this group, the xceiver has been fired up, by one of the Yuris, and M/S Lucid given the MIC. Heard some OM's in RR on the 143.625 Nite before last around 2:00am (edt), but nothing on 145.550.

BTW; My STS-76 MET clock is still ticking here, and it sez 27d:10h:42m:30s as I type, so it's still early in Shannon's stay, Don't forget, Dr. Norm admitted to being sowhat BORED after awhile......

Once the "honeymoon" is over, She'll be a regular.....stay tuned.

George N2LZH

787. R0MIR active Wednesday night.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: bd703@scn.org
Message-ID: <Dq35yK.zp@scn.org>
Source record: 22504

Although I didn't make a contact last night , here are a few of the calls
that Shannon read back during a 06:08 utc pass over Seattle:

06:10 VE6TV
06:11 KB7??? CHEYENNE WYOMING
06:12 VE7VVW
06:13 VE6MPB WA4HND
06:14 N7SFI

73's

Kerwin

--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

788. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4l6pbd$8gb@news.mhv.net>
Source record: 22505

In article <4l1q9h$d7@news.injersey.com>, jrespler@nj5.injersey.com (Jay Respler) wrote:
>: >.> Anyone recommend a Satellite tracking program that will display multiple
>: >.> objects on the screen and track both of them....
>
>I find PCTRACK is the most flexible of the graphics prediction programs.

I use STSORBIT plus and LOVE it. It'll track 32 at a time. I only track 5 or
6 at a time however.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

789. LogSat for Windows (sat tracking) home page + Moon keps

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: roberto@netwide.net
Message-ID: <3176db4a.1494839@news.netwide.net>
Source record: 22506

Anyone interested in satellite tracking might want to take a trip to:
http://www.netwide.net/logsat
It's the home page of LogSat Professional, a satellite tracking program under Windows. The commercial version of the software is advertised there, but you may download the demo version as well. The site also carries fresh keps (updated daily) for about 700-900 satellites, available both as a zip file or in uncompressed format, ready to be read by tracking programs. Also available are pseudo Keplerian elements for the Moon, which will allow you to track it just as if it was a normal artificial satellite. Of course there will also be a few links to other interesting pages related to ham radio.

73s,
Roberto Franceschetti ik8sqi

790. Re: Trackbox Problem

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: skontorp@telepost.no
Message-ID: <4l81qu$s93@nms.telepost.no>
Source record: 22507

>Karl contact TAPR and ask them if they have any TrakBox kits in stock.
>If not, get back to me and I will see if I can help.
>
>ex-TAPR TrakBox Manager
>73 de WA4EJR
>
Hi Jack!
I shuld have sendt you a separate article/mail, but I don't know yr
e-mail addr!
Thanks for answering anyways! I have sendt a letter to TAPR, and they
said that they have 2 more kits in stock. I havn't ordered anything,
because I wanted to use some of the 'stuff' I have in my junkbox! I have
diffeerent lcd's, processors, RAM, EPROM etc, and hoped that I could get
a copy of the schematic diagram and the software somewhere. I can make my
own pcb - that would be no problem. I suppose its only possible to get a
.BIN file with software, I could have wanted the source of course, but
I think that's rather difficult! If I could get the source, I would do a
special adaption tom my home made antenna rotators.
So, I would be grateful for any info on the trackbox!
Thanks in advance!

73's de Karl Jan LA3FY

PS I hope Frank J. Dziurda K don't mind that I have connected this
article to his chain ...hihi

791. Help: TS-790 & AMSATS

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: pmarkham@sun.lssu.edu
Message-ID: <4l8hi8$8k8@doc.zippo.com>
Source record: 22508

I am putting together an amsat station. I own a TS-790A, G5400B,
KCT with tuner, and a PacCom NB96? 1200/9600bd TNC.
I have no antennas or preamps, yet, and intend to use about 100ft
of air dialectric catv 1/2" hardline.
I want to work both voice and data, and intend to use w9ip's NOVA
program to run the automated functions. I would like to be able to use
the system for meteor scatter, terrestrial ssb and packet.
I realize there is likely to be a compromise in antenna system
performance with a "does all" system, but I am looking for the biggest
bang for the buck.
Any and all suggestions, relative to my desires are welcome. Info
concerning known problems with the equipment described is requested.

TIA, Pete/wa4hei

792. HearSat mailing list

Newsgroup: rec.radio.amateur.space
Date: 1996-04-19 00:00:00 UTC
From: jcorby@headwaters.com
Message-ID: <4l7vkr$t3o@news.bellglobal.com>
Source record: 22509

HearSat is an Internet mailing list for discussion on the subject of receiving radio signals from Earth-orbiting satellites. Some of these signals may be received using very simple and inexpensive receivers. Signal types range from recorded voice messages from the Russian space station Mir, and live audio from the US Space Shuttle, to packet data telemetry from amateur radio microsats. HearSat subscribers include many radio hams and experts in earth orbiting satellites, as well as beginners listening in for their first radio contact from space.

Subscribe to hearsat-l by sending an e-mail to majordomo@grove.net with any subject and the message (without the quotes) "subscribe hearsat-l" in the body.

The HearSat website is located at www.grove.net/~hearsat.

John Corby
Toronto, Canada
Moderator, HearSat-L mailing list
jcorby@headwaters.com

793. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-20 00:00:00 UTC
From: rolfe@ldp.com
Message-ID: <4l9itg$iuc@news-s01.ny.us.ibm.net>
Source record: 22510
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In <4l40s6$8m4@news.mcn.net>, vfiscus@mcn.net (Vince Fiscus, KB7ADL) writes:
>In article <1996Apr15.172744.6313@ke4zv.atl.ga.us>,
> gary@ke4zv.atl.ga.us (Gary Coffman) wrote:
>
>>
>>The TS-790A should be avoided for satellite use. It has *serious*
>>design flaws for such usage. Not recomended. It can be Ok for
>>light duty terrestrial use.
>>
>I disagree, while the TS-790 left some things out, it is still a good
>satellite rig.

Only if you are a masochist.

Rolfe
W3VH

--
Rolfe Tessem | Lucky Duck Productions, Inc.
rolfe@ldp.com | 96 Morton Street
(212) 463-0029 | New York, NY 10014

794. NEED Travelling Wave Tube

Newsgroup: rec.radio.amateur.space
Date: 1996-04-20 00:00:00 UTC
From: angel vilaseca <100604.1242@CompuServe.COM>
Message-ID: <4la821$do3$2@mhafc.production.compuserve.com>
Source record: 22511
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.swap

I am building a 10 GHz EME station and I am looking for a 20
Watts or more Travelling Wave Tube amplifier.

795. Navstar GPS Constellation Status (96-04-20)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-20 00:00:00 UTC
From: Richard Langley <lang@unb.ca>
Message-ID: <Pine.SUN.3.93.960420143533.24708A-100000@jupiter.sun.csd.unb.ca>
Source record: 22512
Cross-posted to: comp.infosystems.gis,rec.aviation.misc,rec.boats,rec.radio.amateur.space,sci.electronics,sci.engr.surveying,sci.geo.satellite-nav,sci.space.news

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Navstar GPS Constellation Status
(96-04-20)

Blk NORAD Orbit Launch
II PRN Internat. Catalog Plane Date
Seq SVN Code ID Number Pos'n (UT) Clock Available/Decommissioned
-------------------------------------------------------------------------------
Block I
01 04 1978-020A 10684 78-02-22 78-03-29 85-07-17
02 07 1978-047A 10893 78-05-13 78-07-14 81-07-16
03 06 1978-093A 11054 78-10-06 78-11-13 92-05-18
04 08 1978-112A 11141 78-12-10 79-01-08 89-10-14
05 05 1980-011A 11690 80-02-09 80-02-27 83-11-28
06 09 1980-032A 11783 80-04-26 80-05-16 91-03-06
07 81-12-18 Launch failure
08 11 1983-072A 14189 83-07-14 83-08-10 93-05-04
09 13 1984-059A 15039 84-06-13 84-07-19 94-06-20
10 12 1984-097A 15271 84-09-08 84-10-03 95-11-18*
11 03 1985-093A 16129 85-10-09 85-10-30 94-04-13

* see note below

Block II
II-1 14 14 1989-013A 19802 E-1 89-02-14 Cs 89-04-15 05:02 UT
II-2 13 02 1989-044A 20061 B-3 89-06-10 Cs 89-08-10 20:46 UT
II-3 16 16 1989-064A 20185 E-3 89-08-18 Cs 89-10-14 20:21 UT
II-4 19 19 1989-085A 20302 A-4 89-10-21 Rb 89-11-23 03:13 UT
II-5 17 17 1989-097A 20361 D-3 89-12-11 Cs 90-01-06 03:30 UT
II-6 18 18 1990-008A 20452 F-3 90-01-24 Cs 90-02-14 22:26 UT
II-7 20 20 1990-025A 20533 B-2 90-03-26 Rb 90-04-18 23:13 UT
II-8 21 21 1990-068A 20724 E-2 90-08-02 Cs 90-08-22 15:00 UT
II-9 15 15 1990-088A 20830 D-2 90-10-01 Cs 90-10-15 00:39 UT

Block IIA
II-10 23 23 1990-103A 20959 E-4 90-11-26 Cs 90-12-10 23:45 UT
II-11 24 24 1991-047A 21552 D-1 91-07-04 Rb 91-08-30 04:44 UT
II-12 25 25 1992-009A 21890 A-2 92-02-23 Cs 92-03-24 11:00 UT
II-13 28 28 1992-019A 21930 C-5 92-04-10 Cs 92-04-25 20:32 UT
II-14 26 26 1992-039A 22014 F-2 92-07-07 Cs 92-07-23 19:43 UT
II-15 27 27 1992-058A 22108 A-3 92-09-09 Cs 92-09-30 20:08 UT
II-16 32 01 1992-079A 22231 F-1 92-11-22 Rb 92-12-11 14:49 UT
II-17 29 29 1992-089A 22275 F-4 92-12-18 Cs 93-01-05 16:39 UT
II-18 22 22 1993-007A 22446 B-1 93-02-03 Cs 93-04-04 05:20 UT
II-19 31 31 1993-017A 22581 C-3 93-03-30 Rb 93-04-13 20:53 UT
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II-20 37 07 1993-032A 22657 C-4 93-05-13 Cs 93-06-12 16:15 UT
II-21 39 09 1993-042A 22700 A-1 93-06-26 Cs 93-07-20 12:54 UT
II-22 35 05 1993-054A 22779 B-4 93-08-30 Cs 93-09-28 19:29 UT
II-23 34 04 1993-068A 22877 D-4 93-10-26 Cs 93-11-22 18:20 UT
II-24 36 06 1994-016A 23027 C-1 94-03-10 Cs 94-03-28 14:20 UT
II-25 33 03 1996-019A 23833 C-2 96-03-28 Cs 96-04-09 21:17 UT
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Notes
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1. NORAD Catalog Number is also known as U.S. Space Command (USSPACECOM) object number and NASA catalog number.
2. No orbital plane position = satellite no longer operational.
3. Clock: Rb = Rubidium; Cs = Cesium.
4. Selective Availability (S/A) had been enabled on Block II satellites during part of 1990; S/A off between about 10 August 1990 and 1 July 1991 due to Gulf crisis; standard level re-implemented on 15 November 1991; occasionally off for test and other purposes. Currently, PRN15 and PRN28 appear to have little or no S/A imposed.
5. Anti-spoofing (A-S) was activated on 94-01-31 at 00:00 UT on all Block II satellites (ref. NANU 050-94042); occasionally off for test and other purposes. A-S was turned off on all satellites at 20:00 UT on 95-04-19 and back on on 95-05-10; off again between 95-06-19 and 95-07-10; and between 95-10-10 and 95-10-31. A-S has been off on PRN28 since 95-02-21.
6. PRN number of SVN32 was changed from 32 to 01 on 93-01-28.
7. PRN05 and PRN06 are equipped with corner-cube reflectors for satellite laser ranging (SLR). SLR tracking of the satellites will permit onboard clock errors and satellite ephemeris errors in GPS tracking to be differentiated.
8. The decommissioning date for PRN06/SVN03 is the date of termination of operations of this satellite (ref. USNO) and is about 3 weeks later than other published dates for "deactivation".
9. PRN12, which was in declining health (primarily due to power supply problems) and which had been unusable since 95-11-18 due to end-of-life testing had its navigation payload switched off permanently on 96-03-26 (ref. NANU 051-96086, NANU 242-95325) and was boosted to a higher orbit.
10. PRN03 (SVN33) was launched on 96-03-28 at 00:21 UT. It achieved initial usable status on 96-04-09 at 21:17 UT (ref. NANU 068-96100).
11. PRN28 is in the process of being moved from the C-2 slot to the C-5 slot, about 20 degrees away. This move, which was initiated on 96-03-06 by lowering the orbit of PRN28 by about 6 km, made way for PRN03. PRN03 is a backup for PRN28 which has some undisclosed equipment problem. PRN28 will remain on the air, with some subsystems shut down to conserve power (ref. NANUs 045-96066, NANU 068-96100, and GPS World Newsletter). At the moment, PRN28 is about 11 degrees away from PRN03. The move should be completed in about another month or so.
12. Announced dates of next scheduled launches: 96-06-30 (SNV40) and 96-08-29 (first Block IIR satellite).

==========

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Fredericton? Where's that? See: http://degaulle.hil.unb.ca/NB/fredericton.html
==========

796. ARLK028 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-20 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk028.1996@arrl.org>
Source record: 22513
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK028
ARLK028 Keplerian data

ZCZC SK28
QST de W1AW
Keplerian Bulletin 28 ARLK028
From ARRL Headquarters
Newington, CT April 20, 1996
To all radio amateurs

SB KEP ARL ARLK028
ARLK028 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96109.30404092 .00067319 00000-0 88336-3 0 4814
2 16609 51.6492 63.9975 0004411 207.8211 152.2547 15.57897525580677
AO-10
1 14129U 83058B 96108.73022969 -.00000074 00000-0 10000-3 0 4152
2 14129 26.2800 213.9904 5996717 7.9297 358.3577 2.05879049 68627
RS-10/11
1 18129U 87054A 96108.75590420 -.00000030 00000-0 -49154-4 0 02187
2 18129 82.9266 193.1972 0011219 331.7116 28.3427 13.72363571441883
UO-11
1 14781U 84021B 96109.07413514 .00000129 00000-0 29600-4 0 8774
2 14781 97.7969 102.4849 0010881 287.7374 72.2607 14.69444326648829
RS-12/13
1 21089U 91007A 96108.89341035 .00000035 00000-0 21007-4 0 08940
2 21089 82.9204 234.0410 0030801 42.0557 318.2954 13.74068607260750
AO-13
1 19216U 88051B 96109.12686050 .00000257 00000-0 51923-3 0 1869
2 19216 57.2997 122.4832 7402887 36.9814 356.1746 2.09759614 28587
UO-14
1 20437U 90005B 96109.08223736 .00000019 00000-0 24142-4 0 01939
2 20437 98.5451 193.2185 0012326 20.8287 339.3401 14.29917669325467
RS-15
1 23439U 94085A 96109.05287293 -.00000039 00000-0 10000-3 0 01470
2 23439 64.8159 120.3284 0162694 209.8371 149.3203 11.27524559054006
```

```
AO-16
1 20439U 90005D 96109.11230331 -.00000003 00000-0 15730-4 0 09962
2 20439 98.5599 195.3701 0012250 21.4312 338.7398 14.29971868325482
DO-17
1 20440U 90005E 96109.07053638 .00000003 00000-0 17830-4 0 09818
2 20440 98.5610 195.9298 0012322 22.5671 337.6057 14.30113621325505
WO-18
1 20441U 90005F 96109.12907511 -.00000002 00000-0 16111-4 0 09959
2 20441 98.5618 195.9370 0012747 22.1570 338.0152 14.30083357325514
LO-19
1 20442U 90005G 96109.12943323 .00000008 00000-0 19830-4 0 09812
2 20442 98.5608 196.4034 0013132 21.3670 338.8063 14.30191283325537
FO-20
1 20480U 90013C 96109.11480580 -.00000040 00000-0 -87118-5 0 08938
2 20480 99.0328 145.3708 0540004 260.6369 93.3319 12.83232215290187
AO-21
1 21087U 91006A 96109.10185201 .00000094 00000-0 82657-4 0 07147
2 21087 82.9401 6.1794 0036710 15.0954 345.1287 13.74567426261758
UO-22
1 21575U 91050B 96109.10020598 .00000036 00000-0 26400-4 0 06919
2 21575 98.3549 177.2544 0008612 82.0593 278.1571 14.37019721249432
KO-23
1 22077U 92052B 96109.07290154 -.00000037 00000-0 10000-3 0 05822
2 22077 66.0798 315.3263 0010403 313.4798 46.5355 12.86296163173072
KO-25
1 22828U 93061F 96109.08168860 .00000016 00000-0 23673-4 0 04529
2 22828 98.5773 185.9102 0011269 33.3624 326.8266 14.28137215101536
IO-26
1 22826U 93061D 96108.73598713 .00000003 00000-0 18653-4 0 04890
2 22826 98.5871 185.5227 0010375 48.2579 311.9484 14.27800438133375
AO-27
1 22825U 93061C 96109.08550006 .00000009 00000-0 21282-4 0 04710
2 22825 98.5812 185.7084 0009621 47.9745 312.2272 14.27692393133418
PO-28
1 22829U 93061G 96108.74720028 .00000045 00000-0 35469-4 0 04711
2 22829 98.5840 185.6413 0010916 36.2650 323.9270 14.28117800133405

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
April 23, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

797. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Apr21.073533.4420@ke4zv.atl.ga.us>
Source record: 22514
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In article <4l40s6$8m4@news.mcn.net> vfiscus@mcn.net (Vince Fiscus, KB7ADL) writes:
>In article <1996Apr15.172744.6313@ke4zv.atl.ga.us>,
> gary@ke4zv.atl.ga.us (Gary Coffman) wrote:
>>The TS-790A should be avoided for satellite use. It has *serious*
>>design flaws for such usage. Not recomended. It can be Ok for
>>light duty terrestrial use.
>
>I disagree, while the TS-790 left some things out, it is still a good
>satellite rig.

The TS-790A has some horrible defects that make it unsuitable for satellite operation. The most brain dead feature is that the narrow filters don't work in the sub-band receiver, but that's the one you have to use when operating satellite because only the main band unit transmits. Thus your SNR suffers severely unless all you operate is SSB.

And like all other Kenwood VHF+ gear, it has absolutely horrible thermal design. The PA modules get very hot. The 70cm module in mine cooked out after only 30 days of operation (and Kenwood took months to fix it). The replacement PA module was worse. Instead of 18 amps current draw for 27 watts output (yeah it didn't meet power output specs from the factory), the replacement PA drew 22 amps for only 22 watts output. Then the 2m PA module died. Same problem, thermal cookout opened metalization in the module. I sawed that one open rather than send it back to the factory again, and fixed it myself.

And then there's the brain dead user interface. To make sattrack tuning work, you have to depress and *hold* the SAT button. That makes tuning a two handed job. And if you release the SAT button, you have to press it *twice* to get back into track tuning, useless. I rigged up a mechanical clamp to keep the SAT button depressed all the time.

I finally managed to unload it on a sucker (hi Brian), and got a real radio, the FT-736R. It runs cool, the narrow filters *work* for satellite, there's a for real rotary switch that puts you in sattrack tuning and *leaves* you in sattrack tuning, etc. In other words, it works right.

I know, I should have known better than to buy a Kenwood. I've got enough experience with them to know that they are all terminally brain dead. I just have to plead temporary insanity when I bought yet another of their poorly designed pieces of crap. (Hope springs

eternal that they'll finally get *something* right on a VHF+ radio.
Their HF stuff isn't half bad.)

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

798. R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: ghansen@accessone.com
Message-ID: <ghansen.745.3179EB71@accessone.com>
Source record: 22515

On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a return call from Shannon. A real thrill for me and more than likely for Shannon too! :-) She sounds a bit taken back by it all but I bet she gets the hang of it soon enough. Mir certainly had a solid strong signal to Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft AR270 vertical up about 40ft.

A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO. Thank you NR7F!!

BTW, can anybody tell me the QSL route for Shannon/Mir??

73 - Glenn - KB7PKC

799. ADMS-1B Webpage wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: darryl.linkow@grinder.com
Message-ID: <8BF1039.01A9000339.uuout@grinder.com>
Source record: 22516

Hello all and thanks for reading this. A couple of weeks ago
someone posted the Web Page for downloading the patch files for the
latest version of the Yaesu ADMS-1B software. If you know that
Website, please Email me or leave message here.
73, Darryl KE6IHA

darryl.linkow@grinder.com

---
* OLX 2.2 * Darryl Linkow (818)346-5278 9 am - 5 pm PDT

800. R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: Ronalee Fitch <hammster@earthlink.net>
Message-ID: <4lcuij$7b4@uruguay.it.earthlink.net>
Source record: 22517

Shannon, aboard the space station MIR was heard in Los Angeles making about 12 voice contacts with hams with 6 and 7 area calls for about 8 minutes starting at 0638 UTC Sunday 21 April. Unfortunately, this time, I was not one of them. Anybody get lucky? 73, Robb KO6ZD

801. SUBSCRIBE

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: dkdoyle@ix.NETcom.COM
Message-ID: <317A05EE.219@ix.netcom.com>
Source record: 22518

SUBSCRIBE

802. Re: Lucid on the MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dq7FBH.982@pe1chl.ampr.org>
Source record: 22519

In <4l44fn$kgg@host-3.cyberhighway.net> wecare@teleport.com (John Jordan) writes:

>Finally heard Shannon Lucid, voice on 145.550 a couple nights ago.
>Tried, but wasn't able to chat with her, this time... I have lestened
>for her on every pass since, she hasn't uttered a word, at least not
>while over NW Oregon. I even drove up to a hill west of here,
>borrowed a friends repeater antenna on a great big tower and hooked up
>my amplifier in hopes of making a voice cntct, but again, silence..

A repeater antenna? That probably won't work very well...
Usually a repeater will use some collinear array, and it radiates only
towards the horizon.

It is better to borrow the auto-tracking az/el steerable yagis from a
local packet satellite enthousiast. That will provide you with a
fullscale signal and a lot of ERP towards MIR.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

803. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: tpickett@tir.com
Message-ID: <4ldo9u$l6n@ramp2.tir.com>
Source record: 22520

ghansen@accessone.com (Glenn Hansen) wrote:

>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.

>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!

>BTW, can anybody tell me the QSL route for Shannon/Mir??

>73 - Glenn - KB7PKC

CALLSIGN R0MIR (Romeo Zero Mike India Romeo)
145.550 Simple

Please only 1 of your qsl cards for either R0MIR or R0MIR-1
card is same for both.

Only one qsl card per year

QSL Address
==========
N6JLH
POB 1501
PINE GROVE CALIFORINA
95665

Packet Address
N6JLH@N0ARY.#NOCAL.CA.USA.NOAM.

E-Mail Address
==========
docdave@inreach.com

DON'T FORGET
==========
SEND SASE ON BUSINESS SIZE ENVELOPE.

Please include your qsl card.
If you dont have one, send on post card of were you live.
These will be forwared to RV3DR every 3 months.

I hope that helps a little.

Tim KG8OC

804. Society of Amatuer Radio Astronomers

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: sftinc@aol.com
Message-ID: <4leh6b$sra@newsbf02.news.aol.com>
Source record: 22521

If you are interested in a really great non-profit organization, that has been around for years promoting Amatuer Radio Astronomy, Then contact:

Society of Amatuer Radio Astronomers
247 N. Linden Street
Massapequa, N.Y. 11758
Attn: Vincent Carraci,
Secretary

805. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960421145238.1232C-100000@internet>
Source record: 22522

On 21 Apr 1996, Ronalee Fitch wrote:

> Shannon, aboard the space station MIR was heard in Los Angeles
> making about 12 voice contacts with hams with 6 and 7 area calls
> for about 8 minutes starting at 0638 UTC Sunday 21 April.
> Unfortunately, this time, I was not one of them. Anybody get
> lucky? 73, Robb KO6ZD

Hi. yes, I got lucky again, and worked her at 0638. she mentioned that
06-0700 is the best time to get ahold of them, and that the Yuri's prefer
to talk when over Russia, presumably due to language differences. She
doesnt have a preference for a particular day that she operates.
Dan WA7TDZ oconneld@mail.oit.osshe.edu

806. NORAD Two-Line Orbital Element Sets (TLE796)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4lebj6$n8l@blackbird.afit.af.mil>
Source record: 22523

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #796 -
Alouette 1
1 00424U 62049A 96107.92691575 .00000012 00000-0 41408-5 0 1894
2 00424 80.4576 344.1954 0020575 191.7322 168.3352 13.67865526673964
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
1 03029U 67111A 96109.40638098 -.00000129 00000-0 10000-3 0 4849
2 03029 14.8996 0.4152 0009614 275.7841 331.4590 1.00273187104165
Starlette
1 07646U 75010A 96109.10549786 -.00000143 00000-0 18692-5 0 9632
2 07646 49.8291 25.8058 0205472 32.1339 329.1889 13.82190401 70654
LAGEOS
1 08820U 76039A 96110.19563092 .00000004 00000-0 10000-3 0 1872
2 08820 109.8540 5.8093 0044294 142.1678 218.2222 6.38664848210065
ETS-2
1 09852U 77014A 96109.29807681 -.00000102 00000-0 10000-3 0 695
2 09852 13.1645 33.6648 0003086 93.5774 266.3309 0.99994755 17046
GOES 2
1 10061U 77048A 96103.62217897 .00000044 00000-0 10000-3 0 6602
2 10061 12.2710 37.8494 0009108 135.8002 75.5333 1.00284424 13785
IUE
1 10637U 78012A 96105.84835989 -.00000196 00000-0 10000-3 0 2455
2 10637 35.6337 84.0656 1355182 55.1180 334.8071 1.00255167 19306
GPS BI-01
1 10684U 78020A 96105.68072171 -.00000083 00000-0 10000-3 0 4417
2 10684 64.9591 25.7612 0058974 163.5247 196.6397 1.98069394118155

```
GPS BI-02
1 10893U 78047A 96107.30821798 -.00000035 00000-0 10000-3 0 2376
2 10893 63.1901 262.9837 0229939 14.4745 346.1128 2.01627084131560
GOES 3
1 10953U 78062A 96104.42526289 -.00000144 00000-0 10000-3 0 6440
2 10953 11.2631 40.6966 0002006 336.6040 236.2729 1.00276156 18407
SeaSat 1
1 10967U 78064A 96107.38623356 -.00000051 00000-0 27755-4 0 4797
2 10967 107.9888 46.8704 0002214 228.1184 131.9770 14.38097565932561
GPS BI-03
1 11054U 78093A 96107.47739684 -.00000039 00000-0 10000-3 0 3989
2 11054 62.8837 261.9657 0045859 179.4072 180.5776 1.93504746127467
Nimbus 7
1 11080U 78098A 96107.01985573 -.00000042 00000-0 -65207-8 0 5793
2 11080 98.9559 332.2599 0009309 130.6365 229.5606 13.83695116882578
GPS BI-04
1 11141U 78112A 96101.93790671 -.00000054 00000-0 10000-3 0 373
2 11141 64.9708 28.1876 0049957 27.8073 332.4629 1.92894708 16584
GPS BI-05
1 11690U 80011A 96109.02006595 -.00000075 00000-0 10000-3 0 144
2 11690 65.3015 27.1534 0144660 191.9137 167.6965 2.00571649132991
GPS BI-06
1 11783U 80032A 96103.49075100 .00000003 00000-0 10000-3 0 1403
2 11783 62.3378 255.8661 0226369 29.8275 331.4161 2.03456652117499
GOES 5
1 12472U 81049A 96106.89266719 -.00000045 00000-0 10000-3 0 9262
2 12472 8.0718 50.8246 0005304 39.4729 320.5172 1.00206840 12478
Cosmos 1383
1 13301U 82066A 96110.23190248 -.00000070 00000-0 -10008-3 0 4880
2 13301 82.9328 177.0239 0029101 44.0626 316.2836 13.68073049689313
LandSat 4
1 13367U 82072A 96107.57253301 .00000032 00000-0 16852-4 0 8820
2 13367 98.0808 160.3332 0007132 342.0799 18.0147 14.57179085731560
DMSP B5D2-1
1 13736U 82118A 96107.89193045 .00000083 00000-0 53453-4 0 9908
2 13736 98.6260 297.2634 0007865 202.0660 158.0182 14.25779150692337
IRAS
1 13777U 83004A 96109.15292136 .00000163 00000-0 14220-3 0 2900
2 13777 98.9635 295.9237 0011417 257.3836 102.6072 13.99245486344978
Cosmos 1447
1 13916U 83021A 96107.84609300 .00000051 00000-0 38039-4 0 5839
2 13916 82.9437 236.3957 0037858 325.5990 34.2714 13.74338634655317
TDRS 1
1 13969U 83026B 96105.24051293 -.00000306 00000-0 00000+0 0 5764
2 13969 8.8674 44.3432 0004792 337.8995 198.6049 1.00422151 20745
GOES 6
1 14050U 83041A 96109.20424887 -.00000274 00000-0 10000-3 0 5057
2 14050 6.9117 54.1905 0004412 10.9357 140.1847 1.00271645105597
OSCAR 10
1 14129U 83058B 96108.73022969 -.00000074 00000-0 10000-3 0 4152
```

```
2 14129 26.2800 213.9904 5996717 7.9297 358.3577 2.05879049 68627
LandSat 5
1 14780U 84021A 96109.13185415 .00000025 00000-0 15901-4 0 4619
2 14780 98.3364 166.9172 0003088 101.4988 258.6561 14.57046992645181
UoSat 2
1 14781U 84021B 96109.07413514 .00000129 00000-0 29600-4 0 8774
2 14781 97.7969 102.4849 0010881 287.7374 72.2607 14.69444326648829
GPS BI-09
1 15039U 84059A 96109.97085734 -.00000076 00000-0 10000-3 0 4052
2 15039 64.6304 22.2953 0083400 19.0247 341.3085 1.92302311 86295
Cosmos 1574
1 15055U 84062A 96109.88691545 .00000041 00000-0 27880-4 0 7843
2 15055 82.9526 289.6736 0028043 143.6761 216.6306 13.73634199592844
GPS BI-10
1 15271U 84097A 96108.63867647 -.00000040 00000-0 10000-3 0 1402
2 15271 62.0462 256.2277 0153658 359.1955 0.7308 2.00610580 84051
Cosmos 1602
1 15331U 84105A 96106.51078936 .00000179 00000-0 18174-4 0 4674
2 15331 82.5355 171.7524 0020462 149.8449 210.3946 14.84741970623677
NOAA 9
1 15427U 84123A 96109.90223623 .00000075 00000-0 63121-4 0 6647
2 15427 98.9524 174.7771 0015663 118.4533 241.8209 14.13774815585250
GPS BI-11
1 16129U 85093A 96105.39592221 -.00000086 00000-0 10000-3 0 7164
2 16129 65.2997 26.0180 0156405 84.7994 276.9739 1.89367961 20711
Mir
1 16609U 86017A 96109.88136995 .00001446 00000-0 25641-4 0 4811
2 16609 51.6485 61.1019 0003803 210.5895 149.4852 15.57872745580765
SPOT 1
1 16613U 86019A 96109.81810734 .00000089 00000-0 62356-4 0 9306
2 16613 98.7316 178.8670 0001831 103.5917 256.5435 14.20003518211883
Cosmos 1766
1 16881U 86055A 96107.41636818 .00000166 00000-0 17102-4 0 3822
2 16881 82.5171 228.6288 0018696 175.0906 185.0496 14.83721062524686
EGP
1 16908U 86061A 96107.65256498 -.00000083 00000-0 10000-3 0 798
2 16908 50.0090 186.1883 0011557 215.8553 144.1507 12.44414254108746
NOAA 10
1 16969U 86073A 96109.86737751 .00000001 00000-0 18682-4 0 5866
2 16969 98.5199 108.6394 0013005 162.2433 197.9204 14.24979482498154
MOS-1
1 17527U 87018A 96109.71104764 -.00000043 00000-0 00000+0 0 4049
2 17527 98.9489 173.0238 0018792 124.4200 235.8740 14.00416371466669
GOES 7
1 17561U 87022A 96109.47165193 -.00000094 00000-0 10000-3 0 8627
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2 19336 82.5442 209.5470 0018485 28.9979 331.2169 13.16977155371456
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2 22657 55.1855 350.3250 0074274 222.7405 136.7176 2.00574737 17731
RADCAL
1 22698U 93041A 96107.00442808 .00000046 00000-0 14325-4 0 4818
2 22698 89.5349 274.6376 0091166 167.3137 193.0380 14.21370051145595
GPS BIIA-21
1 22700U 93042A 96109.21156205 -.00000037 00000-0 10000-3 0 5425
2 22700 54.2378 230.7992 0042554 2.4878 357.5033 2.00554449 20543
NOAA 13
1 22739U 93050A 96109.91846108 .00000073 00000-0 65926-4 0 434
2 22739 99.0351 64.7733 0010889 33.2915 326.8934 14.10961454138698
GPS BIIA-22
1 22779U 93054A 96109.30544323 -.00000059 00000-0 10000-3 0 5981
2 22779 54.3937 289.7610 0015012 264.6340 95.1767 2.00567387 19303
Meteor 2-21
1 22782U 93055A 96110.24182168 .00000040 00000-0 23238-4 0 4779
2 22782 82.5499 33.8546 0022645 138.7008 221.5874 13.83051518132982
UFO F2
1 22787U 93056A 96106.82419630 -.00000089 00000-0 00000+0 0 6369
2 22787 4.1874 326.8821 0008251 64.8769 180.7955 1.00253587 8204
SPOT 3
1 22823U 93061A 96109.35989697 -.00000044 00000-0 00000+0 0 5384
2 22823 98.7027 184.0953 0001080 77.4462 282.6836 14.20036305132747
STELLA
1 22824U 93061B 96107.19900480 -.00000042 00000-0 58734-6 0 4648
2 22824 98.5779 183.3143 0007542 52.5464 307.6403 14.27104290133091
AO-27
1 22825U 93061C 96108.17442131 -.00000008 00000-0 14359-4 0 4670
2 22825 98.5811 184.8138 0009583 50.8646 309.3387 14.27692120133284
IO-26
1 22826U 93061D 96109.71707488 -.00000019 00000-0 97266-5 0 4661
2 22826 98.5870 186.4869 0010361 45.7894 314.4133 14.27800276133518
HEATHSAT
1 22827U 93061E 96107.25800519 -.00000028 00000-0 62597-5 0 5275
2 22827 98.5843 183.9781 0010258 41.1834 319.0118 14.27932510133176
ITAMSAT
1 22828U 93061F 96107.26009889 .00000004 00000-0 18884-4 0 4448
2 22828 98.5779 184.1213 0011258 38.5870 321.6112 14.28136877101271
PO-28
1 22829U 93061G 96106.71539970 .00000013 00000-0 22720-4 0 4586
2 22829 98.5843 183.6444 0010832 42.3489 317.8534 14.28117173133111
KO-25
1 22830U 93061H 96108.24790394 -.00000018 00000-0 96738-5 0 4775
2 22830 98.4732 174.7623 0012397 13.2330 346.9174 14.28105733133335
GPS BIIA-23
1 22877U 93068A 96107.85833830 -.00000073 00000-0 10000-3 0 4162
2 22877 55.6168 51.6221 0041338 288.7620 70.7754 2.00555030 18164
METEOSAT 6
1 22912U 93073B 96109.26026141 .00000000 00000-0 10000-3 0 4387
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2 22912 0.2329 290.0133 0002344 59.6680 300.3589 1.00269098 7267
HST Array
1 22920U 90037C 96110.20869214 .00006282 00000-0 42898-3 0 4541
2 22920 28.4646 162.0471 0003576 195.9187 164.1301 15.04212589130534
Meteor 3-6
1 22969U 94003A 96108.50868502 .00000051 00000-0 10000-3 0 2478
2 22969 82.5608 303.3150 0016429 33.2548 326.9604 13.16736035107060
TUBSAT-B
1 22970U 94003B 96110.04461309 .00000051 00000-0 10000-3 0 2397
2 22970 82.5583 302.1344 0017169 27.6908 332.5126 13.16827449107270
GPS BIIA-24
1 23027U 94016A 96108.93022073 -.00000085 00000-0 10000-3 0 3424
2 23027 55.0942 352.2990 0066051 199.3219 160.4664 2.00576638 15496
Glonass 62
1 23043U 94021A 96109.47923882 -.00000042 00000-0 00000+0 0 3424
2 23043 64.6774 325.9858 0004306 175.7221 184.3207 2.13102894 15737
Glonass 63
1 23044U 94021B 96107.95398882 -.00000032 00000-0 00000+0 0 3094
2 23044 64.6647 326.0367 0027988 203.1406 156.7825 2.13102928 15700
Glonass 64
1 23045U 94021C 96107.66166357 -.00000031 00000-0 00000+0 0 3205
2 23045 64.6545 326.0508 0012033 32.3276 327.7817 2.13101894 15697
GOES 8
1 23051U 94022A 96108.32971588 -.00000273 00000-0 00000+0 0 5083
2 23051 0.1091 265.0627 0001886 175.3275 168.9758 1.00265612 14759
MSTI 2
1 23101U 94028A 96108.87605650 .00006532 00000-0 10427-3 0 3055
2 23101 97.0857 303.0737 0011028 176.7690 183.3637 15.53470410109939
STRV-1A
1 23125U 94034B 96104.61290806 -.00000517 00000-0 -18192-3 0 2706
2 23125 7.2812 268.3264 7248108 5.8961 359.8441 2.31897885 14623
STRV-1B
1 23126U 94034C 96105.52899976 .00000817 00000-0 20131-3 0 2405
2 23126 7.2731 267.8556 7253819 6.5702 359.1793 2.31774952 14686
Nadezhda 4
1 23179U 94041A 96106.99989918 .00000029 00000-0 14796-4 0 1820
2 23179 82.9423 282.6834 0035328 299.0361 60.7252 13.75679601 88245
Glonass 65
1 23203U 94050A 96109.67631744 -.00000027 00000-0 10000-3 0 2741
2 23203 64.8045 206.1075 0008246 141.2582 218.8374 2.13102004 13137
Glonass 66
1 23204U 94050B 96109.91007947 .00000006 00000-0 00000+0 0 2977
2 23204 64.7597 206.1327 0014787 346.6757 13.3134 2.13102219 13131
Glonass 67
1 23205U 94050C 96109.79277076 .00000001 00000-0 10000-3 0 2741
2 23205 64.7949 206.1239 0001155 316.3687 43.6586 2.13102667 13130
DMSP B5D2-7
1 23233U 94057A 96109.79926495 .00000009 00000-0 28383-4 0 7438
2 23233 98.8372 169.4204 0012312 354.9108 5.1933 14.12696637 84443
OKEAN 1-7
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1 23317U 94066A 96107.66848749 .00000107 00000-0 12825-4 0 1460
2 23317 82.5434 115.6284 0024588 283.2186 76.6277 14.74011475 81477
ELEKTRO
1 23327U 94069A 96108.42355324 -.00000120 00000-0 00000+0 0 1442
2 23327 0.1343 231.8324 0004819 224.4140 337.9763 1.00271912 5390
RESURS 1-3
1 23342U 94074A 96108.21934030 .00000060 00000-0 18034-4 0 4771
2 23342 97.9728 166.7073 0001445 84.9232 275.2140 14.69827440 77853
Glonass 68
1 23396U 94076A 96108.69769826 .00000002 00000-0 00000+0 0 2439
2 23396 65.0604 86.3322 0029182 195.1266 164.7590 2.13102268 10954
Glonass 69
1 23397U 94076B 96109.34281784 .00000083 00000-0 10000-3 0 2439
2 23397 65.0270 86.3124 0014841 316.8475 43.0728 2.13103822 10975
Glonass 70
1 23398U 94076C 96109.22656576 .00000038 00000-0 10000-3 0 2588
2 23398 65.0170 86.2967 0005371 295.2173 64.7635 2.13103194 10971
LUCH (Altair-2)
1 23426U 94082A 96108.91800412 .00000000 00000-0 10000-3 0 3054
2 23426 1.5659 271.7796 0001506 154.2764 205.7349 1.00277707 4909
RS-15
1 23439U 94085A 96110.11719933 -.00000039 00000-0 10000-3 0 1278
2 23439 64.8157 118.6078 0162707 209.6865 149.4745 11.27524613 54122
NOAA 14
1 23455U 94089A 96109.81483039 .00000126 00000-0 93688-4 0 5702
2 23455 98.9399 55.4880 0010730 51.2363 308.9775 14.11582456 67075
Glonass 71
1 23511U 95009A 96107.30909069 -.00000029 00000-0 00000+0 0 1751
2 23511 64.6835 326.3383 0004668 216.0653 143.9538 2.13103119 8654
Glonass 72
1 23512U 95009B 96106.48898365 -.00000025 00000-0 00000+0 0 1864
2 23512 64.6834 326.3645 0006664 337.3566 22.6657 2.13101665 8630
Glonass 73
1 23513U 95009C 96107.72006560 -.00000031 00000-0 00000+0 0 1981
2 23513 64.6928 326.3386 0011614 199.4500 160.5575 2.13103003 8665
GMS 5
1 23522U 95011B 96108.56402095 -.00000304 00000-0 10000-3 0 1157
2 23522 0.4399 330.9836 0000324 120.5072 97.8120 1.00270997 3846
DMSP B5D2-8
1 23533U 95015A 96109.87328606 .00000029 00000-0 39358-4 0 4742
2 23533 98.8410 113.1036 0006068 219.2535 140.8194 14.12733803 55256
Microlab 1
1 23547U 95017C 96106.53657486 .00000147 00000-0 58618-4 0 994
2 23547 69.9842 315.4634 0014954 266.2817 93.6609 14.45513919 54613
OFEQ 3
1 23549U 95018A 96107.87085865 .00008252 00000-0 20019-3 0 2328
2 23549 143.3633 214.6565 0230246 342.3962 16.8938 15.14381363 57061
GFZ-1
1 23558U 86017JE 96108.25159335 .00003985 00000-0 50898-4 0 1184
2 23558 51.6518 60.7254 0005896 7.1814 352.9307 15.61903017580481
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ERS-2
1 23560U 95021A 96109.82949801 .00000885 00000-0 34425-3 0 2040
2 23560 98.5480 184.7504 0001096 65.8115 294.3184 14.32246644 52074
Spektr
1 23579U 95024A 96109.81722757 .00007619 00000-0 10668-3 0 3193
2 23579 51.6485 61.4231 0004048 206.7283 153.3803 15.57877513 52186
GOES 9
1 23581U 95025A 96108.50237083 .00000064 00000-0 00000+0 0 1713
2 23581 0.0892 75.6841 0002374 246.3168 289.9432 1.00260032 15318
Helios 1A
1 23605U 95033A 96108.92450138 .00000106 00000-0 29290-4 0 2055
2 23605 98.1176 45.5065 0001719 64.6353 295.5027 14.63829579 41717
UPM SAT 1
1 23606U 95033B 96109.23699973 .00000180 00000-0 40623-4 0 1563
2 23606 98.0981 46.6873 0008760 20.3996 339.7557 14.67234849 41921
CERISE
1 23607U 95033C 96109.90330870 .00000002 00000-0 90245-5 0 823
2 23607 98.1007 47.2426 0007107 20.5424 339.6058 14.66934676 42048
TDRS 6
1 23613U 95035B 96109.40590666 .00000111 00000-0 00000+0 0 1565
2 23613 0.5608 83.2830 0002764 335.7116 143.5190 1.00277184 2785
Glonass 74
1 23620U 95037A 96108.44266284 -.00000005 00000-0 00000+0 0 1231
2 23620 64.8296 206.0083 0018403 168.0845 191.9802 2.13102779 5712
Glonass 75
1 23621U 95037B 96108.15043330 -.00000008 00000-0 00000+0 0 1272
2 23621 64.8398 206.0167 0017389 178.4970 181.5284 2.13101926 5706
Glonass 76
1 23622U 95037C 96109.14730711 .00000001 00000-0 00000+0 0 1282
2 23622 64.8290 205.9863 0036855 165.2337 194.9004 2.13102248 5727
Prognoz-M2
1 23632U 95039A 96111.71503530 -.00001746 00000-0 00000+0 0 498
2 23632 69.9000 250.6110 8573633 320.2350 335.5620 0.26393000 699
SICH-1
1 23657U 95046A 96106.85920360 .00000095 00000-0 11166-4 0 716
2 23657 82.5299 257.9168 0025977 253.3703 106.4661 14.73464118 33651
RADARSAT
1 23710U 95059A 96109.16473508 -.00000044 00000-0 00000+0 0 1259
2 23710 98.5810 116.7034 0001196 113.0407 247.0961 14.29983194 23667
Glonass 77
1 23734U 95068A 96106.91854441 -.00000020 00000-0 00000+0 0 998
2 23734 64.8306 205.9837 0018738 323.0781 36.8063 2.13101796 2641
Glonass 78
1 23735U 95068B 96107.60735575 -.00000013 00000-0 00000+0 0 893
2 23735 64.8274 205.9478 0006969 214.1917 145.7806 2.13124818 2657
Glonass 79
1 23736U 95068C 96109.96864124 .00000007 00000-0 00000+0 0 788
2 23736 64.8208 205.8846 0007362 198.7056 161.2990 2.13101919 2702
XTE
1 23757U 95074A 96106.15807389 .00000564 00000-0 18199-4 0 451
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2 23757 22.9770 120.7918 0013588 26.4154 333.7038 14.97631363 16005
1996010D
1 23797U 96010D 96106.83854374 .00002683 00000-0 27316-3 0 518
2 23797 48.4328 267.3909 7336508 13.6178 358.4538 2.23377708 1267
Soyuz TM-23
1 23798U 96011A 96109.81722757 .00007619 00000-0 10668-3 0 561
2 23798 51.6485 61.4231 0004048 206.7283 153.3803 15.57877513 8944
1996010E
1 23824U 96010E 96105.44735586 .00000086 00000-0 40788-3 0 409
2 23824 47.9859 268.5660 7249882 12.8025 358.5045 2.21632674 1200
IRS-P3
1 23827U 96017A 96107.20820680 -.00000044 00000-0 00000+0 0 140
2 23827 98.7958 182.3773 0022111 170.3299 189.8305 14.17751009 3685
1996017B
1 23828U 96017B 96109.70715858 .00000085 00000-0 60055-4 0 143
2 23828 98.7978 184.9552 0030982 164.9907 195.2175 14.20256846 4041
GPS BIIA-25
1 23833U 96019A 96106.07824991 -.00000082 00000-0 00000+0 0 199
2 23833 54.7019 350.6369 0038277 147.9326 212.3260 2.00564521 391
1996019B
1 23834U 96019B 96109.57811087 .00001375 00000-0 54825-4 0 71
2 23834 35.0734 189.0603 0074728 5.7871 354.4190 15.21637991 3280
1996019C
1 23835U 96019C 96109.74585622 .00058264 46535-6 12741-2 0 352
2 23835 34.8739 329.6849 6035499 215.1413 83.6843 4.07445363 920
INMARSAT III F1
1 23839U 96020A 96108.74753657 .00000120 00000-0 00000+0 0 195
2 23839 2.6608 284.6870 0004314 214.8109 3.3072 1.00277847 158
1996020B
1 23840U 96020B 96106.73113049 -.00000167 00000-0 00000+0 0 56
2 23840 21.9378 341.3292 6995998 193.6305 127.0085 2.24190595 263
ASTRA 1F
1 23842U 96021A 96108.65330723 .00000125 00000-0 00000+0 0 189
2 23842 0.0667 191.9430 0003519 50.9665 225.4911 1.00296477 73
1996021D
1 23845U 96021D 96106.63381387 -.00000145 00000-0 00000+0 0 82
2 23845 6.9667 196.1253 3950681 1.0468 359.7020 1.64348446 103
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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807. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: djohnson@netside.net
Message-ID: <4ldtre$ja8@sunny.netside.net>
Source record: 22524

ghansen@accessone.com (Glenn Hansen) wrote:

>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.

>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!

>BTW, can anybody tell me the QSL route for Shannon/Mir??

>73 - Glenn - KB7PKC

For that one Glenn I'd spring for the extra cash and go direct.

dj KD 4 SQ

808. GPS Receiver For Sale

Newsgroup: rec.radio.amateur.space
Date: 1996-04-21 00:00:00 UTC
From: ddixon@huntel.com
Message-ID: <4ld9gv$7sa@bubba.NMSU.Edu>
Source record: 22525

For Sale Magellan GPS NAV DLX-10

Due to expansion underway at the Internet Provider I use if you are interested in the following receiver you will have to contact me via. phone, E-mail is not working at this time! My apologies.

Magellan GPS NAV DLX-10, Handheld 10 channel GPS receiver, includes receiver in like new condition, quad helix detachable antenna with 6 ft. extension cable and suction cup mount, Magellan active patch antenna with 30 ft. cable, PC RS232 data and power cable, NEMA/DC power and data cable, 110 AC power supply, extra battery clip, receiver mounting bracket. and manuals. $600+shipping 505-382-0596

DGPS is not readily available here in the Rocky Mountains of NM, and I am going to a code phase survey receiver to allow postprocessing for 2 to 5 Meter accuracy.

David Dixon (ddixon@huntel.com)

809. it help

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: jemalone@ballistic.com
Message-ID: <4lei56$1e3i@news3.realtime.net>
Source record: 22526

hello. i have recently builted up a new computer for myself. i ordered
a new botherboard/cpu and ordered the intel 100 mhz cpu chip to go in
the new mb they were out of the intel and sent me the amd 120 mhz chip
instead. What I want to know if anyone out there has an amd cpu chip
and if instant track runs ok with it. It does not on my system. I go
to the menu option number 2 to track a satilite with the map and text
on bottom. well the text info on the nbottom of the screen is all
garbled and not read able. I would like to hear from people who have
this cpu chip and run it to see if you have the same problem.
jack
jemalone@ballistic.com
jack malone
jemalone@ballistic.com

810. Re: Lucid on the MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: wecare@teleport.com
Message-ID: <4lfhqq$gop@host-3.cyberhighway.net>
Source record: 22527

>ob@pe1chl.ampr.org (Rob Janssen) wrote:

>A repeater antenna? That probably won't work very well...
>Usually a repeater will use some collinear array, and it radiates only
>towards the horizon.
>
>It is better to borrow the auto-tracking az/el steerable yagis from a
>local packet satellite enthousiast. That will provide you with a
>fullscale signal and a lot of ERP towards MIR.
>
>Rob

Ahhh, wouldn't that be nice.... Actually, the antenna is mine (2X4MAX) and is on loan to the repeater owner until his gets in and we have nicer weather to put it on the tower. It's true that the high passes of the MIR (45deg and above) are not so useful with the present antenna setup, but for the one to 45 degree passes it's more than sufficiant, a dozen QSO's with Dr. Thaggard on the MIR last year using the same antenna is a testiment to that.. In the mean time I will dream of anaz-ele circular polarized, 5400 rotor etc etc..

73's

John KB7VZL

811. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: wecare@teleport.com
Message-ID: <4lfi38$gop@host-3.cyberhighway.net>
Source record: 22528

Ronalee Fitch <hammster@earthlink.net> wrote:

>Shannon, aboard the space station MIR was heard in Los Angeles
>making about 12 voice contacts with hams with 6 and 7 area calls
>for about 8 minutes starting at 0638 UTC Sunday 21 April.
>Unfortunately, this time, I was not one of them. Anybody get
>lucky? 73, Robb KO6ZD
>
>
She was yaking away this evening as well :) A fellow amateur and I
drove up to another friends repeater (again) and "borrowed" it's
antenna to try and make a contact, no luck, again.. :) Although she
was S-9 she didn't seem to hear us, leading me to believe that perhaps
she is using a split, I'm looking into this.. I'll keep trying..
Sometimes the "fishing" is just as fun! :)

73's

John KB7VZL

812. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4lfvne$q60@news.mhv.net>
Source record: 22529

In article <ghansen.745.3179EB71@accessone.com>, ghansen@accessone.com (Glenn Hansen) wrote:
>
>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.
>
>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!
>
>BTW, can anybody tell me the QSL route for Shannon/Mir??
>
>
>
>73 - Glenn - KB7PKC

For U.S. contacts send your card to:

N6JLH
Dave Larsen
P.O.Box 1501
Pine Groce,Ca 95665

The current card has a nice b/w photo of the station but they are getting in a new color card soon! Thanks for the report Glenn!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

813. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4lgbuv$5r0@news.jf.intel.com>
Source record: 22530

>>>The TS-790A should be avoided for satellite use. It has *serious*
>>>design flaws for such usage. Not recomended. It can be Ok for
>>>light duty terrestrial use.
>>I disagree, while the TS-790 left some things out, it is still a good
>>satellite rig.
>Only if you are a masochist.

Can't you guys be a little more specific? WHAT essential features are
missing? WHAT design flaws, defficiencies?

I don't mind turning knobs, that's part of the fun, isn't it? If I
wanted everything automatic I would just go watch my TVRO dish.

--
<<<<"Put the urban skyline in your rearview mirror and KEEP it there">>>>
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

814. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dq9Kv2.Cyn@pe1chl.ampr.org>
Source record: 22531
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In <1996Apr21.073533.4420@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>I know, I should have known better than to buy a Kenwood. I've
>got enough experience with them to know that they are all terminally
>brain dead. I just have to plead temporary insanity when I bought
>yet another of their poorly designed pieces of crap.

Yes, Kenwood user-interface always sucks...
Quite some years ago, the local packet radio networking group bought
a lot of TM-531E 23cm FM transceivers to use for links in the Dutch
packet network.

They have to operate in a 59 MHz split for this, and it is unbelievably
complicated to set them up to do that... when you don't have a manual
with you when at a link site, you are basically lost when you have to
retune a transceiver. And sometimes they suddenly lose their memory
and have to be retuned :-(

ALL the Kenwoods (even the 790) are lacking a programmable repeater split.
You get what they think is right for your area. However, the split
has been changed a few times because of bandplan changes and coordination
with other band users, and now it is 28 MHz. That is not present in
Kenwood transceivers, so you can no longer freely tune around in the
repeater subband (you have to program each repeater in a "split" memory).

Also, the TM-531 has serial control via its MIC jack, which is proven
by the existence of a "remote control" from Kenwood. However, they
refuse to publish the protocol used. (unlike Yaesu and ICOM)
So, we cannot do remote control of our transceivers in the packet
network, which would have been very nice (to set power level, reprogram
the frequency when it has once again forgotten it, read S-meter value, etc).

There is also a bad bug in the design: they generate output even when
the PLL has not yet locked. This causes interference around the transmit
frequency. Setup a spectrum analyzer to store peak values seen around
the transmit band of the local node, and you see a 3 MHz wide spectrum
around the transmit frequencies. The interference is so strong that it
jams other links.
The 2M and 70cm units have the same bug.

Finally, they are not suitable for G3RUH modems, so we still run them
at 4800 bps using HAPN modems.

All in all it was a bad choice. The only advantage of these boxes has
been that they don't fail too often, especially when run at 1 Watt.
Unfortunately, there is no really better commercial alternative. The

only well-working 23cm link transceivers are the kits available from
Germany...

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

815. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: dwydra@amedec.amg.gda.PL
Message-ID: <Pine.OSF.3.91.960422214251.22617H-100000@amedec.amg.gda.pl>
Source record: 22532

```
subscribe ham-space Dariusz SP2XDW
```

816. Need MIR Info.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: benji123z@aol.com
Message-ID: <4lgthk$ld7@newsbf02.news.aol.com>
Source record: 22533

If ANYONE has ANY info. on Mir (what time they're listening, what frequencies, what callsigns...) PLEASE E-MAIL (ONLY E-MAIL!) to Benji123Z@aol.com. Please only give 2M info.

73,
Benji
N3VYA
Benji123Z@aol.com

817. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-22 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960422112949.11141D-100000@internet>
Source record: 22534

On Mon, 22 Apr 1996, John Jordan wrote:

> Ronalee Fitch <hammster@earthlink.net> wrote:
>
> >Shannon, aboard the space station MIR was heard in Los Angeles
> >
> She was yaking away this evening as well :) A fellow amateur and I
> was S-9 she didn't seem to hear us, leading me to believe that perhaps
> she is using a split, I'm looking into this.. I'll keep trying..

She is running simplex. its just probably that a million guys are
calling her at the same time. I talked to her again last night at about
0530. Shes still real new to radio and hasnt learned to handle pileups
yet. With 5 more months to go, I bet she gets lots of practice.
Dan WA7TDZ

818. Dont Kill Me FS: KCT

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: mfp@aros.net
Message-ID: <4lh9pv$qa8@news.aros.net>
Source record: 22535

New KCT with Tracking AND TUNING board..newer version..with software and Hardware..even Factory cable for 5400 ALT/AZ Rotor

$225.00 or offer....

Don't kill me for placing this ad in Am Space usenet group..I put it in REC.SWAP.RADIO usenet and had 4 different people ask what kind of RADIO it was...!

819. Searching for SAT-GATE nearest from AZ in the US.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: BAJ44566@pcvan.or.jp
Message-ID: <DqAsBL.I9C@world.std.com>
Source record: 22536

Hello all Hams in the US.
Now I'm searching for satellite gateway radio-bbs nearest from SCOTTSDALE AZ. in the US.
I'd like to send private messages from my Internet equipment , via the Internet gateway located in SCOTTSDALE AZ. and sat-gate nearest from the gateway.
If you know such a sat-gate , would you let me know the complete Packet address of the gate by return?

I'd thank you in advance.

88&73s
de Takeshi - JN1RII

Best Regards.
Takeshi Tsunemoto
AX25. Packet Radio : JN1RII@JH4RMH.12.JNET1.JPN.AS
E-mail : BAJ44566@pcvan.or.jp
Locator PM95XV , Kashiwa City Chiba Pref. JAPAN

820. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: wecare@teleport.com
Message-ID: <4li43f$oi6@host-3.cyberhighway.net>
Source record: 22537

Dan O'Connell <oconneld@mail.oit.osshe.edu> wrote:

> She is running simplex. its just probably that a million guys are
>calling her at the same time. I talked to her again last night at about
>0530. Shes still real new to radio and hasnt learned to handle pileups
>yet. With 5 more months to go, I bet she gets lots of practice.
> Dan WA7TDZ

Hiya Dan,

Funny, I heard her talking to you! It was about 10:40 PDT and I (we)
were up at the repeater site trying for her, I even taped it :)

Good go'n, I just hope I am able to slip a qso in there before she
returns to the planet's surface :)

73's

John KB7VZL

821. Space Horizons conference, May 3-4, 1996 - final announcement

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: David_Joshua_Goldstein@brown.edu
Message-ID: <4livbh$bqu@cocoa.brown.edu>
Source record: 22538

Space Horizons: A Summit on Emerging Applications, Missions, and Technology
Friday and Saturday, May 3-4, 1996
Hyatt Regency Cambridge, Cambridge, Massachusetts

Sponsored by AeroAstro / Boston University Center for Space Physics /
Launchspace / National Space Society / New Space

The Space Horizons Summit is the first to address in a hands on, workshop setting, the fundamental changes now occurring in the way humans operate in and use space. We stand at a crossroads - In what directions can and will the space community proceed from here? For two days, experts, leaders, and visionaries from across a spectrum of disciplines in the space program and industry will meet in an interactive "think tank" to discuss emerging applications and markets, developing technologies, and the future of the space industry and community.

Our time is one of turmoil and redefinition in the space sector. The economics of space is changing. As space and defense budgets shrink, government and space industry are changing the way they do business. In addition, global competition has become a significant factor for the space industry. A growing market has already emerged in communications, small satellites, remote sensing, space biotechnology, and launch vehicles. Small and reengineered companies are proposing and enacting a myriad of new initiatives in these areas. At the same time, new terrestrial and space technologies are driving space activity towards new applications and methods.

Out of these changing budgets, needs, economics, and technologies will emerge the next generation of space applications, programs, and commercial ventures. You can just sit back and watch this new era unfold. Or you can help to create it.

The two day Summit will take place May 3 - 4, 1996, at Boston University and the Hyatt Regency Cambridge. In addition, a pre-summit seminar entitled, "New Approaches to Economics, Design, Development and Maintenance of Space Systems", will be held on May 2nd.

The Space Horizons Summit will gather some of the new space initiative's best minds and most visionary pioneers in an informal, creative setting to study and to uncover opportunities, ideas, directions, and possibilities for the future. Participants will be confronted with and discuss emerging opportunities for space applications in areas such as remote sensing, communications, science, mission support and education. The Space Horizons conference is unique in its interactive format, with numerous small working groups and interactive sessions to grapple with the challenges and opportunities facing the space community today.

At the conclusion of the summit, you will have gained a new outlook on many aspects of space:
- possibilities for viable space ventures and applications;
- potential new commercial space initiatives that the market will demand and support;
- improved understanding of developing technologies and ways to apply them to both emerging and established opportunities;
- knowledge and connections necessary to bring your concepts and ideas to reality;
- a visionary perspective on new ways of "doing space";
- an appreciation of how issues such as education, the media, and responsibility in space development can be advantageously integrated into space efforts;
- exposure to the thoughts and ideas of many of the brightest, most visionary leaders in space - and a chance to interact with them in an informal, problem-solving setting.

At Space Horizons you will work closely with leaders from all segments of the space community - industry leaders, technical innovators and visionaries, investors and market experts, educators, government planners, university researchers - an interdisciplinary mix representative of all aspects of space activity.

The pre-summit seminar, led by three respected leaders in the fields of space transportation and microsatellites, will be held May 2nd. Starting with a clean sheet of paper, this special one-day course begins surveying the state of the art in minimum mission technologies. It will examine the approaches available to space mission planners and developers to achieve minimum cost and therefore to enable a new generation of space initiatives. The result is a dramatic savings over conventional system designs coupled with enhanced reliability and a program structure designed to be attractive to sources of capital. The approaches demonstrated are equally applicable to scientific, remote sensing and military one of a kind and cluster space systems.

The conference and seminar provides an opportunity to seed contemporary space activity with a new generation of initiatives and applications. If you have an interest in innovative ideas, an interest in the future of space, creative visions, and new technologies, this conference is for you. Weï¿½re looking forward to your participation at the Space Horizons Summit - helping to plot a new course in space.

Registration information is at the end of this message.

Space Horizons Summit Schedule
(subject to change)

Thursday, May 2
8:00 AM - 9:00 AM
Continental Breakfast

9:00 AM - 5:00 PM
New Approaches to Economics, Design, Development, Deployment, and Maintenance of Space Systems: A workshop on minimizing the cost of space transportation,

space systems and operations, and on maximizing economic returns from space.
Rick Fleeter, Ph.D., President, AeroAstro, LLC.
Marshall H. Kaplan, Ph.D., Chairman, Launchspace, Inc.
Steve Newman, MBA, President, Launchspace, Inc.

Friday, May 3
8:00 AM - 9:00 AM
Continental Breakfast

9:00 AM - 9:50 AM
Convocation and Keynote Speaker: Dwight Duston, Director of Technology, BMDO (invited)

10:00 AM - 12:00 PM
-- Access to Space, Dr. Marshall H. Kaplan, Chairman, Launchspace, Inc.
-- Scientific Applications, Dr. Supriya Chakrabarti, Professor, Boston University Center for Space Physics

12:00 PM - 1:00 PM
Lunch: free in Boston

1:00 PM - 1:45 PM
Plenary Speaker:
-- Mr. John Westling, President-elect, Boston University
-- Mr. Lionel S. Johns, Associate Director for Technology, White House Office of Science and Technology Policy

1:45 PM - 3:45 PM
-- Remote Sensing Applications, Dr. John Mustard, Professor, Brown University Department of Geological Sciences
-- Governmentï¿½s Role in the Future, Mr. Alan Ladwig, Associate Administrator, NASA Policy and Plans

4:00 PM - 6:00 PM
-- Media and the Public, Ms. Lori Garver, Executive Director, National Space Society
-- Opportunities for Small Countries, Mr. Sven Grahn, Swedish Space Corporation
-- Robotics Applications, Dr. Red Whittaker, Director, Field Robotics Center, Carnegie Mellon University

6:00 PM - 8:00 PM
Networking Reception and Mixer: Boston University Center for Space Physics (transportation provided)

Saturday, May 4
7:30 - 9:00 AM
Continental Breakfast

8:15 AM - 8:45 AM
Plenary Speaker: Mr. Richard Tumlinson, President, Space Frontier Foundation

9:00 AM - 11:00 AM
-- Next Generation Communications Concepts, Dr. James Stuart, Vice President

for Space Infrastructure, Teledesic Corporation

11:15 AM - 1:15 PM
-- Education and Outreach, Dr. Paul J. Coleman, Jr., President, Universities Space Research Association
-- Financing Space Ventures, Mr. Robert D. Leppo, Director, Belisarius Fund

1:15 PM - 2:30 PM
Luncheon and Speaker: Mr. Thomas F. Rogers, President, Space Transportation Association

2:30 PM - 4:30 PM
-- Responsible Space Development, Mr. Leonard David, Space News Correspondent
-- Future Space Industries, Mr. Charlie Chafer, Founder, Celestis Corporation

To register, call Spectrum Management Group at (301) 353-0022.

For more information, contact:

David Goldstein
Space Horizons Chair
phone: 401 331-8975
fax: 401 331-0438
email: David_Goldstein@brown.edu
WWW: http://www.newspace.com/horizons

==========

** Space Horizons Summit Registration Form **

To Register Complete this form and remit with payment to: SMG, 13235 White Church Circle, Germantown, MD 20874; Tel (301) 353-0022; Fax (301) 353-0020; EMail: specgroup@aol.com

Registration Information
Name _____ Badge Name_____
Title/Position _____
Company or Agency _____
Address _____
City _____ State _____ Zip _____ Country _____
Phone _____ Fax _____
E-Mail Address _____
How did you first learn about the Space Horizons Summit?_____
_____

Choose six of the following topic sessions in order of preference, from 1 (highest) to 6 (lowest):
__ Access to Space __ Future Space Industries
__ Education and Outreach __ Financing Space Ventures
__ Government's Role in the Future __ Media and the Public
__ Next Generation Comm's Concepts __ Opportunities for Small Countries
__ Remote Sensing Application __ Responsible Space Development
__ Robotics Applications __ Scientific Applications

Are you interested in facilitating a small working group in one of these sessions? (Facilitators attend at a discounted rate.) __ Yes __ No
If yes, specify which session: _____

Registration Category
Pre-Registration On-Site Registration
Received Before 4/30 Received After 4/30
Standard __ $495.00 __ $545.00
Academia/Government/Non-Profit __ $395.00 __ $445.00
National Space Society Members __ $395.00 __ $445.00
Student (does not include meals) __ $40.00 * __ $40.00 *
Pre-Summit Seminar Attendees __ $345.00 # N/A
Total $_____

* Students must show proof of full time status and show a photocopy of valid student I.D.
# If attending both the conference and the workshop (you must pre-register) deduct an additional $50.00

**** There is a 10% discount for 4 or more registered ****
**** individuals from the same organizations. ****

__ Dietary Restrictions: Check here if you have any dietary restrictions.
__ Special Disabilities: Check here if you require special assistance or services. Please include with your registration form a written description of the special services required.

All registrations include admission to all technical sessions, opening reception, 2 continental breakfasts, all refreshment breaks, and luncheon.

** Full Payment Must Accompany Completed Registration Form. Payment must be made by check (in U.S. dollars only, drawn on U.S. bank), payable to SMG, money order, or one of the following credit cards:
__ Visa __ MasterCard __ Diners Club __ American Express __ Discover

Credit Card Number _____ Expiration Date _____
Cardholder Name _____
Cardholder Signature _____

**Refund Policy: Cancellations must be made in writing. Those received at SMG headquarters by April 1, 1996 will be subject to a $75.00 cancellation fee. No refunds will be given after April 1, 1996 and there will be no exceptions.

822. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: ghansen@accessone.com
Message-ID: <ghansen.747.317D1F63@accessone.com>
Source record: 22539

In article <4lfi38$gop@host-3.cyberhighway.net> wecare@teleport.com (John Jordan) writes:

>Ronalee Fitch <hammster@earthlink.net> wrote:

>She was yaking away this evening as well :) A fellow amateur and I
>drove up to another friends repeater (again) and "borrowed" it's
>antenna to try and make a contact, no luck, again.. :) Although she
>was S-9 she didn't seem to hear us, leading me to believe that perhaps
>she is using a split, I'm looking into this.. I'll keep trying..
>Sometimes the "fishing" is just as fun! :)

No split frequencies John, she is working simplex. I worked her Saturday and
I know one of the ops that worked her Sunday. Simplex......keep fishing. :-)

Glenn - KB7PKC

823. Re: Need MIR Info.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960423152219.9489D-100000@internet>
Source record: 22540

On 22 Apr 1996, Benji123Z wrote:

>
> If ANYONE has ANY info. on Mir (what time they're listening, what
> frequencies, what callsigns...) PLEASE E-MAIL (ONLY E-MAIL!) to
> Benji123Z@aol.com. Please only give 2M info.
>
> 73,
> Benji
> N3VYA
> Benji123Z@aol.com

According to Shannon, who I have talked to 3 times now, she normally operates 05-0700z and the Russians, Yuri and Yuri usually operate when over Russia. No particular day preference, just operate on a whim and/or when they have time. The call sign is R0MIR, and frequency is 145.550 simplex. When it is not in use, it is turned off. They operate on Moscow time zone.
Dan WA7TDZ oconneld@mail.oit.osshe.edu

824. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-23 00:00:00 UTC
From: Dan O'Connell <oconneld@mail.oit.osshe.edu>
Message-ID: <Pine.OSF.3.91.960423152828.9489E-100000@internet>
Source record: 22541

> Dan O'Connell <oconneld@mail.oit.osshe.edu> wrote:
> > She is running simplex. its just probably that a million guys are
> >calling her at the same time. I talked to her again last night at about
> >0530. Shes still real new to radio and hasnt learned to handle pileups
> >yet. With 5 more months to go, I bet she gets lots of practice.
> > Dan WA7TDZ
> Hiya Dan,
> Funny, I heard her talking to you! It was about 10:40 PDT and I (we)
> were up at the repeater site trying for her, I even taped it :)
> Good go'n, I just hope I am able to slip a qso in there before she
> returns to the planet's surface :)
> John KB7VZL

Cool! wish I had it on tape. Just keep trying, she doesnt have a
fixed sked on when she operates. and you dont have to go portable. I use
a 3 el quad in my apartment. just be sure to have current keps in your
sat tracking program so you know when she is available and start calling
when AOS. other wise, just keep the radio on and with squelch on, say any
pass 04/08 z and see if she works someone. I noticed that the orbits are
slipping more to the south and west, so possibly soon we will only have a
small window in the evening. GOOD LUCK! Dan WA7TDZ.

825. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-24 00:00:00 UTC
From: Gary - KJ6Q <tech@thereporter.com>
Message-ID: <4lkahm$kdt@miwok.nbn.com>
Source record: 22542
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

GARY, I've *GOTTA* tell you, you have the best all around knowledge and helpful nature I have seen on these much abused newsgroups. I don't know how you find the time to put in appearances here on the 'net, and still support yourself, but I am certain I am only one of *MANY* who are glad you DO! Keep up the good work.

Cheers, and 73.

--
Gary... KJ6Q...I am the NRA

826. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-24 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199604240923.CAA15690@UCSD.EDU>
Source record: 22543

```
From smtp Mon Apr 22 09:58 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Mon, 22 Apr 96 09:58 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA03512; Mon, 22 Apr 96 09:54:20 PDT
Received: by mail.ucsd.edu; id EAA15314
sendmail 8.6.12/UCSD-2.2-sun
Mon, 22 Apr 1996 04:30:30 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA15302
sendmail 8.6.12/UCSD-2.2-sun
Mon, 22 Apr 1996 04:30:28 -0700 for ham-space-ddist
Errors-To: ham-space-relay@ucsd.edu
Errors-To: ham-space-relay@ucsd.edu
Content-Length: 7074
Content-Type: text
Sender: ham-space-relay@ucsd.edu
Precedence: List
Message-Id: <199604221130.EAA15302@mail.ucsd.edu>
Date: Mon, 22 Apr 96 04:30:27 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #117
To: Ham-Space@ucsd.edu

Ham-Space Digest Mon, 22 Apr 96 Volume 96 : Issue 117

Today's Topics:
it help
Lucid on the MIR (2 msgs)
R0MIR ACTIVE IN LOS ANGELES 21 APRIL
R0MIR contact!
Society of Amatuer Radio Astronomers

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Mon, 22 Apr 1996 00:06:20 GMT
From: jemalone@ballistic.com (Jack Malone)
Subject: it help

hello. i have recently builted up a new computer for myself. i ordered
a new botherboard/cpu and ordered the intel 100 mhz cpu chip to go in
the new mb they were out of the intel and sent me the amd 120 mhz chip
instead. What I want to know if anyone out there has an amd cpu chip
and if instant track runs ok with it. It does not on my system. I go
to the menu option number 2 to track a satilite with the map and text
on bottom. well the text info on the nbottom of the screen is all
garbled and not read able. I would like to hear from people who have
this cpu chip and run it to see if you have the same problem.
jack
jemalone@ballistic.com
jack malone
jemalone@ballistic.com

Date: Sun, 21 Apr 1996 08:52:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Lucid on the MIR

In <4l44fn$kgg@host-3.cyberhighway.net> wecare@teleport.com (John Jordan) writes:

>Finally heard Shannon Lucid, voice on 145.550 a couple nights ago.
>Tried, but wasn't able to chat with her, this time... I have lestened
>for her on every pass since, she hasn't uttered a word, at least not
>while over NW Oregon. I even drove up to a hill west of here,
>borrowed a friends repeater antenna on a great big tower and hooked up
>my amplifier in hopes of making a voice cntct, but again, silence..

A repeater antenna? That probably won't work very well...
Usually a repeater will use some collinear array, and it radiates only
towards the horizon.

It is better to borrow the auto-tracking az/el steerable yagis from a
local packet satellite enthousiast. That will provide you with a
fullscale signal and a lot of ERP towards MIR.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: Mon, 22 Apr 1996 09:07:03 GMT
From: wecare@teleport.com (John Jordan)
Subject: Lucid on the MIR

>ob@pe1chl.ampr.org (Rob Janssen) wrote:

>A repeater antenna? That probably won't work very well...
>Usually a repeater will use some collinear array, and it radiates only
>towards the horizon.
>
>It is better to borrow the auto-tracking az/el steerable yagis from a
>local packet satellite enthousiast. That will provide you with a
>fullscale signal and a lot of ERP towards MIR.
>
>Rob

Ahhh, wouldn't that be nice.... Actually, the antenna is mine (2X4MAX) and is on loan to the repeater owner until his gets in and we have nicer weather to put it on the tower. It's true that the high passes of the MIR (45deg and above) are not so useful with the present antenna setup, but for the one to 45 degree passes it's more than sufficiant, a dozen QSO's with Dr. Thaggard on the MIR last year using the same antenna is a testiment to that.. In the mean time I will dream of anaz-ele circular polarized, 5400 rotor etc etc..

73's

John KB7VZL

Date: Mon, 22 Apr 1996 09:11:33 GMT
From: wecare@teleport.com (John Jordan)
Subject: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Ronalee Fitch <hammster@earthlink.net> wrote:

>Shannon, aboard the space station MIR was heard in Los Angeles
>making about 12 voice contacts with hams with 6 and 7 area calls
>for about 8 minutes starting at 0638 UTC Sunday 21 April.
>Unfortunately, this time, I was not one of them. Anybody get
>lucky? 73, Robb KO6ZD
>
>
She was yaking away this evening as well :) A fellow amateur and I drove up to another friends repeater (again) and "borrowed" it's antenna to try and make a contact, no luck, again.. :) Although she was S-9 she didn't seem to hear us, leading me to believe that perhaps she is using a split, I'm looking into this.. I'll keep trying.. Sometimes the "fishing" is just as fun! :)

73's

John KB7VZL

Date: Sun, 21 Apr 1996 16:39:15 GMT
From: tpickett@tir.com (Tim Pickett)
Subject: R0MIR contact!

ghansen@accessone.com (Glenn Hansen) wrote:

>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.

>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!

>BTW, can anybody tell me the QSL route for Shannon/Mir??

>73 - Glenn - KB7PKC

CALLSIGN R0MIR (Romeo Zero Mike India Romeo)
145.550 Simple

Please only 1 of your qsl cards for either R0MIR or R0MIR-1
card is same for both.

Only one qsl card per year

QSL Address
==========
N6JLH
POB 1501
PINE GROVE CALIFORINA
95665

Packet Address
N6JLH@N0ARY.#NOCAL.CA.USA.NOAM.

E-Mail Address
==========
docdave@inreach.com

DON'T FORGET
==========
SEND SASE ON BUSINESS SIZE ENVELOPE.

Please include your qsl card.
If you dont have one, send on post card of were you live.
These will be forwared to RV3DR every 3 months.

I hope that helps a little.

Tim KG8OC

Date: 21 Apr 1996 19:43:07 -0400
From: sftinc@aol.com (SFTINC)
Subject: Society of Amatuer Radio Astronomers

If you are interested in a really great non-profit organization, that has been around for years promoting Amatuer Radio Astronomy, Then contact:

Society of Amatuer Radio Astronomers
247 N. Linden Street
Massapequa, N.Y. 11758
Attn: Vincent Carraci,
Secretary

End of Ham-Space Digest V96 #117
****

827. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-04-24 00:00:00 UTC
From: LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
Message-ID: <4lmee0$s3b@news.sanders.lockheed.com>
Source record: 22544
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

I've used both the FT-736 and TS-790. I own the latter. Ergonomically
it can be a bit difficult to get used to, but it's a good rig. The
FT-736 is very goo, too, and perhaps easier to learn to use. Trouble is,
it's more expensive.

73,

Larry/NA5E

828. FS: Electronic leftovers

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: chane@cse.ucsc.edu
Message-ID: <4lmop1$hvi@darkstar.UCSC.EDU>
Source record: 22545
Cross-posted to:
rec.radio.amateur.misc,rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

```
Hi all..

I have some treasures for sale that I just can't
haul around with me anymore...

The prices are subject to negotiation :)
Best offer takes it..

--------------------------------------
COMPUTER EQUIPMENT
--------------------------------------

Televideo TVI-925 terminal $20

--------------------------------------
ELECTRONICS GOODIES
--------------------------------------

Western Union Telefax Transceivers $20/pair
Model 6500-A, proprietary protocol
interesting little beasties...

Tektronix Oscilloscope $50
Model RM545B, with 1A1 Dual Trace module
Good condition, 19" rack mountable, weighs about 75#s

--chane@cse.ucsc.edu
```

829. Re: Need MIR Info.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: rickcrider@aol.com
Message-ID: <4ln2js$412@newsbf02.news.aol.com>
Source record: 22546

>The call sign is R0MIR, and frequency is 145.550
>simplex.

Is the call sign R0 (ZERO?) MIR ..... or RO (O 'Oscar'?) MIR.......????

Thanks.....

Rick Crider
KD4FXA

830. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199604250853.BAA05059@UCSD.EDU>
Source record: 22547

```
From smtp Mon Apr 22 09:58 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Mon, 22 Apr 96 09:58 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA03512; Mon, 22 Apr 96 09:54:20 PDT
Received: by mail.ucsd.edu; id EAA15314
sendmail 8.6.12/UCSD-2.2-sun
Mon, 22 Apr 1996 04:30:30 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA15302
sendmail 8.6.12/UCSD-2.2-sun
Mon, 22 Apr 1996 04:30:28 -0700 for ham-space-ddist
Errors-To: ham-space-relay@ucsd.edu
Errors-To: ham-space-relay@ucsd.edu
Content-Length: 7074
Content-Type: text
Sender: ham-space-relay@ucsd.edu
Precedence: List
Message-Id: <199604221130.EAA15302@mail.ucsd.edu>
Date: Mon, 22 Apr 96 04:30:27 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #117
To: Ham-Space@ucsd.edu

Ham-Space Digest Mon, 22 Apr 96 Volume 96 : Issue 117

Today's Topics:
it help
Lucid on the MIR (2 msgs)
R0MIR ACTIVE IN LOS ANGELES 21 APRIL
R0MIR contact!
Society of Amatuer Radio Astronomers

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Mon, 22 Apr 1996 00:06:20 GMT
From: jemalone@ballistic.com (Jack Malone)
Subject: it help

hello. i have recently builted up a new computer for myself. i ordered
a new botherboard/cpu and ordered the intel 100 mhz cpu chip to go in
the new mb they were out of the intel and sent me the amd 120 mhz chip
instead. What I want to know if anyone out there has an amd cpu chip
and if instant track runs ok with it. It does not on my system. I go
to the menu option number 2 to track a satilite with the map and text
on bottom. well the text info on the nbottom of the screen is all
garbled and not read able. I would like to hear from people who have
this cpu chip and run it to see if you have the same problem.
jack
jemalone@ballistic.com
jack malone
jemalone@ballistic.com

Date: Sun, 21 Apr 1996 08:52:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Lucid on the MIR

In <4l44fn$kgg@host-3.cyberhighway.net> wecare@teleport.com (John Jordan) writes:

>Finally heard Shannon Lucid, voice on 145.550 a couple nights ago.
>Tried, but wasn't able to chat with her, this time... I have lestened
>for her on every pass since, she hasn't uttered a word, at least not
>while over NW Oregon. I even drove up to a hill west of here,
>borrowed a friends repeater antenna on a great big tower and hooked up
>my amplifier in hopes of making a voice cntct, but again, silence..

A repeater antenna? That probably won't work very well...
Usually a repeater will use some collinear array, and it radiates only
towards the horizon.

It is better to borrow the auto-tracking az/el steerable yagis from a
local packet satellite enthousiast. That will provide you with a
fullscale signal and a lot of ERP towards MIR.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: Mon, 22 Apr 1996 09:07:03 GMT
From: wecare@teleport.com (John Jordan)
Subject: Lucid on the MIR

>ob@pe1chl.ampr.org (Rob Janssen) wrote:

>A repeater antenna? That probably won't work very well...
>Usually a repeater will use some collinear array, and it radiates only
>towards the horizon.
>
>It is better to borrow the auto-tracking az/el steerable yagis from a
>local packet satellite enthousiast. That will provide you with a
>fullscale signal and a lot of ERP towards MIR.
>
>Rob

Ahhh, wouldn't that be nice.... Actually, the antenna is mine (2X4MAX) and is on loan to the repeater owner until his gets in and we have nicer weather to put it on the tower. It's true that the high passes of the MIR (45deg and above) are not so useful with the present antenna setup, but for the one to 45 degree passes it's more than sufficiant, a dozen QSO's with Dr. Thaggard on the MIR last year using the same antenna is a testiment to that.. In the mean time I will dream of anaz-ele circular polarized, 5400 rotor etc etc..

73's

John KB7VZL

Date: Mon, 22 Apr 1996 09:11:33 GMT
From: wecare@teleport.com (John Jordan)
Subject: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Ronalee Fitch <hammster@earthlink.net> wrote:

>Shannon, aboard the space station MIR was heard in Los Angeles
>making about 12 voice contacts with hams with 6 and 7 area calls
>for about 8 minutes starting at 0638 UTC Sunday 21 April.
>Unfortunately, this time, I was not one of them. Anybody get
>lucky? 73, Robb KO6ZD
>
>
She was yaking away this evening as well :) A fellow amateur and I drove up to another friends repeater (again) and "borrowed" it's antenna to try and make a contact, no luck, again.. :) Although she was S-9 she didn't seem to hear us, leading me to believe that perhaps she is using a split, I'm looking into this.. I'll keep trying.. Sometimes the "fishing" is just as fun! :)

73's

John KB7VZL

Date: Sun, 21 Apr 1996 16:39:15 GMT
From: tpickett@tir.com (Tim Pickett)
Subject: R0MIR contact!

ghansen@accessone.com (Glenn Hansen) wrote:

>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.

>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!

>BTW, can anybody tell me the QSL route for Shannon/Mir??

>73 - Glenn - KB7PKC

CALLSIGN R0MIR (Romeo Zero Mike India Romeo)
145.550 Simple

Please only 1 of your qsl cards for either R0MIR or R0MIR-1
card is same for both.

Only one qsl card per year

QSL Address
==========
N6JLH
POB 1501
PINE GROVE CALIFORINA
95665

Packet Address
N6JLH@N0ARY.#NOCAL.CA.USA.NOAM.

E-Mail Address
==========
docdave@inreach.com

DON'T FORGET
==========
SEND SASE ON BUSINESS SIZE ENVELOPE.

Please include your qsl card.
If you dont have one, send on post card of were you live.
These will be forwared to RV3DR every 3 months.

I hope that helps a little.

Tim KG8OC

Date: 21 Apr 1996 19:43:07 -0400
From: sftinc@aol.com (SFTINC)
Subject: Society of Amatuer Radio Astronomers

If you are interested in a really great non-profit organization, that has been around for years promoting Amatuer Radio Astronomy, Then contact:

Society of Amatuer Radio Astronomers
247 N. Linden Street
Massapequa, N.Y. 11758
Attn: Vincent Carraci,
Secretary

End of Ham-Space Digest V96 #117
****

831. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199604250854.BAA05078@UCSD.EDU>
Source record: 22548

```
From smtp Tue Apr 23 09:46 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Tue, 23 Apr 96 09:46 PDT
Received: by mail.ucsd.edu; id EAA28734
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Apr 1996 04:30:36 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28726
sendmail 8.6.12/UCSD-2.2-sun
Tue, 23 Apr 1996 04:30:34 -0700 for ham-space-ddist
Errors-To: ham-space-relay@UCSD.EDU
Content-Length: 9816
Content-Type: text
Sender: ham-space-relay@UCSD.EDU
Precedence: List
Message-Id: <199604231130.EAA28726@mail.ucsd.edu>
Date: Tue, 23 Apr 96 04:30:33 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #118
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 23 Apr 96 Volume 96 : Issue 118

Today's Topics:
(none)
Cant connect to MIR via pkt 72 Degree pass
Dont Kill Me FS: KCT
IC-970 is it good ?? (2 msgs)
Need MIR Info.
R0MIR ACTIVE IN LOS ANGELES 21 APRIL (2 msgs)
R0MIR contact!

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 22 Apr 96 19:43:43 GMT
From: dwydra@amedec.amg.gda.PL (Dariusz Wydra)
Subject: (none)

subscribe ham-space Dariusz SP2XDW

Date: 17 Apr 1996 12:33:01 -0700
From: Stephanie Steele <kc7dba@primenet.com>
Subject: Cant connect to MIR via pkt 72 Degree pass

George J. Molnar wrote:
>
> Jeff Schultz wrote:
> >
> > For some reason, I just had a 72 degree pass and I couldn't connect or
> > hear from R0MIR-1... I dont know why
> > Any info appreciated, Thanx
>
> They probably didn't have the rig on. Sometimes, the station is off the air while
> power is used for other things, while repairs are underway, or when the crew
> just doesn't feel like operating.
>
> You were on the right frequency with an adequate antenna, rig, etc., AND
> current keplerian elements? Sometimes the station orbit is changed, which leaves
> us with pretty useless data -- even when it's only a week old!
>
> Good luck & 73
>
> --
> George J. Molnar
> Highlands Ranch, Colorado
> Amateur Radio: KF2T@N0QCU.#NECO.CO.USA.NOAM
> http://www.interealm.com/p/gmolnar/index.html

Hi All,

Shannon stated that the packet station is off the air and they are
working on it. Please don't send packets when you do not hear the
downlink as it is interfering with the voice contacts that are taking
place on the same frequency. The voice contacts are available quite
often now so listen first!

--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

Date: 23 Apr 1996 00:55:27 GMT
From: mfp@aros.net (Marcus)

Subject: Dont Kill Me FS: KCT

New KCT with Tracking AND TUNING board..newer version..with software and Hardware..even Factory cable for 5400 ALT/AZ Rotor

$225.00 or offer....

Don't kill me for placing this ad in Am Space usenet group..I put it in REC.SWAP.RADIO usenet and had 4 different people ask what kind of RADIO it was...!

Date: 22 Apr 1996 16:26:07 GMT
From: jgarver@ichips.intel.com (Jim Garver)
Subject: IC-970 is it good ??

>>>The TS-790A should be avoided for satellite use. It has *serious*
>>>design flaws for such usage. Not recomended. It can be Ok for
>>>light duty terrestrial use.
>>I disagree, while the TS-790 left some things out, it is still a good
>>satellite rig.
>Only if you are a masochist.

Can't you guys be a little more specific? WHAT essential features are missing? WHAT design flaws, defficiencies?

I don't mind turning knobs, that's part of the fun, isn't it? If I wanted everything automatic I would just go watch my TVRO dish.

--
<<<<"Put the urban skyline in your rearview mirror and KEEP it there">>>>
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

Date: Mon, 22 Apr 1996 12:47:24 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: IC-970 is it good ??

In <1996Apr21.073533.4420@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>I know, I should have known better than to buy a Kenwood. I've
>got enough experience with them to know that they are all terminally
>brain dead. I just have to plead temporary insanity when I bought
>yet another of their poorly designed pieces of crap.

Yes, Kenwood user-interface always sucks...
Quite some years ago, the local packet radio networking group bought a lot of TM-531E 23cm FM transceivers to use for links in the Dutch packet network.

They have to operate in a 59 MHz split for this, and it is unbelievably complicated to set them up to do that... when you don't have a manual with you when at a link site, you are basically lost when you have to

retune a transceiver. And sometimes they suddenly lose their memory
and have to be retuned :-(

ALL the Kenwoods (even the 790) are lacking a programmable repeater split.
You get what they think is right for your area. However, the split
has been changed a few times because of bandplan changes and coordination
with other band users, and now it is 28 MHz. That is not present in
Kenwood transceivers, so you can no longer freely tune around in the
repeater subband (you have to program each repeater in a "split" memory).

Also, the TM-531 has serial control via its MIC jack, which is proven
by the existence of a "remote control" from Kenwood. However, they
refuse to publish the protocol used. (unlike Yaesu and ICOM)
So, we cannot do remote control of our transceivers in the packet
network, which would have been very nice (to set power level, reprogram
the frequency when it has once again forgotten it, read S-meter value, etc).

There is also a bad bug in the design: they generate output even when
the PLL has not yet locked. This causes interference around the transmit
frequency. Setup a spectrum analyzer to store peak values seen around
the transmit band of the local node, and you see a 3 MHz wide spectrum
around the transmit frequencies. The interference is so strong that it
jams other links.
The 2M and 70cm units have the same bug.

Finally, they are not suitable for G3RUH modems, so we still run them
at 4800 bps using HAPN modems.

All in all it was a bad choice. The only advantage of these boxes has
been that they don't fail too often, especially when run at 1 Watt.
Unfortunately, there is no really better commercial alternative. The
only well-working 23cm link transceivers are the kits available from
Germany...

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

Date: 22 Apr 1996 17:26:12 -0400
From: benji123z@aol.com (Benji123Z)
Subject: Need MIR Info.

If ANYONE has ANY info. on Mir (what time they're listening, what
frequencies, what callsigns...) PLEASE E-MAIL (ONLY E-MAIL!) to
Benji123Z@aol.com. Please only give 2M info.

73,
Benji

N3VYA
Benji123Z@aol.com

Date: 21 Apr 1996 09:19:15 GMT
From: Ronalee Fitch <hammster@earthlink.net>
Subject: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Shannon, aboard the space station MIR was heard in Los Angeles
making about 12 voice contacts with hams with 6 and 7 area calls
for about 8 minutes starting at 0638 UTC Sunday 21 April.
Unfortunately, this time, I was not one of them. Anybody get
lucky? 73, Robb KO6ZD

Date: Sun, 21 Apr 1996 14:56:41 -0700
From: "Dan O'Connell" <oconneld@mail.oit.osshe.edu>
Subject: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

On 21 Apr 1996, Ronalee Fitch wrote:

> Shannon, aboard the space station MIR was heard in Los Angeles
> making about 12 voice contacts with hams with 6 and 7 area calls
> for about 8 minutes starting at 0638 UTC Sunday 21 April.
> Unfortunately, this time, I was not one of them. Anybody get
> lucky? 73, Robb KO6ZD

Hi. yes, I got lucky again, and worked her at 0638. she mentioned that
06-0700 is the best time to get ahold of them, and that the Yuri's prefer
to talk when over Russia, presumably due to language differences. She
doesnt have a preference for a particular day that she operates.
Dan WA7TDZ oconneld@mail.oit.osshe.edu

Date: Mon, 22 Apr 96 12:59:54 GMT
From: trandall@mhv.net
Subject: R0MIR contact!

In article <ghansen.745.3179EB71@accessone.com>, ghansen@accessone.com (Glenn Hansen)
wrote:
>
>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.
>
>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!
>

>BTW, can anybody tell me the QSL route for Shannon/Mir??
>
>
>
>73 - Glenn - KB7PKC

For U.S. contacts send your card to:

N6JLH
Dave Larsen
P.O.Box 1501
Pine Groce,Ca 95665

The current card has a nice b/w photo of the station but they are getting in a new color card soon! Thanks for the report Glenn!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

End of Ham-Space Digest V96 #118
****

832. Re: Need MIR Info.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <317F89C0.3260@primenet.com>
Source record: 22549

RICKCRIDER wrote:
>
> >The call sign is R0MIR, and frequency is 145.550
> >simplex.
>
> Is the call sign R0 (ZERO?) MIR ..... or RO (O 'Oscar'?) MIR.......????
>
> Thanks.....
>
> Rick Crider
> KD4FXA

It is "R, ZERO, MIR"

--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

```
___ ___ ___ ___ _ ___ __ __ ___ ___ _ _ _ __ _ _ ___
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| _/ / (_) | _ \ |__| _|| |\/| | \__ \ (_) | |_\ V / | || .` | (_ |
|_| |_|_\\___/|___/____|___|_| |_| |___/\___/|____\_/ |___|_|\_|\___|
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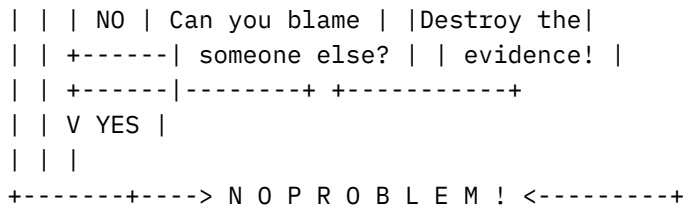
```

```
YES ============================== NO
+----------- Does the Darn Thing work? -----------+
V ============================== V
+----------+ +---------+ +---------+
| Don't | NO | Does | +-------+ YES | Did you |
| mess | +---| anyone |<------| You |<---------| mess |
| with it! | | | know? | | Moron | | with it |
+----------+ | +---------+ +-------+ +---------+
| V | YES | NO
| +------+ +-----------V V
| | Hide | +--------+ +-----------+
| | it! | | You | YES | Will they |
| +------+ +-------->| poor |<------------| catch you?|
| | | |bastard!| +-----------+
| | | +----|---+ | NO
| | | V V
| | | +---------------+ +-----------+
```


| | | NO | Can you blame | |Destroy the|
| | +------| someone else? | | evidence! |
| | +------|--------+ +-----------+
| | V YES |
| | |
+-------+----> N O P R O B L E M ! <---------+

833. Saturn 6 tuning - HELP!!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-25 00:00:00 UTC
From: darryl.linkow@grinder.com
Message-ID: <8BF5277.01A9000354.uuout@grinder.com>
Source record: 22550

Hello all and thanks for reading this. I just acquired an old Saturn 6 antenna and am having a difficult time getting the SWR down below 2.5 to 1. I am using the MFJ-259 analyzer. I am just curious if perhaps part of the antenna is missing? There are two screws attached to a piece of phenolic board. I have attached the shield and center conductor of some RG-58 coax to these screws as the feedpoint. I am just curious if perhaps there is a tuning device (other than the capacitor plate adjustment) or a balun that should be connected to these screws on the phenolic board that might be missing? Also, might anyone have an instruction sheet or manual that came with the antenna that I might get a copy of? Any help would be appreciated.
73, Darryl KE6IHA

---
* OLX 2.2 * Darryl Linkow (818)346-5278 9 am - 5 pm PDT

834. Arrange contact with MIR... who do I contact?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: fx514@cleveland.Freenet.Edu
Message-ID: <4lp43a$dr5@madeline.INS.CWRU.Edu>
Source record: 22551

Burt (VE1AMA) and I (VE1DMS) will be doing a ham radio demo
at a local science fiction convention and will be working AO-27
et.al. We would also like to work MIR. Does anyone here
know who I'd contact to request a scheduled contact with MIR?

Thanks in advance...

-David

835. need HR2600 1 att mod from AMSAT JOURNAL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: elsner@alpha1.csd.uwm.edu
Message-ID: <4lpf7g$cvu@uwm.edu>
Source record: 22552

73 - don ks9f

elsner@alpha1.cs.uwm.edu

836. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: "John R. Moore" <jrmoore@pop.jaxnet.com>
Message-ID: <3180D945.2B96@pop.jaxnet.com>
Source record: 22553

SHANNON was on the air and very very loud and clear here in north florida
Yesterday 4/25/96 at 1933 UTC Myself(W5HUQ) and My Wife (N4TAE) had a very
good contact with her. Was very suprised to hear her that late in the day.
John W5HUQ

837. WWW Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <318123cc.6038733@news.innotts.co.uk>
Source record: 22554

Thank you to all those who have visited and supported:

http://www.innotts.co.uk/~asperges/

amateur radio pages.

They are regularly updated: if you haven't seen them yet, please drop in and see for yourself.

73 de
Jeremy G4NJH
asperges@innotts.co.uk
[Am Radio, SWL pages: http://www.innotts.co.uk/~asperges/]

838. IT patch#4 available

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: james.mollica@compudata.com
Message-ID: <8BF61F0.15110002F8.uuout@compudata.com>
Source record: 22555

InstantTrack Patch #4 may also be obtained on diskette from AMSAT-NA headquarters for a minimum donation for $5.00 to cover the cost of distribution. Contact:

AMSAT-NA
850 Sligo Avenue
Silver Spring, MD 20910
USA

voice: (301) 589-6062
fax: (301) 608-3410

This patch solves the incompatibility that InstantTrack 1.00 or 1.00b you will see garbage at the bottom of the map screens where the text is supposed to be. If you don't see that garbage, this patch won't do you any good.

InstantTrack Patch #4 remains available for free download from ftp://ftp.amsat.org/amsat/software/PC/InstantTrack/itpatch4.zip. It is also downloadable from CompuServe's HamNet forum as ITPATCH4.ZIP. Feel free to upload ITPATCH4.ZIP to any other archive of amateur radio software.

 1st 2.00 #1439 N2NRD @ AMSAT.ORG

839. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DqHK50.4Cw@pe1chl.ampr.org>
Source record: 22556
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com> writes:

>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
>it can be a bit difficult to get used to, but it's a good rig. The
>FT-736 is very goo, too, and perhaps easier to learn to use. Trouble is,
>it's more expensive.

Apparently pricing is different in the USA.
In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
(two bands, mains supply)

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

840. Where to get poster/photo space image?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-26 00:00:00 UTC
From: ahm@goonsquad.spies.com
Message-ID: <4lsdoe$82h@goonsquad.spies.com>
Source record: 22557

[This is slightly off-topic; I apologize.]

I believe I'd read somewhere that it is possible to obtain from some U.S.
government agency a colorful and detailed poster/photo of one's local area
as seen from space (having given them the appropriate latitiude and longitude,
of course).

As I'd like to have something like this to decorate my shack,
can anyone tell me:
- is this still available?
- whom do I contact?
- how much (if anything) does it cost?

Please reply by email.

Thanks,
Andy
--
Andreas Meyer ahm@goonsquad.spies.com http://www.spies.com/~ahm/
========= HO-scale Slotcar Collectors and Racers mailing list: =========
To subscribe, send email to: majordomo@goonsquad.spies.com
and in the body of the message put: subscribe ho-slotcars

841. Re: Need MIR Info.

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4lrqr5$gur@news.mhv.net>
Source record: 22558

In article <4ln2js$412@newsbf02.news.aol.com>, rickcrider@aol.com (RICKCRIDER) wrote:
>>The call sign is R0MIR, and frequency is 145.550
>>simplex.
>
>Is the call sign R0 (ZERO?) MIR ..... or RO (O 'Oscar'?) MIR.......????
>
>Thanks.....
>
>Rick Crider
>KD4FXA

The call is R "ZERO" MIR.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

842. NORAD Two-Line Orbital Element Sets (TLE800)

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4lrq5f$rhs@blackbird.afit.af.mil>
Source record: 22559

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #800 -
Alouette 1
1 00424U 62049A 96116.92374047 .00000102 00000-0 11005-3 0 1917
2 00424 80.4593 335.3205 0022455 165.9837 194.1939 13.67867441675190
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
1 03029U 67111A 96115.36105663 -.00000118 00000-0 10000-3 0 4879
2 03029 14.8968 0.3424 0009593 275.5450 321.3212 1.00273056104226
Starlette
1 07646U 75010A 96113.22674235 -.00000147 00000-0 -14556-5 0 9649
2 07646 49.8260 9.5451 0205774 45.7190 316.0382 13.82190140 71223
LAGEOS
1 08820U 76039A 96114.26700549 -.00000006 00000-0 10000-3 0 1888
2 08820 109.8531 7.1988 0044404 141.0543 219.3364 6.38664509210327
ETS-2
1 09852U 77014A 96110.29826175 -.00000091 00000-0 10000-3 0 705
2 09852 13.1653 33.6505 0003404 91.1507 268.8070 0.99994621 17054
GOES 2
1 10061U 77048A 96116.45450862 .00000061 00000-0 10000-3 0 6674
2 10061 12.2890 37.7072 0010754 134.9230 29.4527 1.00288223 13916
IUE
1 10637U 78012A 96116.64742147 -.00000186 00000-0 10000-3 0 2479
2 10637 35.7223 83.9791 1355498 55.2475 272.1918 1.00250924 19408
GPS BI-01
1 10684U 78020A 96105.68072171 -.00000083 00000-0 10000-3 0 4417
2 10684 64.9591 25.7612 0058974 163.5247 196.6397 1.98069394118155

```
GPS BI-02
1 10893U 78047A 96115.73960995 -.00000001 00000-0 10000-3 0 2390
2 10893 63.1924 262.7185 0230894 14.9630 345.6913 2.01627183131734
GOES 3
1 10953U 78062A 96114.46028916 -.00000135 00000-0 10000-3 0 6483
2 10953 11.2777 40.5833 0002191 322.3853 273.2155 1.00275439 18507
SeaSat 1
1 10967U 78064A 96111.55982449 -.00000019 00000-0 38172-4 0 4803
2 10967 107.9904 55.5141 0001972 245.9605 114.1330 14.38098857933164
GPS BI-03
1 11054U 78093A 96114.71225690 -.00000001 00000-0 10000-3 0 4004
2 11054 62.8752 261.7416 0046722 179.6334 180.3444 1.93505580127600
Nimbus 7
1 11080U 78098A 96115.69697906 -.00000042 00000-0 -54143-6 0 5814
2 11080 98.9520 340.5249 0009705 109.4832 250.7372 13.83695220883778
GPS BI-04
1 11141U 78112A 96115.93525780 -.00000072 00000-0 10000-3 0 397
2 11141 64.9806 27.7995 0050060 27.8752 332.4139 1.92894748 16851
GPS BI-05
1 11690U 80011A 96116.00021911 -.00000069 00000-0 10000-3 0 164
2 11690 65.3046 26.9436 0144661 191.8947 167.7839 2.00571796133133
GPS BI-06
1 11783U 80032A 96111.35476604 -.00000019 00000-0 10000-3 0 1410
2 11783 62.3340 255.6026 0226620 29.8497 331.3676 2.03456628117658
GOES 5
1 12472U 81049A 96114.87567116 -.00000023 00000-0 10000-3 0 9282
2 12472 8.0859 50.7327 0005383 39.3001 320.6557 1.00207913 12551
Cosmos 1383
1 13301U 82066A 96114.25439400 .00000031 00000-0 19178-4 0 4896
2 13301 82.9333 174.0767 0029014 33.3194 326.9776 13.68073771689869
LandSat 4
1 13367U 82072A 96117.18581726 .00000406 00000-0 10000-3 0 8859
2 13367 98.0802 169.6614 0006647 310.4511 49.5213 14.57105448732960
DMSP B5D2-1
1 13736U 82118A 96115.89210369 .00000069 00000-0 47199-4 0 9922
2 13736 98.6256 305.1352 0008211 176.8057 183.3176 14.25780964693477
IRAS
1 13777U 83004A 96116.94709757 .00000272 00000-0 21722-3 0 2970
2 13777 98.9638 303.5515 0011477 236.5014 123.5058 13.99250250346062
Cosmos 1447
1 13916U 83021A 96115.85443174 .00000035 00000-0 20930-4 0 5859
2 13916 82.9442 230.4731 0037242 303.0723 56.6858 13.74338533656417
TDRS 1
1 13969U 83026B 96116.13596942 -.00000299 00000-0 00000+0 0 5782
2 13969 8.8874 44.2353 0004606 327.4958 188.0072 1.00417831 20856
GOES 6
1 14050U 83041A 96114.23150628 -.00000267 00000-0 10000-3 0 5068
2 14050 6.9245 54.1150 0004137 8.2747 157.6604 1.00269931105643
OSCAR 10
1 14129U 83058B 96108.73022969 -.00000074 00000-0 10000-3 0 4152
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2 14129 26.2800 213.9904 5996717 7.9297 358.3577 2.05879049 68627
LandSat 5
1 14780U 84021A 96115.17502617 .00000053 00000-0 22092-4 0 4639
2 14780 98.3364 172.9662 0003350 88.1902 271.9680 14.57048128646062
UoSat 2
1 14781U 84021B 96113.50025067 .00000137 00000-0 30944-4 0 8782
2 14781 97.7971 106.7119 0010612 271.0587 88.9401 14.69445673649477
GPS BI-09
1 15039U 84059A 96109.97085734 -.00000076 00000-0 10000-3 0 4052
2 15039 64.6304 22.2953 0083400 19.0247 341.3085 1.92302311 86295
Cosmos 1574
1 15055U 84062A 96113.89315809 .00000026 00000-0 11261-4 0 7855
2 15055 82.9529 286.7181 0028385 132.7029 227.6523 13.73634117593398
GPS BI-10
1 15271U 84097A 96113.12492794 -.00000008 00000-0 10000-3 0 1425
2 15271 62.0414 256.0826 0154103 359.0467 0.8898 2.00611271 84142
Cosmos 1602
1 15331U 84105A 96114.66539724 .00000300 00000-0 32377-4 0 4695
2 15331 82.5350 164.1140 0021078 123.4337 236.8899 14.84746426624885
NOAA 9
1 15427U 84123A 96117.05020541 .00000090 00000-0 71116-4 0 6736
2 15427 98.9527 181.9335 0016004 98.9292 261.3687 14.13776758586260
GPS BI-11
1 16129U 85093A 96115.95746979 -.00000074 00000-0 10000-3 0 7187
2 16129 65.3039 25.7380 0156495 84.7282 277.0767 1.89367971 20912
Mir
1 16609U 86017A 96114.49995455 .00002491 00000-0 39341-4 0 4912
2 16609 51.6498 37.9523 0004077 225.5446 134.5230 15.57890595581480
SPOT 1
1 16613U 86019A 96116.23015323 .00000089 00000-0 62356-4 0 9323
2 16613 98.7322 185.1960 0001730 77.6978 282.4393 14.20004701212796
Cosmos 1766
1 16881U 86055A 96116.25098544 .00000221 00000-0 23714-4 0 3842
2 16881 82.5177 220.3499 0019587 146.1243 214.1231 14.83724214525996
EGP
1 16908U 86061A 96115.84453339 -.00000083 00000-0 10000-3 0 814
2 16908 50.0081 160.9993 0011614 237.9177 122.0482 12.44414219109760
NOAA 10
1 16969U 86073A 96116.95924350 -.00000005 00000-0 16035-4 0 5952
2 16969 98.5215 115.5272 0013480 141.6874 218.5266 14.24979952499164
MOS-1
1 17527U 87018A 96116.71284637 -.00000043 00000-0 00000+0 0 4078
2 17527 98.9519 179.8839 0018550 102.4064 257.9172 14.00413829467648
GOES 7
1 17561U 87022A 96117.14455745 -.00000097 00000-0 10000-3 0 8730
2 17561 2.9544 69.9153 0005119 354.5822 94.6679 1.00358035 16782
Kvant-1
1 17845U 87030A 96116.80924307 .00002701 00000-0 42083-4 0 6133
2 17845 51.6490 26.3814 0003883 248.0814 112.0855 15.57906232515952
DMSP B5D2-3
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1 18123U 87053A 96117.06765590 .00000027 00000-0 35935-4 0 4083
2 18123 98.7718 308.2202 0015310 45.2014 315.0400 14.15438952457124
RS-10/11
1 18129U 87054A 96115.24470141 .00000102 00000-0 95127-4 0 2039
2 18129 82.9270 188.4062 0011037 313.6400 46.3835 13.72364911442779
Meteor 2-16
1 18312U 87068A 96114.23464321 .00000034 00000-0 17191-4 0 4759
2 18312 82.5590 35.6707 0013350 22.1290 338.0439 13.84076356438572
Meteor 2-17
1 18820U 88005A 96116.87283513 .00000033 00000-0 16274-4 0 9170
2 18820 82.5396 88.7223 0018348 73.2505 287.0668 13.84754618416285
DMSP B5D2-4
1 18822U 88006A 96116.10525283 .00000013 00000-0 23855-4 0 2390
2 18822 98.3870 310.6907 0006334 150.3479 209.8060 14.23187717427020
Glonass 34
1 19163U 88043A 96116.96925347 .00000047 00000-0 10000-3 0 728
2 19163 65.2359 87.5968 0009139 158.7784 201.2614 2.13102227 61123
Glonass 36
1 19165U 88043C 96116.08763405 .00000043 00000-0 10000-3 0 4807
2 19165 65.2214 87.5873 0000430 55.3895 304.5849 2.13101820 61721
METEOSAT 3
1 19215U 88051A 96114.89660415 -.00000061 00000-0 10000-3 0 2579
2 19215 3.1580 68.0476 0002208 146.1415 213.8182 0.96946950 16653
AO-13
1 19216U 88051B 96113.89406541 .00000548 00000-0 48705-3 0 1893
2 19216 57.3024 121.5348 7404907 37.4219 356.0513 2.09759611 28680
OKEAN 1
1 19274U 88056A 96110.60145740 .00000245 00000-0 27555-4 0 837
2 19274 82.5168 326.4462 0019033 323.4328 36.5597 14.82472941420691
Meteor 3-2
1 19336U 88064A 96116.74300828 .00000051 00000-0 10000-3 0 4763
2 19336 82.5443 203.5299 0017733 10.2899 349.8587 13.16976996372575
Glonass 39
1 19503U 88085C 96114.70961240 -.00000039 00000-0 10000-3 0 3684
2 19503 65.5856 326.5623 0004616 148.7718 211.2984 2.13101779 59186
NOAA 11
1 19531U 88089A 96117.04920612 -.00000014 00000-0 17668-4 0 4836
2 19531 99.1920 133.8024 0012817 30.3754 329.8158 14.13089211391080
TDRS 2
1 19548U 88091B 96115.64344646 -.00000201 00000-0 10000-3 0 2005
2 19548 2.3914 72.3974 0000928 126.2343 331.3880 1.00272358 14997
Glonass 40
1 19749U 89001A 96110.99309959 .00000001 00000-0 10000-3 0 5876
2 19749 65.1787 87.3309 0007044 246.3432 113.5604 2.13101598 56613
Glonass 41
1 19750U 89001B 96111.04818374 .00000002 00000-0 10000-3 0 4893
2 19750 65.2086 87.3943 0007484 219.1671 140.7489 2.13101939 56637
GPS BII-01
1 19802U 89013A 96113.30368030 .00000018 00000-0 10000-3 0 2125
2 19802 55.3055 112.8685 0021843 185.1248 174.8623 2.00572162 52590
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Akebono
1 19822U 89016A 96116.12413748 .00008409 00000-0 44760-3 0 7138
2 19822 75.0780 154.6603 3749359 146.4012 244.4025 7.91326889162490
Meteor 2-18
1 19851U 89018A 96116.66499903 .00000052 00000-0 33002-4 0 4746
2 19851 82.5198 322.9647 0015162 118.2626 242.0065 13.84410529361560
MOP-1
1 19876U 89020B 96112.84802737 -.00000078 00000-0 10000-3 0 1967
2 19876 1.8754 71.2923 0020266 281.5144 78.2417 0.97109095 6075
TDRS 3
1 19883U 89021B 96114.22064784 -.00000278 00000-0 00000+0 0 2038
2 19883 0.0224 300.6731 0001602 109.2653 199.9954 1.00271386198556
GPS BII-02
1 20061U 89044A 96114.14278691 -.00000037 00000-0 10000-3 0 2137
2 20061 54.2427 288.6714 0153484 218.8472 140.0204 2.00562399 50358
Nadezhda 1
1 20103U 89050A 96117.06633842 .00000053 00000-0 39895-4 0 7493
2 20103 82.9581 147.1201 0035960 197.2727 162.7208 13.73865131341524
GPS BII-03
1 20185U 89064A 96116.97756835 .00000056 00000-0 10000-3 0 2387
2 20185 55.1067 113.1972 0031457 323.0180 36.7812 2.00550699 48985
GMS 4
1 20217U 89070A 96116.07877894 -.00000374 00000-0 10000-3 0 3543
2 20217 1.6740 76.0524 0000480 280.2035 5.4063 1.00282749 24881
INTERCOSMOS 24
1 20261U 89080A 96113.57903055 .00000216 00000-0 59955-4 0 4924
2 20261 82.5915 306.2392 1242325 168.0538 195.3168 12.47332511298975
GPS BII-04
1 20302U 89085A 96115.51425460 -.00000033 00000-0 10000-3 0 2181
2 20302 53.2562 228.4440 0025805 178.7572 181.2691 2.00561553 47751
Meteor 3-3
1 20305U 89086A 96116.20409903 .00000044 00000-0 10000-3 0 5450
2 20305 82.5525 161.2256 0008101 70.1537 290.0464 13.04427161311295
COBE
1 20322U 89089A 96115.05361797 -.00000104 00000-0 -38253-4 0 2066
2 20322 98.9452 131.1996 0008210 183.3886 176.7223 14.03451698329335
Kvant-2
1 20335U 89093A 96116.80924307 .00002701 00000-0 42083-4 0 5748
2 20335 51.6490 26.3814 0003883 248.0814 112.0855 15.57906232364963
GPS BII-05
1 20361U 89097A 96117.02219054 -.00000040 00000-0 10000-3 0 644
2 20361 55.9600 55.3438 0086305 129.6241 231.1177 2.00564815 37265
COSMOS 2054 (Altair-1)
1 20391U 89101A 96116.20763369 -.00000141 00000-0 00000+0 0 3320
2 20391 3.7478 63.7350 0002434 12.0914 195.9323 1.00276401 23468
SPOT 2
1 20436U 90005A 96116.92872493 .00000169 00000-0 10000-3 0 616
2 20436 98.7012 191.4622 0001573 66.9137 293.2201 14.20046082324428
UO-14
1 20437U 90005B 96115.23994949 -.00000021 00000-0 85097-5 0 1777
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2 20437 98.5447 199.2609 0012136 4.1944 355.9340 14.29917580326349
UO-15
1 20438U 90005C 96117.24799839 -.00000008 00000-0 13659-4 0 9746
2 20438 98.5358 199.2583 0010728 5.1938 354.9352 14.29229162326503
PACSAT
1 20439U 90005D 96113.73040941 -.00000007 00000-0 14230-4 0 9756
2 20439 98.5594 199.9090 0011946 9.5839 350.5576 14.29972310326147
DO-17
1 20440U 90005E 96116.76661585 .00000020 00000-0 24657-4 0 9766
2 20440 98.5615 203.5020 0012159 0.5565 359.5631 14.30114520326607
WO-18
1 20441U 90005F 96114.79630860 .00000031 00000-0 28679-4 0 9805
2 20441 98.5613 201.5100 0012692 6.2054 353.9283 14.30084279326328
LO-19
1 20442U 90005G 96116.75513417 .00000019 00000-0 24008-4 0 9765
2 20442 98.5610 203.9060 0012909 359.7311 0.3864 14.30192211326627
GPS BII-06
1 20452U 90008A 96115.92346532 .00000005 00000-0 10000-3 0 1537
2 20452 54.0306 168.9249 0059119 87.7756 273.0296 2.00564698 45746
MOS-1B
1 20478U 90013A 96115.22607292 -.00000044 00000-0 00000+0 0 9275
2 20478 99.1310 185.3573 0006052 42.4742 317.6885 13.93959712237036
DEBUT
1 20479U 90013B 96116.17809222 -.00000017 00000-0 41044-4 0 9759
2 20479 99.0291 151.2912 0539668 244.0880 110.3654 12.83339426291102
FO-20
1 20480U 90013C 96114.57252122 .00000023 00000-0 13122-3 0 8721
2 20480 99.0327 149.7950 0539943 248.2785 106.0021 12.83233179290886
MOS-1B R/B
1 20491U 90013D 96116.85107080 -.00000117 00000-0 -15961-3 0 2349
2 20491 99.0734 214.9674 0470813 56.9663 307.5768 13.02994693295043
LACE
1 20496U 90015A 96115.24211299 .00001029 00000-0 37376-4 0 6436
2 20496 43.1010 151.2874 0009620 57.7020 302.4807 15.35556623345533
Nadezhda 2
1 20508U 90017A 96116.96669295 .00000074 00000-0 62618-4 0 7500
2 20508 82.9484 281.6958 0044439 149.8105 210.5625 13.73507693308728
OKEAN 2
1 20510U 90018A 96115.51207760 .00000225 00000-0 27535-4 0 4930
2 20510 82.5192 275.6753 0019700 127.9968 232.3024 14.78593936331740
GPS BII-07
1 20533U 90025A 96114.83006701 -.00000033 00000-0 10000-3 0 1998
2 20533 54.5962 289.3711 0052912 76.4342 284.1477 2.00555887 44496
PegSat
1 20546U 90028A 96115.55662721 .00004763 00000-0 89439-4 0 9180
2 20546 94.1101 321.8703 0058226 211.1284 148.6548 15.46841738336714
HST
1 20580U 90037B 96115.23577635 .00000468 00000-0 31135-4 0 7975
2 20580 28.4687 205.3383 0005920 331.9712 28.0555 14.91047881130527
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ASTRO-D
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OKEAN 1-7
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RESURS 1-3
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Spektr
1 23579U 95024A 96116.80924307 .00002701 00000-0 42083-4 0 3256
2 23579 51.6490 26.3814 0003883 248.0814 112.0855 15.57906232 53275
GOES 9
1 23581U 95025A 96116.54494991 .00000078 00000-0 00000+0 0 1747
2 23581 0.1004 76.7166 0001728 253.9142 304.2766 1.00263389 15391
Helios 1A
1 23605U 95033A 96111.93210989 .00000076 00000-0 23641-4 0 2069
2 23605 98.1182 48.4698 0001729 63.9746 296.1634 14.63830068 42152
UPM SAT 1
1 23606U 95033B 96115.23825982 .00000174 00000-0 39483-4 0 1588
2 23606 98.0984 52.6178 0008518 2.8917 357.2343 14.67237165 42808
CERISE
1 23607U 95033C 96114.06412407 .00000100 00000-0 26552-4 0 832
2 23607 98.1017 51.3541 0006996 7.8767 352.2594 14.66936269 42659
TDRS 6
1 23613U 95035B 96115.51919581 .00000120 00000-0 00000+0 0 1600
2 23613 0.5733 83.4092 0002750 340.0799 185.9666 1.00279679 2843
Glonass 74
1 23620U 95037A 96117.35858389 -.00000017 00000-0 00000+0 0 1282
2 23620 64.8249 205.7076 0018356 168.8776 191.2023 2.13102978 5906
Glonass 75
1 23621U 95037B 96116.12786321 -.00000018 00000-0 00000+0 0 1307
2 23621 64.8380 205.7488 0017994 179.3955 180.6468 2.13102203 5875
Glonass 76
1 23622U 95037C 96117.12471624 -.00000018 00000-0 00000+0 0 1317
2 23622 64.8270 205.7200 0036651 165.7221 194.4213 2.13102575 5897
Prognoz-M2
1 23632U 95039A 96119.71503530 -.00002020 00000-0 00000+0 0 515
2 23632 69.7890 250.6390 8541526 320.3350 14.4910 0.26356200 721
SICH-1
1 23657U 95046A 96114.87245153 .00000075 00000-0 81024-5 0 738
2 23657 82.5318 250.5422 0026356 224.7685 135.1400 14.73465850 34833
RADARSAT
1 23710U 95059A 96116.93147409 -.00000044 00000-0 00000+0 0 1283
2 23710 98.5875 124.3642 0000943 93.8189 266.3102 14.29985435 24773
Glonass 77
1 23734U 95068A 96114.89600107 -.00000013 00000-0 00000+0 0 1029
2 23734 64.8321 205.7182 0018916 322.6346 37.2753 2.13101770 2811
Glonass 78
1 23735U 95068B 96116.99155833 -.00000018 00000-0 00000+0 0 927
2 23735 64.8286 205.6345 0007099 215.7125 144.2803 2.13125165 2852
Glonass 79
1 23736U 95068C 96116.53828777 -.00000018 00000-0 00000+0 0 809
2 23736 64.8209 205.6646 0007395 200.0675 159.9419 2.13101912 2847
XTE
1 23757U 95074A 96115.21895275 .00000579 00000-0 19391-4 0 472
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2 23757 22.9807 59.0936 0014229 136.4591 223.7026 14.97637353 17360
1996010D
1 23797U 96010D 96116.68508399 .00004509 00000-0 39433-3 0 584
2 23797 48.3499 264.6919 7338016 16.0856 358.2154 2.23464083 1481
Soyuz TM-23
1 23798U 96011A 96116.80924307 .00002701 00000-0 42083-4 0 624
2 23798 51.6490 26.3814 0003883 248.0814 112.0855 15.57906232 10035
Polar
1 23802U 96013A 96100.29104568 .00000124 00000-0 00000+0 0 206
2 23802 85.9647 26.8706 6628885 289.7689 13.3509 1.36953046 612
1996010E
1 23824U 96010E 96117.17783606 .00000031 00000-0 10000-3 0 446
2 23824 47.9193 265.5842 7251187 15.5683 358.1354 2.21637639 1464
GPS BIIA-25
1 23833U 96019A 96116.04982631 -.00000085 00000-0 00000+0 0 219
2 23833 54.7009 350.2300 0038403 147.8409 212.4333 2.00564634 592
1996019B
1 23834U 96019B 96117.18903299 .00001365 00000-0 56588-4 0 105
2 23834 35.0713 141.3362 0073538 74.3165 286.5650 15.21661757 4448
1996019C
1 23835U 96019C 96116.84805870 .00046686 00000-0 16021-2 0 486
2 23835 34.8825 324.5108 6021775 222.4347 70.7410 4.08154536 1217
INMARSAT III F1
1 23839U 96020A 96116.94606784 .00000134 00000-0 00000+0 0 256
2 23839 2.6463 283.9439 0005375 208.8374 89.7749 1.00281468 237
1996020B
1 23840U 96020B 96115.63138362 -.00000216 00000-0 00000+0 0 99
2 23840 21.9179 338.5600 6995084 198.6020 110.2314 2.24191226 461
ASTRA 1F
1 23842U 96021A 96116.96935148 .00000136 00000-0 00000+0 0 243
2 23842 0.0896 160.9248 0005124 217.1795 212.1615 1.00269610 157
1996021D
1 23845U 96021D 96114.54321850 -.00000136 00000-0 00000+0 0 103
2 23845 6.9631 195.5504 3951140 2.1106 359.2772 1.64348675 235
M-SAT 1
1 23846U 96022A 96113.63300806 -.00000263 00000-0 00000+0 0 103
2 23846 3.9541 4.2507 5647076 178.6187 183.9063 1.96678913 42
1996022B
1 23847U 96022B 96116.12735515 .00000333 00000-0 41776-3 0 94
2 23847 6.9838 3.3322 7273249 180.9851 176.1962 2.27326767 104
Priroda
1 23848U 96023A 96117.38702227 .00039104 00000-0 38399-3 0 117
2 23848 51.6501 23.4866 0023203 120.5444 239.7714 15.65305302 467
1996023B
1 23849U 96023B 96117.12634259 .00265307 11537-4 25709-3 0 94
2 23849 51.6590 24.3405 0068503 95.1767 62.9698 16.05954944 422
1996023C
1 23850U 96023C 96117.00927706 .00815186 10218-4 16474-2 0 83
2 23850 51.6390 26.0215 0327060 108.1819 255.2252 15.45529867 393
MSX
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1 23851U 96024A 96116.63539698 -.00000047 00000-0 00000+0 0 62
2 23851 99.3709 94.7803 0006568 278.0078 82.0880 13.97765356 330
1996024B
1 23852U 96024B 96116.89030208 .00062554 24985-5 24914-3 0 83
2 23852 96.5786 98.4078 0463835 283.7499 71.2529 15.07020024 209
Cosmos 2332
1 23853U 96025A 96117.18864458 -.00003140 -12670-5 -80872-4 0 50
2 23853 82.9615 74.7123 0868527 107.8034 261.9753 13.89632965 237
1996025B
1 23854U 96025B 96116.89955222 .00000733 -12705-5 72245-5 0 56
2 23854 82.9693 74.9327 0867061 108.2320 261.5088 13.90743470 184
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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843. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: roberto@netwide.net
Message-ID: <3181a91d.2428663@news.netwide.net>
Source record: 22560

SkyChart is for the Macintosh, and STSOrbit is a DOS program. If you're looking for something both powerful (2000+ satellites at the same time in one window, and unlimited windows open at the same time...), and at the same time easy to use, try LogSat Professional for Windows.

Roberto ik8sqi

844. Space Institute via the internet

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: gssi@gssi.edu
Message-ID: <318241BE.7DA3@gssi.edu>
Source record: 22561
Cross-posted to: rec.arts.startrek.tech,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,school.subjects.science,sci.astro,sci.astro.amateur,sci.astro.fits,sci.astro.planetarium,sci.cryonics,sci.energy,sci.energy.hydrogen,sci.engr,sci.engr.biomed,sci.engr.chem,

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Galileo Space Sciences Institute is now offering courses via the
internet! Check us out at http://www.gssi.edu. Or for introductory
info, send e-mail to gssi-info@mars.gssi.edu.
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845. ARLK029 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk029.1996@arrl.org>
Source record: 22562
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK029
ARLK029 Keplerian data

ZCZC SK29
QST de W1AW
Keplerian Bulletin 29 ARLK029
From ARRL Headquarters
Newington, CT April 27, 1996
To all radio amateurs

SB KEP ARL ARLK029
ARLK029 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96117.59171546 .00002639 00000-0 41259-4 0 4941
2 16609 51.6490 22.4579 0003814 245.1393 186.4249 15.57911452581964
AO-10
1 14129U 83058B 96108.73022969 -.00000074 00000-0 10000-3 0 4152
2 14129 26.2800 213.9904 5996717 7.9297 358.3577 2.05879049 68627
RS-10/11
1 18129U 87054A 96116.11959534 .00000103 00000-0 96676-4 0 02079
2 18129 82.9269 187.7596 0011029 311.1517 48.8687 13.72365076442892
UO-11
1 14781U 84021B 96116.01973096 .00000119 00000-0 27997-4 0 08914
2 14781 97.7973 109.1184 0010537 261.6262 98.3750 14.69446213649843
RS-12/13
1 21089U 91007A 96115.81105830 .00000011 00000-0 -39328-5 0 08896
2 21089 82.9213 228.9116 0030544 23.9509 336.3064 13.74068454261703
AO-13
1 19216U 88051B 96117.23121819 .00000878 00000-0 44485-3 0 1917
2 19216 57.3060 120.8784 7405998 37.7504 356.0236 2.09760437 28755
UO-14
1 20437U 90005B 96116.14961108 .00000001 00000-0 17048-4 0 01844
2 20437 98.5444 200.1529 0012083 1.9944 358.1286 14.29917847326479
RS-15
1 23439U 94085A 96116.05969347 -.00000039 00000-0 10000-3 0 01408
2 23439 64.8150 108.9976 0162842 208.5428 150.6502 11.27524623054796
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AO-16
1 20439U 90005D 96116.10943205 .00000019 00000-0 24274-4 0 09880
2 20439 98.5592 202.2477 0011815 3.4784 356.6460 14.29972853326487
DO-17
1 20440U 90005E 96116.13693699 .00000009 00000-0 20157-4 0 09968
2 20440 98.5615 202.8824 0012217 2.2610 357.8626 14.30114350326512
WO-18
1 20441U 90005F 96116.12565858 .00000053 00000-0 37159-4 0 09872
2 20441 98.5614 202.8179 0012745 2.2195 357.9044 14.30084706326515
LO-19
1 20442U 90005G 96116.75513417 .00000019 00000-0 24008-4 0 9765
2 20442 98.5610 203.9060 0012909 359.7311 0.3864 14.30192211326627
FO-20
1 20480U 90013C 96116.13187955 .00000028 00000-0 14289-3 0 08816
2 20480 99.0327 151.0595 0539916 244.7540 109.6673 12.83233360291084
AO-21
1 21087U 91006A 96116.08977932 .00000094 00000-0 82657-4 0 07164
2 21087 82.9407 1.0112 0036280 356.1945 3.8929 13.74567689262712
UO-22
1 21575U 91050B 96116.20233201 .00000031 00000-0 24626-4 0 6828
2 21575 98.3550 184.1513 0008770 62.1853 298.0216 14.37020808250459
KO-23
1 22077U 92052B 96115.99268221 -.00000037 00000-0 10000-3 0 05741
2 22077 66.0800 300.8366 0010847 312.0011 48.0081 12.86296693173963
KO-25
1 22828U 93061F 96116.22792047 .00000037 00000-0 32382-4 0 4466
2 22828 98.5795 192.9356 0011301 14.0382 346.1101 14.28138330102558
IO-26
1 22826U 93061D 96116.16421527 .00000034 00000-0 31246-4 0 04778
2 22826 98.5862 192.8205 0010614 26.5694 333.6016 14.27801738134439
AO-27
1 22825U 93061C 96116.16387713 .00000023 00000-0 27063-4 0 04911
2 22825 98.5823 192.6619 0009634 28.6394 331.5314 14.27693200134422
PO-28
1 22829U 93061G 96116.10371741 .00000038 00000-0 32779-4 0 04638
2 22829 98.5835 192.8709 0010937 15.8415 344.3111 14.28118804134454

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
April 30, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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846. Support space- earn income

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: john_house@onet.com
Message-ID: <4ltkfk$6c@saturn.gssi.edu>
Source record: 22563
Cross-posted to: rec.arts.startrek.tech,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,school.subjects.science,sci.astro,sci.astro.amateur,sci.astro.fits,sci.astro.planetarium,sci.cryonics,sci.energy,sci.energy.hydrogen,sci.engr,sci.engr.biomed,sci.engr.chem,

Support the Space Program while you earn an income! For more info,
send e-mail to: spaceinfo-html@mars.ouspadev.com (HTML version) or
spaceinfo-text@mars.ouspadev.com (text version).

847. NEED FAST CASH? READ AND TRY THIS!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: yoon@csugrad.cs.vt.edu
Message-ID: <4luo5v$p6l@csugrad.cs.vt.edu>
Source record: 22564
Cross-posted to: alt.binaries.sounds.music,comp.databases.ms-access,comp.sys.mac.scitech,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space,sci.nonlinear,soc.culture.austria,alt.sports.baseball.sf-giants,alt.fan.laurie.anderson,alt.asian-movies,alt.sports.baseball.cinci-reds,alt.sports.baseball.sd-padres,alt.sports.baseball.mn-twins,comp.databases.pick,comp.lang.sather,comp.os.ms-windows.nt.misc,soc.culture.venezuela

Hello! I've got some awesome news that I think you need to take two minutes to read if you have ever thought "How could I make some serious cash in a hurry???" , or been in serious debt, ready to do almost anything to get the money needed to pay off those bill collectors. So grab a snack, a warm cup of coffee, or a glass of your favorite beverage, get comfortable and listen to this interesting, exciting find!

Let me start by saying that I FINALLY FOUND IT! That's right! I found it! And I HATE GET RICH QUICK SCHEMES!! I hate those schemes like multi-level marketing, mail-order schemes, envelope stuffing scams, 900 number scams... the list goes on forever. I have tried every darn get rich quick scheme out there over the past 12 years. I somehow got on mailing lists for people looking to make money (more like 'desperate stupid people who will try anything for money!'). Well, when I was a teenager, these claims to 'get me rich quick' sounded irresistible! I would shell out $14.95 here, $29.95 there, $24.95 here, and another $49.95 there. I had maxed out my new Circuit City Card AND my Visa...I was desperate for money!! So, I gave them all a chance but failed at every one of them! Maybe they worked for some people, but not for me. Eventually, I just tossed that JUNK MAIL in the trash when I got the mail. I recognized it right away. I can smell a money scam from a mile away these days, SO I THOUGHT.... I thought I could sniff out a scam easily. WAS I WRONG!! ....I LOVE THE INTERNET!!!

I was scanning thru a NEWSGROUP and saw an article stating to GET CASH FAST!! I thought..."Here on the Internet?? Well, I'll just have to see what schemes could possibly be on the internet." The article described a way to MAIL A ONE DOLLAR BILL TO ONLY FIVE PEOPLE AND MAKE $50, 0000 IN CASH WITHIN 4 WEEKS! Well, the more I thought about it, the more I became very curious. Why? Because of the way it worked AND BECAUSE IT WOULD ONLY COST ME FIVE DOLLARS (AND FIVE STAMPS), THAT'S ALL I EVER PAY....EVER!!

Ok, so the $50,000 in cash was maybe an tough amount to reach, but it was possible. I knew that I could at least get a return of $1,000 or so. So I did it!! As per the instructions in the article, I mailed out ('snail mail' for you e-mail fanatics) a single dollar bill to each of the five people on the list that was contained in the article. I included a small note, with the dollar, that stated "Please Add Me

To Your List." I then removed the first position name of the five names listed and moved everyone up one position, and I put my name in position five of the list. This is how the money starts rolling in! I then took this revised article now with my name on the list and REPOSTED IT ON AS MANY NEWSGROUPS AND LOCAL BULLETIN BOARD MESSAGE AREAS THAT I KNEW. I then waited to watch the money come in...prepared to maybe receive about $1000 to $1500 in cash or so.... But what a welcome surprise when those envelopes kept coming in!!! I knew what they were as soon as I saw the return addresses from people all over the world -Most from the U.S., but some from Canada, even some from Australia! I tell you, THAT WAS EXCITING!! So how much did I get in total return? $1000? $5000? Not even!!! I received a total of $23,343!!! I couldn't believe it!!

I now have a brand new black Acura Integra to speak for, due to this!! Now after almost 8 months, I am ready to do it again!!! So maybe it was possible to get $50,000 in cash, I don't know, but IT COMPLETELY DEPENDS ON YOU, THE INDIVIDUAL! You must follow through and repost this article everywhere you can think of! The more postings you achieve will determine how much cash will arrive in your very own mailbox!! It's just too easy to pass up!!!

Let's review the reasons why you should do this: The only cost factors are for the five stamps, the 5 envelopes and the 5 one dollar bills that you send out to the listed names by snail mail (US Postal Service Mail). Then just simply repost the article (WITH YOUR NAME ADDED) to all the newsgroups and local BBS's you can. Then sit back and, (ironically), enjoy walking (you can run if you like! :o) down your driveway to your mailbox and scoop up your rewards!! We all have five dollars to put into such an easy effortless investment with SPECTACULAR REALISTIC RETURNS OF $15,000 to $25,000 in about 3-5 weeks! So HOLD OFF ON THOSE LOTTERY NUMBERS FOR TODAY,
EAT AT HOME TONIGHT INSTEAD OF TAKEOUT FROM McDONALDS AND INVEST FIVE

DOLLARS IN THIS AMAZING MONEY MAKING SYSTEM NOW!!! YOU CAN'T LOSE!!

So how do you do it exactly, you ask? I have carefully provided the most detailed, yet straightforward instructions on how to easily get this underway and get your cash on its way. SO, ARE YOU READY TO MAKE SOME CASH!!!?? HERE WE GO!!!

*** THE LIST OF NAMES IS AT THE END OF THIS ARTICLE. ***

OK, Read this carefully. Get a printout of this information, if you like, so you can easily refer to it as often as needed.

INSTRUCTIONS:

1. Take a sheet of paper and write on it the following: "Please add my name to your list". This creates a service out of this money making system and thus making it completely legal. You are not just randomly sending a dollar to someone, you are paying one dollar for a legitimate service. Make sure you include your name and address. I

assure you that, again, this is completely legal! For a neat little twist, also write what slot their name was in: "You were in slot 3", Just to add a little fun! This is all about having fun and making money at the same time!

2. Now fold this sheet of paper around a dollar bill ,(no checks or money orders), and put them into an envelope and send it on its way to the five people listed. The folding of the paper around the bill will insure its arrival to its recipient. THIS STEP IS IMPORTANT!!

3. Now listen carefully, here's where you get YOUR MONEY COMING TO YOUR MAILBOX. Look at the list of five people; remove the first name from position one and move everyone on the list up slot one on the list. Position 2 name will now move to the position 1 slot , position 3 will now become position 2, 4 will be 3, 5 will be 4. Now put your name, address, zipcode AND COUNTRY in position 5, the bottom position on the list.

4. Now upload this updated file to as many newsgroups and local bulletin boards' message areas & file section as possible. Give a catchy description of the file so it gets noticed!! Such as: "NEED FAST CASH?, HERE IT IS!" or "NEED CASH TO PAY OFF YOUR DEBTS??", etc. And the more uploads, the more money you will make, and of course, the more money the others on the list will make too. LET'S ALL TAKE CARE OF EACH OTHER BY BEING HONEST AND BY PUTTING FORTH 120 PERCENT INTO THIS PROFITABLE & AMAZING SYSTEM!!! You'll reap the benefits, believe me!!! Set a goal for the number of total uploads you'll post, such as 15-20 postings or more! Always have a goal in mind!!!
If you can UUE encode the file when uploading, that will make it easier for the people to receive it and have it downloaded to their hard drive. That way they get a copy of the article right on their computer without hassles of viewing and then saving the article from the File menu. Don't alter the file type, leave it as an MS-DOS Text file. The best test is to be able to view this file using Microsoft's Notepad for Windows 3.x or WordPad for Windows '95. If the margins look right without making the screen slide left or right when at the ends of the sentences, you're in business!

5. If you need help uploading, simply ask the sysop of the BBS, or "POST" a message on a newsgroup asking how to post a file, tell them who your Internet provider is and PEOPLE WILL ALWAYS BE GLAD TO HELP. I would try to describe how to do it but there are simply too many internet software packages with slightly different yet relatively simple ways to post or upload a file. Just ask for help or look in the help section for 'posting'. I do know that for GNN, you simply select 'POST' then enter a catchy description under the subject box, choose 'ATTACH', selecting 'UUE' and NOT 'TXT', then
choose 'Browse' to go look for the file. Find your text file CASH.TXT and click on it and choose 'OK'. Place a one line statement in the main body section of the message post screen. Something like "Download this to read how to get cash arriving in your mailbox with no

paybacks!" or whatever. Just make sure it represents its true feasibility, NOT something like..."Get one million dollars flooding in your mailbox in two days!" You'll never get ANY responses!

6. And this is the step I like. JUST SIT BACK AND ENJOY LIFE BECAUSE

CASH IS ON ITS THE WAY!! Expect to see a little money start to trickle in around 2 weeks, but AT ABOUT WEEKS 3 & 4, THE MONEY STORM WILL HIT YOUR MAILBOX!! All you have to do is take it out of the mailbox and try not to scream too loud (outside anyway) when you realize YOU HIT THE BIG TIME AT LAST!!

7. So go PAY OFF YOUR BILLS AND DEBTS and then get that something special you always wanted or buy that special person in your life (or the one you want in your life) a gift they'll never forget. ENJOY LIFE!

8. Now when you get low on this money supply, simply re-activate this file again; Reposting it in the old places where you originally posted and possibly some new places you now know of. Don't ever lose this file, always keep a copy at your reach for when you ever need cash. THIS IS AN INCREDIBLE TOOL THAT YOU CAN ALWAYS RE-USE TIME AND TIME AGAIN WHEN CASH IS NEEDED!

9. (This step added by Charles Reiley). Hello, This is exciting isn't it?! While I'm on the list, just add a note saying "Please include extra money tips" with your name & E-MAIL address, and I will (FOR FREE) send you some neat methods to increase the money you will receive with this plan.
Why?... Why not? I'm not a selfish jerk...I like helping out others. E-mail just makes it a touch easier and cheaper, too! After I drop off the list, I can no longer offer you this advice, obviously, but maybe someone else who gets my tips will offer and simply replace my name on this step number 9. Good luck and give this plan your all, it will definitely pay off!
Like Mike said, HAVE FUN WITH IT!!!

****
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****
*
THE NAMES LIST THE NAMES LIST THE NAMES LIST
****
*
HONESTY IS WHAT MAKES THIS PROGRAM SUCCESSFUL!!!

1. Paul Dittrich
1509 Trigg Lane
Wichita Falls, TX 76306
USA

2. Mike Sova
P.O. Box 381

Coldwater ON Canada
L0K 1E0

3. George Juniel
5000 Western Ave. #2100
Knoxville. TN 37921
USA

4. Joel Schmidt
7809 Shadowhill Way
Cincinnati, OH 45242
USA

5. Yo S. Yoon
1224 University City Blvd #D40
Blacksburg, VA 24060
USA

****
*

NOTE:
Try to keep a list of everyone that sends you a dollar and always keep an eye on the local postings of this file...Just to make sure that everyone is playing the game fairly. You know where your name should be.....

*** AGAIN, HONESTY IS THE BEST THING WE HAVE GOING FOR US ON THIS PLAN.

-Mike Dotson, Boulder, CO

848. Re: IC-970 is it good ??

Newsgroup: rec.radio.amateur.space
Date: 1996-04-27 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Apr27.201802.18196@ke4zv.atl.ga.us>
Source record: 22565

In article <4lgbuv$5r0@news.jf.intel.com> jgarver@ichips.intel.com (Jim Garver) writes:
>>>>The TS-790A should be avoided for satellite use. It has *serious*
>>>>design flaws for such usage. Not recomended. It can be Ok for
>>>>light duty terrestrial use.
>>>I disagree, while the TS-790 left some things out, it is still a good
>>>satellite rig.
>>Only if you are a masochist.
>
>Can't you guys be a little more specific? WHAT essential features are
>missing? WHAT design flaws, defficiencies?
>
>I don't mind turning knobs, that's part of the fun, isn't it? If I
>wanted everything automatic I would just go watch my TVRO dish.

Well, the user interface does suck for satellite, but that would be
tolerable if it were the only problem. The bigger problem is the
inability to use the narrow filter selections for satellite operation.
When operating satellite, you transmit on the main band unit (the only
one that transmits), and you perforce must receive on the sub-band
unit. But only the main band unit allows use of the narrow filters.
That means you can't use the narrow filters for sateliite operation,
and that means that your receive SNR suffers. That's mildly annoying
on voice, where the default sub-band filter is only a bit too wide,
but it is a serious problem for digital operation, or for CW if that's
your mode of choice.

The second problem of consequence is the poor thermal design. In short,
the PA modules get *very* hot when run at levels approaching their
rated output (mine wouldn't make the advertised output). This tends
to shorten their life considerably. In fact both modules eventually
failed on mine, the UHF module after 30 days and the VHF module shortly
after the rig came back from Kenwood with a replacement UHF module
(which was even further from making rated output power, though it drew
even more current). I didn't wait for it to burn up again, but traded
the radio for a FT736R, which has none of the problems the Kenwood
suffered. If you only operate SSB, and listen more than you transmit,
the modules' heatsinking may suffice. But if you are heavy into data,
they'll die quickly. This is really inexcusable in a large desktop
radio.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org

Lawrenceville, GA 30244 | |

849. Low-power (transverter) output of TS-520?

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: bruces@mpd.tandem.com
Message-ID: <4lujja$emq@news.mpd.tandem.com>
Source record: 22417
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space

Looking for the specs on the TS-520 when it's hooked up to a TV-502 2M transverter. I've successfully modified the transverter for receive on a TS-850, but there's nothing in the TV502 manual about drive input levels. THe 850 puts out 0-10dBm. Any info would be appreciated.

Thanks

--
| Bruce Sawtelle AX.25 : W3NJ @ W5SYT.TX.USA.NOAM |
| Tandem Computers, Inc. Internet : bruces @ mpd.tandem.com |
| 14231 Tandem Blvd. USENET : halley!bruces |
| Austin, Tx 78728 TCP/IP : 44.76.1.42 (w3nj.ampr.org) |

850. Re: R0MIR ACTIVE IN LOS ANGELES 21 APRIL

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4luq9j$8kn@paperboy.ids.net>
Source record: 22418

In article <4lfi38$gop@host-3.cyberhighway.net> John Jordan, wecare@teleport.com writes:

>[Shannon Lucid R0MIR] was yaking away this evening as well :) A fellow amateur and I
>drove up to another friends repeater (again) and "borrowed" it's
>antenna to try and make a contact, no luck, again.. :) Although she
>was S-9 she didn't seem to hear us, leading me to believe that perhaps
>she is using a split, I'm looking into this..

Shannon has been using 145.55 Mhz. simplex - and has been *very* active on the radio.

The reason you may think she's ignoring you is a simple fact of geometry. Forget all of your terrestrial experience with using 45 watts to go 40 miles. 5 watts is adequate to operate Mir with an omnidirectional antenna! (honest - did it in January).

Mir's high altitude puts it in potential contact with literally thousands of hams at the same time. If Mir was exactly overheard in Los Angeles (90 degree elevation) then its visible horizion would extend over the entire Southwest -- plus much of Mexico! It wouldn't be unreasonable for hams in Colorado, Oklahoma, and Nebraska to hear Mir -- even though it would be over 1000 miles away at that moment.

So the simple answer is that she may not have heard you because she was listening to somebody else who had a little more gain or luck.

I'm using a J-pole antenna with a 45 watt radio to talk to Shannon and have had a couple of successful contacts - plus a couple of cases where I've talked with buddies on simplex within a 40 mile radius after she's under our horizon. ;-)

Directional antennas do make a significant improvement in your gain, which will result in a higher quality signal. High power is *not* necessary - I talked to Sergei Adeev of the previous Mir crew with a 5 watt handheld using my J-pole antenna.

The crew operates on a Moscow timetable, which is about 7 hours difference from Eastern Daylight Time. So for East-coasters the crew is asleep from 3 pm to midnight EDT at the present. And the radio is fairly close to the flight engineer's bunk - so don't expect anybody to operate the radio while the others are asleep.

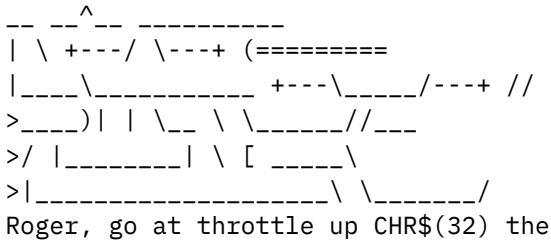
Shannon did receive some ham radio training on the ground, but did not have the time to get her license. She had has a bunch of on-the-job experience though! Her daughter and son-in-law do have their licenses -

I head her talking to them today (apr 27)

Expect that the best passes over the middle of the U.S. during the normal U.S. hours will be commonly spent with Shannon talking to her friends and family at the Johnson Space Center and catching up on office gossip and other minuate which doesn't make the official channels. I heard her talking with the STS-76 commander Kevin Chilton a couple of days ago.

One other key comment - remember that as the rare station they get to choose who they want to talk to and who to ignore. If you keep stepping over others or just keep blasting away they're more likely to shut off the radio than to respond.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

851. RS-10/11 & RS-12/13 ROBOT Uplink frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: Mark Saunders <tracker@indirect.com>
Message-ID: <3183AE3A.6E0D@indirect.com>
Source record: 22419

I'm looking for the 15m ROBOT uplink frequencies for both RS-10/11 and RS-12/13.

Regards,

Mark Saunders - KJ7BS
Glendale, AZ
PACKET: KJ7BS@KC7Y.AZ.USA.NOAM
INTERNET: tracker@indirect.com

852. need grid map

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: salty@southwind.net
Message-ID: <4m0us8$lig@opal.southwind.net>
Source record: 22420

73's kb0osa adam

853. Re: Antenna's for low orbit satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Apr28.163602.22690@ke4zv.atl.ga.us>
Source record: 22421

In article <3172B09C.5C7E@vogon.rain.com> Philip Peake <philip@vogon.rain.com> writes:
>On a personal note - I spend all day playing with computers, and have
>had internet access for more years than I want to remember, so packet
>seems terribly antiquated, unchallenging and generally boring to me. It
>is rather a pity that most recent satellites are totally packet
>oriented. I could be uncharitable, and say that this is due to a
>generation of electrical engineers who are only comfortable with digital
>techniques - and designing and building a high quality linear
>transponder is more difficult than a store and forward digital mailbox
>-- but, that might just be too uncharitable. Anyway, the plethora of "me
>too" flying digital mailboxes, and lack of linear transponders, I find
>personally dissapointing.

You're being more than uncharitable. The choice to go to digital
satellites was driven by a desire to allow low power stations
with simple antennas to fully participate in global satellite
communications, and to take advantage of the launch opportunities
for very small satellites. PSK encoding allows smaller signal
margins than analog encodings, so low power and simple antennas
become practical for the ground stations. And, because of the
very small size and limited power budget of the microsats, use
of digital also allows the satellite to more effectively use
its limited resources to serve the broadest possible range
of amateurs.

Saying that the satellite builders aren't comfortable with
analog transponder techniques flies in the face of Oscar 10
and Oscar 13, built by pretty much the same small group of
people who have brought us the microsats. They certainly
know how to build analog transponders, but chose not to
for the microsats for sound technical (and economic) reasons.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

854. QRM During MIR pass 4/21/96

Newsgroup: rec.radio.amateur.space
Date: 1996-04-28 00:00:00 UTC
From: bd703@scn.org
Message-ID: <DqJr7D.4HE@scn.org>
Source record: 22566

On Sunday April 21 1996, the MIR station passed near Washington and Oregon from 22:37 PDT to 22:47 PDT.

During this pass there were several Seattle area hams who attempted to make contact (myself included).

The conduct of a few of these stations was appalling. They kept calling for R0MIR even though it was VERY OBVIOUS that Shannon was trying very hard to have a QSO with a specific station!

Even when Shannon read back the call of the station she was talking to at the begining of each transmission, the same few hams would start calling as soon as Shannon unkeyed.

Here are the worst 3 offenders of that pass, as determined by listening to the recording I made of the whole sorry mess.

KC7FYQ made 16 transmissions and actually doubled with R0MIR a couple of times.

KI7JB made 14 transmissions; and K7KAI made 13 transmissions, including several that weren't even attempts to call R0MIR.

Despite the poor practices of some stations, R0MIR did make a contact with WA7TDZ , ?7AAW, KA5UAR, N6JLH, and N5TD.

The TDZ QSO must have been really a tough one, but Shannon did manage pretty well.

For the record, I made two transmissions. The first just before R0MIR came on and the second when it seemed as if she had completed a QSO.

Kerwin, N7JGW
--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

855. Satellite Transmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: whitestone@netins.net
Message-ID: <4m1fb7$urr@insosf1.netins.net>
Source record: 22422

I have a satellite set up using the icom 970 H (35 w out) hy gain antennas with alt/az tracking preams ... etc. I seem to be able to hear something when I tranmit on the return but it is very weak. Is that because I need more power or is something else wrong. Have used the antennas and radio on local repeaters etc ... and it works ok. What is the normal amount of power required.

856. Re: RS-10/11 & RS-12/13 ROBOT Uplink frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: Bill Meara <w.meara@codetel.net.do>
Message-ID: <4m26g3$jfu@server2.codetel.net.do>
Source record: 22423

RS-10 Robot Uplink: 145.820, Downlink 29.403

RS-12 (Mode K) Robot Uplink: 21.129, Downlink 29.454

I've worked both Robots using a hand key. You need to get the CW at
almost exactly 20 wpm and you need to send precisely the correct
transmission.

Both Robots are FB hams! They give you a QSO number, say 73 and TNX!

Tip: Try to work the Robot on "off hours" i.e. 3 am! If more than one
station is trying to uplink to the robot, the machine seems to get
confused and "locked up" !

Good Luck and 73 Bill N2CQR/HI8

857. Re: Satellite Transmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: "George J. Molnar" <gmolnar@interealm.com>
Message-ID: <3184C8A3.6F8F@interealm.com>
Source record: 22424

KE0PV wrote:
>
> I have a satellite set up using the icom 970 H (35 w out) hy gain antennas
> with alt/az tracking preams ... etc. I seem to be able to hear something when
> I tranmit on the return but it is very weak. Is that because I need more
> power or is something else wrong. Have used the antennas and radio on local
> repeaters etc ... and it works ok. What is the normal amount of power
> required.

Here's the key: Your signals should be comparable to the others
in the satellite passband, and not stronger than the beacon. If they,
too, are weak, you need to improve your receive setup. If everyone
else is strong, and you are weak, check the transmit side.

Power levels differ from bird to bird, so a single number isn't
available, sorry.

One more thing, an antenna that works well on the repeater subbands
may not work at all well in the satellite portion, particularly at
70cm. Gain falls off rapidly away from resonance, and if your uplink
antenna is tuned for repeater use, it may be doing a very poor job
many MHz away in the satellite portion of the band.

73
--
George J. Molnar
Highlands Ranch, Colorado
Amateur Radio: KF2T@N0QCU.#NECO.CO.USA.NOAM
http://www.interealm.com/p/gmolnar/index.html

858. Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: Mike Lynn <100135.2612@CompuServe.COM>
Message-ID: <4m2r3n$47k$2@mhafn.production.compuserve.com>
Source record: 22425

Anyone,

What would be the best first satellite to work on in the 2 meter

band.

any info would be great.

Mike

100135.2612@compuserve.com

--
Mike Lynn
Comms Guru
lynnm@westpac.demon.co.uk
compuserve 100135,2612

859. SatTrack for Linux

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: Buck Evans <bevans@net2.intserv.com>
Message-ID: <318511C1.34B6@net2.intserv.com>
Source record: 22426

Hi Everyone de N3VZL--

I'm trying to compile SatTrack for Linux and failing miserably. Slackware v 1.2.3 with X11R6. I've tracked it
down to the fact that the Makefile can't find any of the X11 include files, but they are there, and the
environment variable set statements look fine.

The box is discon right now, so I don't have the body of the Makefile available at this time.

Has anyone else had problems compiling the app?

TvmIA and 73

Steve
N3VZL

pl reply to group or steve@gnosis.slac.com, not here

860. Re: Satellite Transmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-04-29 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Apr29.144702.28024@ke4zv.atl.ga.us>
Source record: 22427

In article <4m1fb7$urr@insosf1.netins.net> whitestone@netins.net (KE0PV) writes:
>I have a satellite set up using the icom 970 H (35 w out) hy gain antennas
>with alt/az tracking preams ... etc. I seem to be able to hear something when
>I tranmit on the return but it is very weak. Is that because I need more
>power or is something else wrong. Have used the antennas and radio on local
>repeaters etc ... and it works ok. What is the normal amount of power
>required.

You don't say which satellite you're trying to use. For Oscar 10 and 13,
35 watts and gain yagis should be sufficient to put your downlink signal
equal to the beacon. Does the beacon sound strong to you? If it doesn't,
you may have one of several problems. If you aren't using a mast mount
preamp, you should be. Or there may be a problem with your Rx antenna.
Or you could be off-pointed from the satellite, or using the wrong
polarization sense. If the beacon does sound strong to you, then the
problem is likely high loss cables to your uplink antenna, or a problem
with the uplink antenna itself, or you may be using the wrong polarization
sense. Or it may be that your Tx antenna isn't boresighted with your
Rx antenna.

If you're trying to use one of the LEOs, then 35 watts is *more*
than enough uplink power (5 watts should be sufficient). Again,
troubleshoot as noted above. Make sure you're receiving the beacon
strongly first (typically S9 or so). This will tell you that your
receiving system is Ok. If your downlink signal is still weak
compared to the beacon, then look for loss terms in the Tx feedline
and antenna.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

861. Re: SatTrack for Linux

Newsgroup: rec.radio.amateur.space
Date: 1996-04-30 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dqo7zM.Ls5@pe1chl.ampr.org>
Source record: 22428

In <318511C1.34B6@net2.intserv.com> Buck Evans <bevans@net2.intserv.com> writes:

>Hi Everyone de N3VZL--

> I'm trying to compile SatTrack for Linux and failing miserably. Slackware v 1.2.3 with X11R6. I've tracked it
>down to the fact that the Makefile can't find any of the X11 include files, but they are there, and the
>environment variable set statements look fine.

> The box is discon right now, so I don't have the body of the Makefile available at this time.

> Has anyone else had problems compiling the app?

It compiles without problem here, after setting the correct options and
paths in the Makefile. There are many examples, so this should be no
problem.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

862. Re: SatTrack for Linux

Newsgroup: rec.radio.amateur.space
Date: 1996-04-30 00:00:00 UTC
From: Manfred Bester <manfred@ssl.berkeley.edu>
Message-ID: <3186577E.5436@ssl.berkeley.edu>
Source record: 22429

Buck Evans wrote:
>
> Hi Everyone de N3VZL--
>
> I'm trying to compile SatTrack for Linux and failing miserably.
> Slackware v 1.2.3 with X11R6. I've tracked it down to the fact that
> the Makefile can't find any of the X11 include files, but they are
> there, and the environment variable set statements look fine.
>
> Steve
> N3VZL

Steve,

the most common problem (really the only one) encountered when building the SatTrack code is that the location of the X11 include files and the X11 libraries is not specified right. Since that is different for each operating system the user has to do a little editing here. There are two lines in the SatTrack Makefile that deal with this issue. The first one tells the compiler where the X11 include files are. One of those files needed is X11/Xlib.h. If for instance on your system the X11 directory is under /usr/include then you need to specify the following line in the Makefile:

X11 = /usr/include

Then at least the compilation should work well. The next step is to tell the linker where the X11 libraries are. If you find the file libX11.a on your system under say /usr/lib then you need to specify the other line in the Makefile for X11R5 as

LX11 = -L/usr/lib -lX11 -lXt

and for X11R6 as

LX11 = -L/usr/lib -lX11 -lXt -lICE -lSM

That really should work (and has on literally thousands of systems all over the world).

Also, make sure you got the latest publicly released revision of SatTrack (V3.1.4). It can be found on the SatTrack web page at:

http://www.primenet.com/~bester/sattrack.html

Best regards,
-Manfred

--
Manfred Bester
http://ssl.berkeley.edu/isi_www/satpasses.html
Space Sciences Laboratory manfred@ssl.berkeley.edu
University of California
Berkeley, CA 94720

863. Help!)scar-13 antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-04-30 00:00:00 UTC
From: jaggarao@globalone.net
Message-ID: <4m5sc9$k15@news.global1.net>
Source record: 22430

I am planning to try oscar-13. Is it possible to use a seperate
5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
for a few months. I can pump in about 70 W on 70 cm.
Any suggestions on 2 mtr pre-amp. I realise that the antenna
system is very comprimised. Jag AA2LJ

864. ARLK030 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-04-30 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk030.1996@arrl.org>
Source record: 22431
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK030
ARLK030 Keplerian data

ZCZC SK30
QST de W1AW
Keplerian Bulletin 30 ARLK030
From ARRL Headquarters
Newington, CT April 30, 1996
To all radio amateurs

SB KEP ARL ARLK030
ARLK030 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96121.04273177 -.00000622 00000-0 -15277-5 0 05135
2 16609 51.6506 5.1590 0004023 264.2359 95.8176 15.57970167582501
HST
1 20580U 90037B 96121.26006550 .00000323 00000-0 16773-4 0 7991
2 20580 28.4691 166.6217 0006143 34.3961 325.7022 14.91049569131426
AO-10
1 14129U 83058B 96120.38655284 -.00000189 00000-0 10000-3 0 4189
2 14129 26.2463 212.1558 5993776 11.1720 357.6077 2.05879937 68867
RS-10/11
1 18129U 87054A 96121.15023738 .00000019 00000-0 47583-5 0 02189
2 18129 82.9269 184.0419 0010568 295.8907 64.1149 13.72364719443588
UO-11
1 14781U 84021B 96121.05868798 .00000116 00000-0 27436-4 0 09035
2 14781 97.7980 113.9327 0010588 244.2219 115.7873 14.69447707650580
RS-12/13
1 21089U 91007A 96120.83545019 .00000053 00000-0 39739-4 0 08969
2 21089 82.9220 225.1870 0030349 10.1864 349.9900 13.74069250262392
AO-13
1 19216U 88051B 96120.09157202 .00000333 00000-0 41791-3 0 01935
2 19216 57.3032 120.3064 7407084 37.9963 356.0105 2.09769685028815
UO-14
1 20437U 90005B 96121.11776027 .00000061 00000-0 40381-4 0 01887
2 20437 98.5440 205.0284 0011796 347.8663 12.2229 14.29919128327185
```

```
RS-15
1 23439U 94085A 96121.02655456 -.00000039 00000-0 10000-3 0 01448
2 23439 64.8148 100.9644 0162564 207.7145 151.5041 11.27524753055350
AO-16
1 20439U 90005D 96121.14736362 .00000019 00000-0 24098-4 0 09967
2 20439 98.5588 207.2001 0011664 348.7528 11.3394 14.29973374327204
DO-17
1 20440U 90005E 96121.24433215 .00000028 00000-0 27712-4 0 9776
2 20440 98.5614 207.9063 0011875 348.6123 11.4779 14.30115250327240
WO-18
1 20441U 90005F 96120.67343748 -.00000038 00000-0 23230-5 0 09891
2 20441 98.5611 207.2897 0012396 349.7554 10.3378 14.30084304327164
LO-19
1 20442U 90005G 96120.25316032 .00000023 00000-0 25709-4 0 09965
2 20442 98.5609 207.3468 0012698 350.4195 9.6741 14.30192716327120
FO-20
1 20480U 90013C 96121.12186231 -.00000020 00000-0 33675-4 0 08901
2 20480 99.0334 155.1069 0539857 233.4543 121.5699 12.83232711291726
AO-21
1 21087U 91006A 96121.11235367 .00000094 00000-0 82657-4 0 07084
2 21087 82.9408 357.2952 0036018 342.8189 17.1743 13.74567807263403
UO-22
1 21575U 91050B 96121.14596583 .00000001 00000-0 14634-4 0 06883
2 21575 98.3538 188.9483 0008746 49.6345 310.5611 14.37021180251164
KO-23
1 22077U 92052B 96120.96870532 -.00000037 00000-0 10000-3 0 05805
2 22077 66.0797 290.4170 0011288 311.0950 48.9093 12.86296824174606
KO-25
1 22828U 93061F 96121.13219585 -.00000003 00000-0 16128-4 0 04502
2 22828 98.5788 197.7525 0011265 0.7476 359.3721 14.28138632103253
IO-26
1 22826U 93061D 96121.13972607 -.00000019 00000-0 98405-5 0 04822
2 22826 98.5853 197.7071 0010415 14.8015 345.3470 14.27801525135147
AO-27
1 22825U 93061C 96121.20984707 -.00000011 00000-0 13009-4 0 4708
2 22825 98.5811 197.6185 0009356 15.5221 344.6242 14.27693401135145
PO-28
1 22829U 93061G 96121.14818283 .00000045 00000-0 35388-4 0 04711
2 22829 98.5829 197.8270 0011025 1.2025 358.9179 14.28119538135170

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
May 4, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

865. KC Tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-04-30 00:00:00 UTC
From: "John R. Moore" <jrmoore@pop.jaxnet.com>
Message-ID: <3186D7E0.40CC@pop.jaxnet.com>
Source record: 22432

Just wondering is there anyone out there that has the KC Tracker
working under Windows 95. I can restart in dos and everything
works wonderful. But so far cant get the DRV.COM to come up
under windows 95. Any infor would be appreciated. Thanks.
John W5HUQ
jrmoore@jaxnet.com

866. Re: Tracking Multiple Sats Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <Dqp9t2.FGB@icon.rose.hp.com>
Source record: 22433

: >I find PCTRACK is the most flexible of the graphics prediction programs.
:
:
If you mean version 2.14, I agree. Version 3 caves in to the Windows thing,
and IMHO looses a lot of usability. I especially like the radar chart in the
high density view. It tells me at a glance where to point my antenna without
guessing or interpreting angles.

Greg KO6TH

867. RS-12 Questions + STS tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: dnorris@k7no.com
Message-ID: <4m6fpm$cnb@news.syspac.com>
Source record: 22434

A couple questions about RS-12 and STS satellite tracking program.

1) Is it still in mode K... 15 in/10 out?

2) Where can I find upgrades to STS? The last one I got was in 1995.
Or, in the alternative, is there an better shareware program available
on I'net?

Thanks in advance...

C. Dean Norris
Amateur Radio Station K7NO
e-mail to dnorris@k7no.com
http://www.syspac.com/~dnorris/

868. Re: Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: DaffyDuck@DaffyDuck.com
Message-ID: <4m6j7m$isf@sisko.dnaco.net>
Source record: 22435

Mike Lynn <100135.2612@CompuServe.COM> wrote:

>Anyone,
RS-10/11

>What would be the best first satellite to work on in the 2 meter

>band.

>any info would be great.

>Mike

>100135.2612@compuserve.com

>--
>Mike Lynn
>Comms Guru
>lynnm@westpac.demon.co.uk
>compuserve 100135,2612

Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

869. sunrise/sunset times

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: brent@network.ucsd.edu
Message-ID: <4m7bc5INNp8q@network.ucsd.edu>
Source record: 22436

Does anyone know of a program that will generate a listing of sunrise
and sunset times for a given location. I would like to be able to
generate say a month's worth, and dump it to a printer.

Please email. (It's not always easy to get on the net from here...)

Thanks,
Brent

==
Brent Jones PGP Public Key available
Antarctic Support Associates
U.S. Antarctic Program
==

870. Re: Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Message-ID: <4m7h1t$p98@niven.ksc.nasa.gov>
Source record: 22437

Right now, MIR is probably easier than RS-10/11 because no special equipment is required, just a 2 meter rig and a reasonable antenna. In fact, an HT with a suitable gain type antenna might even get through.

871. HAIR LOSS?..JAPAN'S LEADING TREATMENT MAKES MINOXIDIL OBSOLETE...

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: adachi@xnet.com
Message-ID: <4m7in5$i7e@flood.xnet.com>
Source record: 22438

Now available in the U.S. Pentadecanoic Acid Glyceride and FA-BAO.
World's leading treatments for thinning hair from Japan. 2.5X more
effective than minoxidil. Featured on CNN, NEWSWEEK,
New York Times. Doctor recommended. For free info,
please call 1-800-555-8655

872. satellite antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: Whitestone@netins.net
Message-ID: <4m7q7n$ah8@ng1.icn.state.ia.us>
Source record: 22439

What brand antennas would you recommend for satellite use ...

873. Re: Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: Will Flor <willf@rrgroup.com>
Message-ID: <3187A011.388B@rrgroup.com>
Source record: 22440

Roger E. Koss wrote:
>
> Right now, MIR is probably easier than RS-10/11 because no special
> equipment is required, just a 2 meter rig and a reasonable antenna. In
> fact, an HT with a suitable gain type antenna might even get through.

Yes, indeed. My friend Jared Peck KB9LTV has done exactly that, with an
ADI 2-meter HT and a quarter-wave groundplane at 14 feet.

73 de Will Kb9JTT

874. Re: QRM During MIR pass 4/21/96

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: jaminge@pb2esac.esac.pacbell.com
Message-ID: <4m8daj$a9s@gw.PacBell.COM>
Source record: 22441

In article <DqJr7D.4HE@scn.org>, SCN User <bd703@scn.org> wrote:
>
>On Sunday April 21 1996, the MIR station passed near Washington and Oregon
>from 22:37 PDT to 22:47 PDT.
>
>During this pass there were several Seattle area hams who attempted to make
>contact (myself included).
>
>The conduct of a few of these stations was appalling. They kept calling
>for R0MIR even though it was VERY OBVIOUS that Shannon was trying very hard
>to have a QSO with a specific station!
>
>Even when Shannon read back the call of the station she was talking to at
>the begining of each transmission, the same few hams would start calling
>as soon as Shannon unkeyed.
>
[edited]
>
>Despite the poor practices of some stations, R0MIR did make a contact
>with WA7TDZ , ?7AAW, KA5UAR, N6JLH, and N5TD.
>
>The TDZ QSO must have been really a tough one, but Shannon did manage pretty
>well.
>
[edited]

Pretty sad, isn't it, Kerwin.

I looked up the three callsigns you posted about, expecting to find
inexperienced refugees from 11 meters engaging in such behavior.
Well, that stereotype didn't hold much water.... All were old enough
to have learned better by now. Two even had higher grade licenses.

The newcomer would be Shannon herself. Let's hope she can see past
the few thoughtless ones to the real hams out here.

-John, KE6DTC
--

Proceed at your own risk (At whose risk were you proceding before?)
<jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
employer's lame posting software cuts off sigs after four lines of informa-

875. Re: Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: MIKSUORA@sara.cc.utu.fi
Message-ID: <4m853a$mrl@castor.cc.utu.fi>
Source record: 22442

In <4m2r3n$47k$2@mhafn.production.compuserve.com> Mike writes:

> Anyone,
>
>
>
> What would be the best first satellite to work on in the 2 meter
>
> band.

I had my first qso via RS-10 satellite. 2m up and 10m down,
very easy to work. The satellite has very sensitive receiver:
5..10 watts to a GP or dipole will do for the uplink (if you
work CW), and almost anything for the receiver antenna.

RS-10 is on low orbit: you can work stations 1000..2000 km away
for a 10-20 minute period during each pass.

Start with learning to find satellite cw beacon on 29.357 MHz,
then tune in to listen some ongoing QSO's on 29.360-400 down-
link band. Next step: transmit on the uplink 145.860-900 MHz
and locate your downlink signal. Then it's time for CQ!

Mike OH1NZQ

876. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
Message-ID: <4m8h2l$4l2@news.sanders.lockheed.com>
Source record: 22443
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

rob@pe1chl.ampr.org (Rob Janssen) wrote:
>In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
writes:
>
>>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
>>it can be a bit difficult to get used to, but it's a good rig. The
>Apparently pricing is different in the USA.
>In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
>(two bands, mains supply)

Amateur Electronic Supply has the following prices:

TS790A PS31 FT736R FP700
MSRP $2200 220 2500 280
Discount $1850 170 1870 240

At the time I bought the TS790, the price differences were even greater.

73,

Larry/NA5E

877. Re: Help!)scar-13 antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996May1.162408.9135@ke4zv.atl.ga.us>
Source record: 22444

In article <4m5sc9$k15@news.global1.net> jagg@globalone.net writes:
>I am planning to try oscar-13. Is it possible to use a seperate
>5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
>for a few months. I can pump in about 70 W on 70 cm.
>Any suggestions on 2 mtr pre-amp. I realise that the antenna
>system is very comprimised. Jag AA2LJ

You can make up for a poor uplink antenna by running more power,
but there's only so much a preamp can do for you on receive.
You need a decent 2m CP antenna. A KLM 14C would be the smallest
I'd suggest. If you're building your own, boom length needs to
be about 2.5 wavelengths for adequate performance.

ARR, Henry, and SSB Electronics all offer suitable preamps.
I've used the tiny ARR preamp mounted directly to the feedpoint
of the 2m antenna. The SSB Electronics unit can clamp to the
rear of the reflector on the boom so that only a very short
length of line is needed to the feedpoint. Swing the downlead
out the rear of the antenna rather than lacing it down the
boom to the mast. That'll cause less circularity disruption
and minimize off boresight patterns. RG8X following the preamp
is sufficient feedline for the receiving antenna. The uplink
antenna needs good low loss coax, of course. Belden 9913 is
about the minimum I'd recomend.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

878. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-05-01 00:00:00 UTC
From: Rick Prather <rprather@telis.org>
Message-ID: <31883106.14EB@telis.org>
Source record: 22445
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

LLEDLOW wrote:
>
> rob@pe1chl.ampr.org (Rob Janssen) wrote:
> >In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
writes:
> >
> >>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
> >>it can be a bit difficult to get used to, but it's a good rig. The
> >Apparently pricing is different in the USA.
> >In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
> >(two bands, mains supply)
>
> Amateur Electronic Supply has the following prices:
>
> TS790A PS31 FT736R FP700
> MSRP $2200 220 2500 280
> Discount $1850 170 1870 240
>
> At the time I bought the TS790, the price differences were even greater.
>
> 73,
>
> Larry/NA5E

The only trouble with this comparison is that you don't need a power
supply with the 736 (I assume that is what the FP700 is). It is built
in the 736.

Rick

879. Re: sunrise/sunset times

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <4m95mn$esm@news.onramp.net>
Source record: 22446

The OrbitTrack program will do this for any Lon/lat.
It is a Mac platform program. Shareware on most BBS systems

880. Re: Help!)scar-13 antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DqruEH.2qI@pe1chl.ampr.org>
Source record: 22447

In <4m5sc9$k15@news.global1.net> jaggarao@globalone.net (jagg) writes:

>I am planning to try oscar-13. Is it possible to use a seperate
>5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
>for a few months. I can pump in about 70 W on 70 cm.

Well, you should be quick because in a few months the satellite
will be the problem...

I have worked OSCAR 10 and 13 using a 2x15el crossed yagi on 70cm
and 2x6el crossed yagi for 2m. I used about 30 W max on 70cm.
The signal was not strong, but similar to the beacon.
(that is the correct level, many stations use too much power and
are stronger than the beacon)

>Any suggestions on 2 mtr pre-amp. I realise that the antenna
>system is very comprimised. Jag AA2LJ

I used a homemade preamp with a 3SK97, after a commercial preamp
turned out to be unusable because of too little preselection and
strong local VHF signals causing intermodulation.

It should be possible to make some contacts using your setup. Start
out by listening, and optimize the receive side.
The problem over here often was local QRM. No preamp will correct
that situation. When you are in a quiet environment, it should be
much easier.
Then try to locate your own signal using CW, and make sure it is not
stronger than the beacon.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

881. Re: SatTrack for Linux

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: J.Vandegeyn@mailbox.uq.oz.au
Message-ID: <4mae3r$pr9@hobyah.cc.uq.oz.au>
Source record: 22448

In <318511C1.34B6@net2.intserv.com>, Buck Evans <bevans@net2.intserv.com> writes:
>Hi Everyone de N3VZL--
>
> I'm trying to compile SatTrack for Linux and failing miserably. Slackware v 1.2.3 with X11R6. I've tracked it
>down to the fact that the Makefile can't find any of the X11 include files, but they are there, and the
>environment variable set statements look fine.
>
> The box is discon right now, so I don't have the body of the Makefile available at this time.
>
> Has anyone else had problems compiling the app?
>
>TvmIA and 73
>
>Steve
>N3VZL
>
>pl reply to group or steve@gnosis.slac.com, not here

set the LIBRARY_PATH env variable in /etc/.profile to the libs.
like

LIBRARY_PATH=/usr/lib:/usr/X11/lib:
export LIBRARY_PATH

Cheers Good luck
John VK4CJO

882. Questions from a Novice

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: RNROBERT@UConnVM.UConn.Edu
Message-ID: <1777BD1C8S86.RNROBERT@UConnVM.UConn.Edu>
Source record: 22449

Please fill me in...

I am a novice to the amateur radio hobby. I have recently started monitoring local radio, including emergency services, HAM, and air traffic with a basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)

I am particularly fascinated by air traffic radio transmissions, and would like to further my knowledge, and perhaps begin monitoring satellite and manned spacecraft transmissions. I have noticed that many of the postings to this group involve antennas and specific satellites. I also read the recent posting on space shuttle radio frequencies. I notice that many of the freqs are in ranges that my hand-held scanner is capable of receiving... If I find the proper frequencies, can I pull down space shuttle radio transmissions with my scanner? Do I need a special antenna?

I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are other spacecraft or satellites routinely rebroadcast in a manner such that I can receive them with my simple monitor?

What would be involved, in terms of equipment and expense, for a hobbyist to begin monitoring spaceborne radio transmissions?

Thank you for any replies,

Rob

883. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4mbcpo$las@blackbird.afit.af.mil>
Source record: 22450

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

884. Keps please?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-02 00:00:00 UTC
From: horse@magg.net
Message-ID: <4mkorm$bup@dopey.magg.net>
Source record: 22451

I would appreciate receiving the latest Keps, including Mir. Thanks.

horse@magg.net

885. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: ttaylor@trib.com
Message-ID: <4mblv6$1c1@news.tcd.net>
Source record: 22452

ghansen@accessone.com (Glenn Hansen) wrote:

>On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
>return call from Shannon. A real thrill for me and more than likely for
>Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
>the hang of it soon enough. Mir certainly had a solid strong signal to
>Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
>AR270 vertical up about 40ft.

>A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
>Thank you NR7F!!

>BTW, can anybody tell me the QSL route for Shannon/Mir??

It use to be that a person could make a mir contact with just an HT.
I did it myself quite a few times including on paket. But now with
everyone running 50 plus watts, it's almost impossible to get in on an
HT. With the no code license in effect, people seem to have forgotten
the minimum power rules.
Congradulations on your contact, try it with less power next pass.

>73 - Glenn - KB7PKC

886. Source code for SDP4

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: milliron@ix.netcom.com
Message-ID: <4mbosh$q9v@dfw-ixnews3.ix.netcom.com>
Source record: 22453

I am looking for source code for the SDP4 satellite propagation
model. I already have SGP4 (from sattrack, seesat et. al).
Any help would be greatly appreciated. Also I am interested in
any opinions about the accuracy of sattrack for satellites with
periods > 225 minuts.

Thanks...

887. Here is a money making scheme that WORKS! - cash.zip (1/1)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: ttaylor@trib.com
Message-ID: <4mbnuv$1ls@news.tcd.net>
Source record: 22454
Body handling: Inline uuencoded payload not displayed: cash.zip

```
[Inline uuencoded payload not displayed: cash.zip]
```

888. Upcoming 6 mtr DX in July from YL Land

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: GEORGE LIEPINS <ke4hw@mail.apcnet.com>
Message-ID: <3189EBDF.524D@mail.apcnet.com>
Source record: 22455
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.misc

Activating Rare Latvian Grid

As part of a 23cm EME experiment by the Latvian Amateur Radio League this summer, grid KO07kn will also be QRV on 6m between July 3rd to the 10th. The QTH is at the recently acquired Ventspils International Radio Astronomy Centre (a former Soviet military site) 22km northeast of Ventspils in Kurzeme province (Courland of Hanseatic League fame). The centre is being refurbished for civilian use by the Latvian Academy of Sciences with the help of the Swedish government. Principal operator will be the immediate past president of the LRAL, Vitauts Klimavicus using "YL3AG". All QSLs should be sent to him directly in Riga:-

V. Klimavicus
P.K. #111
Riga
LV - 1069
Latvia

73, George KE4HW

889. Yeasu FT-290

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: lewiss3@aol.com
Message-ID: <4mdv1c$hhr@newsbf02.news.aol.com>
Source record: 22456

I am considering this readio, an all mode for 2 meters. Can it be used to work satellites?

Lewis KC5PSX

890. Re: QRM During MIR pass 4/21/96

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960503104732.15628A-100000@qni.com>
Source record: 22457

John,
Did you really think that these QRM'ers were No code Techs from the
11 meter band ?
It would seem that these operators are seasoned DX'ers
who know how to get thru in a pile up!
Great operating skills they have learned on the hf bands running ssb..
Not quite the same game on FM !
;-)

From a no-code-tech

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 1 May 1996, John Minger wrote:

Much stuff deleted
> [edited]
>
> Pretty sad, isn't it, Kerwin.
>
> I looked up the three callsigns you posted about, expecting to find
> inexperienced refugees from 11 meters engaging in such behavior.
> Well, that stereotype didn't hold much water.... All were old enough
> to have learned better by now. Two even had higher grade licenses.
>
> The newcomer would be Shannon herself. Let's hope she can see past
> the few thoughtless ones to the real hams out here.
>
> -John, KE6DTC
> --
> --
> Proceed at your own risk (At whose risk were you proceding before?)
> <jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
> employer's lame posting software cuts off sigs after four lines of informa-
>
>

891. Re: Source code for SDP4

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <318A829A.1E7E@uiuc.edu>
Source record: 22458

William Milliron wrote:
>
> I am looking for source code for the SDP4 satellite propagation
> model. I already have SGP4 (from sattrack, seesat et. al).
> Any help would be greatly appreciated. Also I am interested in
> any opinions about the accuracy of sattrack for satellites with
> periods > 225 minuts.
>
> Thanks...

Check out the Project Spacetrack docs at Tom Kelso's web site. It is
a Tex document, but you can find the FORTRAN listings with a standard
text editor. I used this as the starting point for the SGP/SGP4 models
in WinOrbit. SDP4 and SDP8 are also listed.

73
Carl, K8CG

892. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: kd6fyk <kd6fyk@wco.com>
Message-ID: <318AFCB6.5336@wco.com>
Source record: 22459

Tim Taylor wrote:
>
> ghansen@accessone.com (Glenn Hansen) wrote:
>
> >On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
> >return call from Shannon. A real thrill for me and more than likely for
> >Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
> >the hang of it soon enough. Mir certainly had a solid strong signal to
> >Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
> >AR270 vertical up about 40ft.
>
> >A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
> >Thank you NR7F!!
>
> >BTW, can anybody tell me the QSL route for Shannon/Mir??
>
> It use to be that a person could make a mir contact with just an HT.
> I did it myself quite a few times including on paket. But now with
> everyone running 50 plus watts, it's almost impossible to get in on an
> HT. With the no code license in effect, people seem to have forgotten
> the minimum power rules.
> Congradulations on your contact, try it with less power next pass.
>
> >73 - Glenn - KB7PKC

the nocode rule has nothing to do with it!

73 sew----50.125usb---145.850fm etc.

893. REJECTED: Ham-Space Digest V96 #130

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Message-ID: <9605040418.AL00036@rtp41.rtp.dg.com>
Source record: 22460

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #130
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Fri, 3 May 96 Volume 96 : Issue 130

Today's Topics:
Antenna's for low orbit satellites
FT-736R vs TS-790 vs IC-820H
Help!)scar-13 antenna
QRM During MIR pass 4/21/96
Questions from a Novice
SatTrack for Linux
sunrise/sunset times

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 28 Apr 1996 16:36:02 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Antenna's for low orbit satellites

In article <3172B09C.5C7E@vogon.rain.com> Philip Peake <philip@vogon.rain.com> writes:
>On a personal note - I spend all day playing with computers, and have
>had internet access for more years than I want to remember, so packet
>seems terribly antiquated, unchallenging and generally boring to me. It
>is rather a pity that most recent satellites are totally packet
>oriented. I could be uncharitable, and say that this is due to a
>generation of electrical engineers who are only comfortable with digital

>techniques - and designing and building a high quality linear
>transponder is more difficult than a store and forward digital mailbox
>-- but, that might just be too uncharitable. Anyway, the plethora of "me
>too" flying digital mailboxes, and lack of linear transponders, I find
>personally dissapointing.

You're being more than uncharitable. The choice to go to digital
satellites was driven by a desire to allow low power stations
with simple antennas to fully participate in global satellite
communications, and to take advantage of the launch opportunities
for very small satellites. PSK encoding allows smaller signal
margins than analog encodings, so low power and simple antennas
become practical for the ground stations. And, because of the
very small size and limited power budget of the microsats, use
of digital also allows the satellite to more effectively use
its limited resources to serve the broadest possible range
of amateurs.

Saying that the satellite builders aren't comfortable with
analog transponder techniques flies in the face of Oscar 10
and Oscar 13, built by pretty much the same small group of
people who have brought us the microsats. They certainly
know how to build analog transponders, but chose not to
for the microsats for sound technical (and economic) reasons.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: Wed, 01 May 1996 20:50:30 -0700
From: Rick Prather <rprather@telis.org>
Subject: FT-736R vs TS-790 vs IC-820H

LLEDLOW wrote:
>
> rob@pe1chl.ampr.org (Rob Janssen) wrote:
> >In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
writes:
> >
> >>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
> >>it can be a bit difficult to get used to, but it's a good rig. The
> >Apparently pricing is different in the USA.
> >In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
> >(two bands, mains supply)
>
> Amateur Electronic Supply has the following prices:
>

> TS790A PS31 FT736R FP700
> MSRP $2200 220 2500 280
> Discount $1850 170 1870 240
>
> At the time I bought the TS790, the price differences were even greater.
>
> 73,
>
> Larry/NA5E

The only trouble with this comparison is that you don't need a power
supply with the 736 (I assume that is what the FP700 is). It is built
in the 736.

Rick

Date: Thu, 2 May 1996 09:30:16 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Help!)scar-13 antenna

In <4m5sc9$k15@news.global1.net> jaggarao@globalone.net (jagg) writes:

>I am planning to try oscar-13. Is it possible to use a seperate
>5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
>for a few months. I can pump in about 70 W on 70 cm.

Well, you should be quick because in a few months the satellite
will be the problem...

I have worked OSCAR 10 and 13 using a 2x15el crossed yagi on 70cm
and 2x6el crossed yagi for 2m. I used about 30 W max on 70cm.
The signal was not strong, but similar to the beacon.
(that is the correct level, many stations use too much power and
are stronger than the beacon)

>Any suggestions on 2 mtr pre-amp. I realise that the antenna
>system is very comprimised. Jag AA2LJ

I used a homemade preamp with a 3SK97, after a commercial preamp
turned out to be unusable because of too little preselection and
strong local VHF signals causing intermodulation.

It should be possible to make some contacts using your setup. Start
out by listening, and optimize the receive side.
The problem over here often was local QRM. No preamp will correct
that situation. When you are in a quiet environment, it should be
much easier.
Then try to locate your own signal using CW, and make sure it is not
stronger than the beacon.

Rob
--

+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

Date: 1 May 1996 19:16:35 GMT
From: jaminge@pb2esac.esac.pacbell.com (John Minger)
Subject: QRM During MIR pass 4/21/96

In article <DqJr7D.4HE@scn.org>, SCN User <bd703@scn.org> wrote:
>
>On Sunday April 21 1996, the MIR station passed near Washington and Oregon
>from 22:37 PDT to 22:47 PDT.
>
>During this pass there were several Seattle area hams who attempted to make
>contact (myself included).
>
>The conduct of a few of these stations was appalling. They kept calling
>for R0MIR even though it was VERY OBVIOUS that Shannon was trying very hard
>to have a QSO with a specific station!
>
>Even when Shannon read back the call of the station she was talking to at
>the begining of each transmission, the same few hams would start calling
>as soon as Shannon unkeyed.
>
[edited]
>
>Despite the poor practices of some stations, R0MIR did make a contact
>with WA7TDZ , ?7AAW, KA5UAR, N6JLH, and N5TD.
>
>The TDZ QSO must have been really a tough one, but Shannon did manage pretty
>well.
>
[edited]

Pretty sad, isn't it, Kerwin.

I looked up the three callsigns you posted about, expecting to find
inexperienced refugees from 11 meters engaging in such behavior.
Well, that stereotype didn't hold much water.... All were old enough
to have learned better by now. Two even had higher grade licenses.

The newcomer would be Shannon herself. Let's hope she can see past
the few thoughtless ones to the real hams out here.

-John, KE6DTC
--

Proceed at your own risk (At whose risk were you proceding before?)
<jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my

employer's lame posting software cuts off sigs after four lines of informa-

---

Date: Thu, 02 May 96 14:55:04 EDT
From: RNROBERT@UConnVM.UConn.Edu (Rob Robertson)
Subject: Questions from a Novice

Please fill me in...

I am a novice to the amateur radio hobby. I have recently started monitoring local radio, including emergency services, HAM, and air traffic with a basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)

I am particularly fascinated by air traffic radio transmissions, and would like to further my knowledge, and perhaps begin monitoring satellite and manned spacecraft transmissions. I have noticed that many of the postings to this group involve antennas and specific satellites. I also read the recent posting on space shuttle radio frequencies. I notice that many of the freqs are in ranges that my hand-held scanner is capable of receiving... If I find the proper frequencies, can I pull down space shuttle radio transmissions with my scanner? Do I need a special antenna?

I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are other spacecraft or satellites routinely rebroadcast in a manner such that I can receive them with my simple monitor?

What would be involved, in terms of equipment and expense, for a hobbyist to begin monitoring spaceborne radio transmissions?

Thank you for any replies,

Rob

Date: 2 May 1996 13:42:19 GMT
From: J.Vandegeyn@mailbox.uq.oz.au
Subject: SatTrack for Linux

In <318511C1.34B6@net2.intserv.com>, Buck Evans <bevans@net2.intserv.com> writes:
>Hi Everyone de N3VZL--
>
> I'm trying to compile SatTrack for Linux and failing miserably. Slackware v 1.2.3 with X11R6.
I've tracked it
>down to the fact that the Makefile can't find any of the X11 include files, but they are there,
and the
>environment variable set statements look fine.
>
> The box is discon right now, so I don't have the body of the Makefile available at this time.
>

> Has anyone else had problems compiling the app?
>
>TvmIA and 73
>
>Steve
>N3VZL
>
>pl reply to group or steve@gnosis.slac.com, not here

set the LIBRARY_PATH env variable in /etc/.profile to the libs.
like

LIBRARY_PATH=/usr/lib:/usr/X11/lib:
export LIBRARY_PATH

Cheers Good luck
John VK4CJO

Date: 2 May 1996 02:12:39 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: sunrise/sunset times

The OrbitTrack program will do this for any Lon/lat.
It is a Mac platform program. Shareware on most BBS systems

End of Ham-Space Digest V96 #130
****

894. RS-12 Questions + STS tra

Newsgroup: rec.radio.amateur.space
Date: 1996-05-03 00:00:00 UTC
From: Bill.White@3821-7.woodybbs.com
Message-ID: <653_9605041202@woodybbs.com>
Source record: 22461

Hello, OM,
By now you've probably gotten several messages saying that rs-12 is alive and doing fine. The 10 meter downlink is still loud and clear at my house. They have turned on the 2 meter downlink also, and I believe that you could probably get better reception on that band (haven't tried it yet. I can't comment on STS software.
Hope to work you on rs-12 soon.

Bill White-N5XYN
North Little Rock, ARK
--
|Fidonet: Bill White 1:3821/7
|Internet: Bill.White@3821-7.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

895. ARLK031 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk031.1996@arrl.org>
Source record: 22317
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK031
ARLK031 Keplerian data

ZCZC SK31
QST de W1AW
Keplerian Bulletin 31 ARLK031
From ARRL Headquarters
Newington, CT May 4, 1996
To all radio amateurs

SB KEP ARL ARLK031
ARLK031 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96124.12159969 .00001399 00000-0 24927-4 0 05196
2 16609 51.6503 349.7267 0003937 273.8865 86.1677 15.57985578582980
AO-10
1 14129U 83058B 96123.30090279 -.00000058 00000-0 10000-3 0 4197
2 14129 26.2428 211.7043 5992462 12.0200 357.6231 2.05879450 68925
RS-10/11
1 18129U 87054A 96124.13945991 .00000013 00000-0 -18855-5 0 02088
2 18129 82.9269 181.8333 0010378 286.7244 73.2763 13.72364670443994
UO-11
1 14781U 84021B 96123.98672925 .00000117 00000-0 27666-4 0 08938
2 14781 97.7982 116.7298 0010649 233.3935 126.6291 14.69448676651012
RS-12/13
1 21089U 91007A 96123.82095932 .00000029 00000-0 14575-4 0 08891
2 21089 82.9223 222.9733 0030216 2.2188 357.9096 13.74069108262805
AO-13
1 19216U 88051B 96122.47509327 -.00000038 00000-0 18342-3 0 01948
2 19216 57.3012 119.8276 7407756 38.2497 355.9625 2.09769513028863
UO-14
1 20437U 90005B 96124.12664064 -.00000013 00000-0 11888-4 0 01808
2 20437 98.5443 207.9817 0011515 339.7308 20.3416 14.29918809327617
RS-15
1 23439U 94085A 96124.04214846 -.00000039 00000-0 10000-3 0 01380
2 23439 64.8144 96.0868 0162675 207.1386 152.0965 11.27524741055698
```

```
AO-16
1 20439U 90005D 96124.08615684 -.00000010 00000-0 12879-4 0 09883
2 20439 98.5587 210.0887 0011558 340.4948 19.5797 14.29973410327628
DO-17
1 20440U 90005E 96124.11286950 .00000015 00000-0 22722-4 0 09915
2 20440 98.5616 210.7285 0011742 340.5334 19.5394 14.30115368327655
WO-18
1 20441U 90005F 96124.10176082 -.00000009 00000-0 13335-4 0 09867
2 20441 98.5611 210.6619 0012373 339.9212 20.1464 14.30084831327655
LO-19
1 20442U 90005G 96124.10098899 -.00000007 00000-0 14277-4 0 09928
2 20442 98.5614 211.1337 0012422 339.7664 20.3016 14.30192773327678
FO-20
1 20480U 90013C 96124.08468677 -.00000053 00000-0 -41035-4 0 08812
2 20480 99.0243 157.5046 0539804 226.7317 128.7527 12.83232530292103
AO-21
1 21087U 91006A 96124.09678201 .00000094 00000-0 82657-4 0 07026
2 21087 82.9410 355.0874 0035998 334.7675 25.1717 13.74567947263811
UO-22
1 21575U 91050B 96124.13999565 .00000020 00000-0 21131-4 0 07042
2 21575 98.3534 191.8543 0008701 41.9946 318.1908 14.37021631251594
KO-23
1 22077U 92052B 96124.54522074 -.00000037 00000-0 10000-3 0 5741
2 22077 66.0796 282.9281 0011289 310.3850 49.6182 12.86296968175063
KO-25
1 22828U 93061F 96124.14482012 .00000042 00000-0 34341-4 0 04669
2 22828 98.5788 200.7122 0011344 352.6483 7.4524 14.28139362103686
IO-26
1 22826U 93061D 96124.15306298 -.00000030 00000-0 53859-5 0 04764
2 22826 98.5791 200.6622 0009941 8.1845 351.9501 14.27801586135575
AO-27
1 22825U 93061C 96124.15332856 -.00000007 00000-0 14782-4 0 04936
2 22825 98.5802 200.5078 0009203 7.9415 352.1911 14.27693683135566
PO-28
1 22829U 93061G 96124.23091197 .00000031 00000-0 29840-4 0 4622
2 22829 98.5768 200.8527 0010409 353.5848 6.5197 14.28119738135610

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
May 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

896. Mir operating suggestions and thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4mge9m$a2q@news.cyberportal.net>
Source record: 22318

Hello to all .
I am Dave N1PPP and have operated Mir under many circustances and in many ways.. there is one clear rule the loudest
signal makes it.. however the person on the Mir station doesn't necessarilly want to talk to the loudest signal. He or she as it is
now has their own set of ideas needs, wants and desires.
I have found most of the crews on Mir get lonely after they have been up there for a month or two, but there are exceptions.
The soviet operating crews tend to be there to do business and only operate the station when and if they really have spare time
and have nothing else constructive to do, the americans, on the other hand try to use the radio to get in touch with friends and
relatives, and to stay in touch with American culture, activities, and interests.
The argumentative comments I have seen in this newsgroup amount to no more than childish tantrums.
Operators can be calling Mir from literally all over the Uninted States and Canada some are in phase and can hear, others are
out of phase and really don't know what is going on, or can't hear who is talking or what they are saying, there is always going
to be competition if an exotic station operates on a single frequency, and Mir is no exception. There are a few stations operating
kansas city trackers with 22 element beams and 600 watt amps and they are going to be heard or at least destroy any
possiblility of a 50 watt station making it through. If two of these powerful stations are competing there is little chance of any of
the smaller stations being heard, and for the good news.. most of the Mir crews like to talk to the little guys so if the big guys
don't get mad and jam the smaller stations (which happens) the Mir operator often calls the weaker signals. I taked to Norm
Thaggard regarding a school contact while at the drive up at a local McDonalds on a 5 watt HT and got my message through
before a local bad operator thought I was talking to Norm (another Ham locally) on the Mir freq and jammed me off. Norm
Thaggard remembered his callsign and never answered his calls.
The only suggestion I can constructively make is to be on your best behavior when you operate Mir behave as you would have
someone else behave. remember if you jam someone else you will get jammed too.
This radio is an important source of enjoyment and entertainment for the Mir crew so do your best to make it enjoyable for them
have something nice ready to tell them, a short joke a quick piece of sports news try to please them and you will be rewarded, I
have been called by Mir by many crews and personally thanked for being there to offer them a little enjoyment in what otherwise
is a rather spartan existance, and you can to.

Get the best antenna setup you can arrange, I built an azimuth elevation rotor from two old tv rotors and use a 13b2 vertically
polarized and generally have been able to make sucessfull contacts with 25 watts. at other times it is impossible to get through
with 150 watts. The conditions vary considerably and the number of people trying varies drastically and when there are a 1000
people putting out 50 watts of qrm each Mir hears nothing except junk, undecipherable and annoying and they shut the radio
off. If you are interested in Mir information and some interesting documents concerning Mir visit my web page at
http://www.cyberportal.net/dhend/dave1.html
I haven't been able to udate it recently but there are some very good up to date links and some messages from U8MIR and a
dissertation by Miles WF1F about conduct on the Mir frequency which is if nothing else informative.
Most Important
if you are not having fun. shut the dam thing off and look for something you can do to have fun..
73 DAVE

897. FS: TNC, Monitor, other stuff....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: Tim Murray <tamurray@iquest.net>
Message-ID: <DqwAuJ.GFy@iquest.net>
Source record: 22319
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.space,rec.radio.swap

I have the following items for sale - cleaning shack:

1. CTX 14" SVGA .28 monitor $95

2. 5 /12, 1.2 floppy drive $10

3. Mouse Systems COM 5 card, w/docs $25

4. AEA PK-88 TNC, w/box, docs $75

5. MFJ Packet/Mic switch for Icom $20

6. 6' Laplink serial cable $5

7. IMSI serial mouse, w/drivers $15

8. 14.4 Data / Fax modem, w/docs $25

9. EIDE controller card $10

10. HMC Super EIDE I/O controller card, docs $15

11. Realtex 256k SVGA card $35

12. Reveal VC200 1/2 meg SVGA card, docs $35

13. 486slc/33 motherboard $15

14. 230 watt power suplly, dual fan $25

Pleas contact Tim Murray KC4YDJ at tamurray@iquest.net, or
(317) 984-2005. Tnx es 73.....

898. Comment 05/04/96 11:58am

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: Ken.Ernandes@333.woodybbs.com
Message-ID: <659_9605042029@woodybbs.com>
Source record: 22320

Joe -

Please Post the follwoing ASAP:

The Larkfield Amateur Radio Club ARES/RACES Unit is planning an Amateur Satellite communications demonstration on Saturday May 11, 1996 at the Huntington Town Hall. Setup will begin at 08:30 AM. Huntington Town Hall is located on Route 25A in Huntington, Long Island. This demonstration is open to the public. Amateur radio operators interested in Satellite Communications are especially encouraged to attend.

These demonstrations provide and introduction to Satellite Communications to newcomers and operator proficiency to those already experienced in this aspect of the hobby. Bring headphones with a 0.25" mono adapter if you have them...

Please refer all questions to Ken Ernandes, N2WWD

--
|Fidonet: Ken Ernandes 1:2619/333
|Internet: Ken.Ernandes@333.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

899. HF Satellite Beam

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: Edward Oros <ac3l@ix.netcom.com>
Message-ID: <318B8E4B.23F1@ix.netcom.com>
Source record: 22321

Anyone interested in a 10/15 meter beam for use with
the HF satellites should check out the site...

http://www.4w.com/ham/antenna

900. NORAD Two-Line Orbital Element Sets (TLE805)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4meere$pte@blackbird.afit.af.mil>
Source record: 22462

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #805 -
Alouette 1
1 00424U 62049A 96121.23929008 .00000061 00000-0 61712-4 0 1926
2 00424 80.4553 331.0604 0022395 154.5377 205.6881 13.67867180675787
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
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2 23851 99.3726 102.5241 0006132 275.5797 84.4652 13.97760768 1213
1996024B
1 23852U 96024B 96123.86059090 .00041793 21018-5 16743-3 0 142
2 23852 96.5795 104.4043 0460749 259.0987 95.8092 15.07676567 1250
Cosmos 2332
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1 23853U 96025A 96124.24484081 .00004932 -12896-5 10228-3 0 106
2 23853 82.9588 69.2862 0869117 87.3747 282.6485 13.89693371 1213
1996025B
1 23854U 96025B 96124.09450392 .00005134 -12936-5 10000-3 0 184
2 23854 82.9605 69.3988 0870964 87.2567 282.7315 13.90544010 1181
SAX
1 23857U 96027A 96122.11011787 -.00005789 00000-0 -63513-3 0 55
2 23857 3.9549 105.6524 0014291 0.0060 0.0057 14.91517646 133
1996027B
1 23858U 96027B 96122.09777531 -.00015454 00000-0 -80394-3 0 44
2 23858 3.9943 108.5471 0090105 75.4905 285.5250 15.13696967 131
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1 23859U 96024C 96123.93810714 -.00000046 00000-0 00000+0 0 83
2 23859 99.3680 102.2326 0089378 89.3725 271.7682 13.96303573 192
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

901. REJECTED: Ham-Space Digest V96 #131

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
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To: Ham-Space@ucsd.edu
Subject: Ham-Space Digest V96 #131
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Fri, 3 May 96 Volume 96 : Issue 131

Today's Topics:
FT-736R vs TS-790 vs IC-820H
NORAD Two-Line Orbital Element Sets (TLE805)
QRM During MIR pass 4/21/96
REJECTED: Ham-Space Digest V96 #130
Satellite Transmissions
Source code for SDP4 (2 msgs)
Upcoming 6 mtr DX in July from YL Land

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Apr 1996 23:45:04 GMT
From: LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
Subject: FT-736R vs TS-790 vs IC-820H

I've used both the FT-736 and TS-790. I own the latter. Ergonomically
it can be a bit difficult to get used to, but it's a good rig. The
FT-736 is very goo, too, and perhaps easier to learn to use. Trouble is,
it's more expensive.

73,

Larry/NA5E

Date: 4 May 1996 02:19:26 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE805)

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #805 -
Alouette 1
1 00424U 62049A 96121.23929008 .00000061 00000-0 61712-4 0 1926
2 00424 80.4553 331.0604 0022395 154.5377 205.6881 13.67867180675787
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
1 03029U 67111A 96118.42533716 -.00000114 00000-0 10000-3 0 4880
2 03029 14.8990 0.3118 0009590 275.5859 347.4786 1.00273114104254
Starlette
1 07646U 75010A 96121.90298211 -.00000166 00000-0 -16288-4 0 9665
2 07646 49.8267 335.3071 0206473 74.2622 288.0940 13.82190037 72428
LAGEOS
1 08820U 76039A 96123.19271518 .00000014 00000-0 10000-3 0 1900
2 08820 109.8497 10.2538 0043723 138.7121 221.7016 6.38664779210894
ETS-2
1 09852U 77014A 96110.29826175 -.00000091 00000-0 10000-3 0 705
2 09852 13.1653 33.6505 0003404 91.1507 268.8070 0.99994621 17054
GOES 2
1 10061U 77048A 96118.42129942 .00000065 00000-0 10000-3 0 6691
2 10061 12.2919 37.6824 0010610 132.5265 21.9770 1.00289052 13935
IUE
1 10637U 78012A 96123.62693465 -.00000169 00000-0 10000-3 0 2485
2 10637 35.7259 83.8496 1357674 55.5268 271.0486 1.00250297 19477
GPS BI-01
1 10684U 78020A 96121.83679859 -.00000052 00000-0 10000-3 0 4458
2 10684 64.9663 25.2853 0061309 163.6416 196.5976 1.98069378118471
GPS BI-02
1 10893U 78047A 96119.70729909 -.00000015 00000-0 10000-3 0 2406

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2 10893 63.1856 262.5876 0230972 14.9537 345.6740 2.01627167131815
GOES 3
1 10953U 78062A 96118.39288110 -.00000128 00000-0 10000-3 0 6520
2 10953 11.2843 40.5370 0001786 336.8923 238.3952 1.00275106 18546
SeaSat 1
1 10967U 78064A 96124.21970402 -.00000021 00000-0 37470-4 0 4832
2 10967 107.9879 81.7041 0001603 246.2639 113.8337 14.38101762934981
GPS BI-03
1 11054U 78093A 96123.49745681 -.00000013 00000-0 10000-3 0 4032
2 11054 62.8649 261.4852 0046473 180.2522 179.6896 1.93505239127777
Nimbus 7
1 11080U 78098A 96120.18015862 -.00000048 00000-0 -57859-5 0 5822
2 11080 98.9523 344.7938 0009661 97.1287 263.0967 13.83695116884390
GPS BI-04
1 11141U 78112A 96121.63787583 -.00000055 00000-0 10000-3 0 405
2 11141 64.9811 27.6409 0049761 27.8767 332.4067 1.92894718 16967
GPS BI-05
1 11690U 80011A 96123.97744078 -.00000040 00000-0 10000-3 0 196
2 11690 65.3085 26.7047 0144793 192.3054 167.3918 2.00571948133293
GPS BI-06
1 11783U 80032A 96111.35476604 -.00000019 00000-0 10000-3 0 1410
2 11783 62.3340 255.6026 0226620 29.8497 331.3676 2.03456628117658
GOES 5
1 12472U 81049A 96119.86508792 -.00000007 00000-0 10000-3 0 9294
2 12472 8.0943 50.6814 0005382 39.4391 320.5271 1.00208703 12603
Cosmos 1383
1 13301U 82066A 96122.66505369 .00000014 00000-0 -95106-6 0 4910
2 13301 82.9329 167.9101 0028355 11.1649 349.0125 13.68074055691013
LandSat 4
1 13367U 82072A 96124.25848585 .00122462 00000-0 26597-1 0 9049
2 13367 98.0782 176.5288 0005900 283.8732 76.1795 14.57255957733996
DMSP B5D2-1
1 13736U 82118A 96124.24315300 .00000056 00000-0 41900-4 0 9955
2 13736 98.6250 313.3526 0008701 151.9898 208.1753 14.25782503694666
IRAS
1 13777U 83004A 96123.52564318 .00000386 00000-0 29591-3 0 3030
2 13777 98.9652 309.9928 0011390 219.5979 140.4362 13.99256326346988
Cosmos 1447
1 13916U 83021A 96124.22679497 .00000054 00000-0 41554-4 0 5877
2 13916 82.9449 224.2827 0036617 279.2934 80.4082 13.74339100657566
TDRS 1
1 13969U 83026B 96123.15563869 -.00000294 00000-0 00000+0 0 5824
2 13969 8.9165 44.1111 0004710 0.3729 172.8650 1.00415043 20924
GOES 6
1 14050U 83041A 96122.18371243 -.00000254 00000-0 10000-3 0 5087
2 14050 6.8854 54.2905 0004649 10.7283 145.5640 1.00267412105725
OSCAR 10
1 14129U 83058B 96123.30090279 -.00000058 00000-0 10000-3 0 4197
2 14129 26.2428 211.7043 5992462 12.0200 357.6231 2.05879450 68925
LandSat 5
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1 14780U 84021A 96121.21819373 .00000027 00000-0 16435-4 0 4658
2 14780 98.3361 179.0133 0003401 74.6107 285.5466 14.57049002646946
UoSat 2
1 14781U 84021B 96121.94390985 .00000156 00000-0 34147-4 0 8806
2 14781 97.7980 114.7780 0010545 241.3316 118.6834 14.69448368650719
GPS BI-09
1 15039U 84059A 96124.01128917 -.00000042 00000-0 10000-3 0 4092
2 15039 64.6331 21.9049 0082612 19.0912 341.2483 1.92302332 86564
Cosmos 1574
1 15055U 84062A 96121.97847765 .00000037 00000-0 22724-4 0 7874
2 15055 82.9526 280.7521 0028680 110.5148 249.9089 13.73634356594504
GPS BI-10
1 15271U 84097A 96122.59588800 -.00000017 00000-0 10000-3 0 1453
2 15271 62.0461 255.7671 0154261 359.1471 0.7948 2.00611840 84337
Cosmos 1602
1 15331U 84105A 96123.62870175 .00000142 00000-0 13724-4 0 4711
2 15331 82.5344 155.7175 0021991 95.8132 264.5590 14.84748210626219
NOAA 9
1 15427U 84123A 96123.77353334 .00000057 00000-0 53961-4 0 6800
2 15427 98.9523 188.6634 0016190 81.3743 278.9259 14.13777777587212
GPS BI-11
1 16129U 85093A 96115.95746979 -.00000074 00000-0 10000-3 0 7187
2 16129 65.3039 25.7380 0156495 84.7282 277.0767 1.89367971 20912
Mir
1 16609U 86017A 96123.86502842 .00000710 00000-0 15907-4 0 5057
2 16609 51.6500 351.0129 0003973 273.5652 86.4865 15.57982994582948
SPOT 1
1 16613U 86019A 96122.57170972 .00000089 00000-0 62356-4 0 9341
2 16613 98.7330 191.4516 0001793 63.6990 296.4375 14.20008458213698
Cosmos 1766
1 16881U 86055A 96120.29736724 .00000199 00000-0 21092-4 0 3852
2 16881 82.5182 216.5593 0019986 133.2229 227.0642 14.83725570526590
EGP
1 16908U 86061A 96124.19713044 -.00000083 00000-0 10000-3 0 836
2 16908 50.0092 135.3187 0011524 258.1759 101.7783 12.44414592110803
NOAA 10
1 16969U 86073A 96123.84045517 .00000006 00000-0 20681-4 0 6039
2 16969 98.5223 122.2102 0013827 121.9868 238.2659 14.24980574500147
MOS-1
1 17527U 87018A 96123.21453556 -.00000043 00000-0 00000+0 0 4114
2 17527 98.9445 186.2404 0020104 89.3006 271.0461 14.00408391468550
GOES 7
1 17561U 87022A 96123.25817734 -.00000102 00000-0 10000-3 0 8804
2 17561 2.9676 69.8139 0005025 354.1491 144.0255 1.00358083 16845
Kvant-1
1 17845U 87030A 96122.96704365 -.00002776 00000-0 -29739-4 0 6189
2 17845 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261516919
DMSP B5D2-3
1 18123U 87053A 96123.50034892 .00000035 00000-0 40460-4 0 4160
2 18123 98.7723 314.5492 0015114 28.0658 332.1328 14.15439737458038
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RS-10/11
1 18129U 87054A 96123.70201278 .00000019 00000-0 45173-5 0 2058
2 18129 82.9269 182.1564 0010406 288.2340 71.7681 13.72364730443933
Meteor 2-16
1 18312U 87068A 96122.83726672 .00000025 00000-0 90066-5 0 4779
2 18312 82.5581 28.8478 0012885 358.4620 1.6498 13.84076778439763
Meteor 2-17
1 18820U 88005A 96122.94230511 .00000063 00000-0 42501-4 0 9237
2 18820 82.5393 83.8922 0018348 57.8105 302.4827 13.84755234417126
DMSP B5D2-4
1 18822U 88006A 96123.55757585 .00000011 00000-0 22907-4 0 2440
2 18822 98.3868 317.7907 0006689 130.2731 229.9035 14.23188291428086
Glonass 34
1 19163U 88043A 96121.19257303 .00000037 00000-0 10000-3 0 739
2 19163 65.2370 87.4535 0008989 159.0078 201.0115 2.13102221 61215
Glonass 36
1 19165U 88043C 96123.12653580 .00000029 00000-0 10000-3 0 4828
2 19165 65.2243 87.3501 0000588 6.0605 353.9132 2.13101850 61877
METEOSAT 3
1 19215U 88051A 96114.89660415 -.00000061 00000-0 10000-3 0 2579
2 19215 3.1580 68.0476 0002208 146.1415 213.8182 0.96946950 16653
AO-13
1 19216U 88051B 96121.99837948 -.00000098 00000-0 17771-3 0 1937
2 19216 57.3020 119.9241 7407580 38.2086 355.9640 2.09769973 28850
OKEAN 1
1 19274U 88056A 96123.56075140 .00000137 00000-0 14157-4 0 869
2 19274 82.5133 314.3083 0018106 277.8303 82.0855 14.82476254422611
Meteor 3-2
1 19336U 88064A 96121.22531747 .00000051 00000-0 10000-3 0 4779
2 19336 82.5442 200.3598 0017512 359.8241 0.2856 13.16977386373166
Glonass 39
1 19503U 88085C 96120.81007153 -.00000002 00000-0 10000-3 0 3711
2 19503 65.5830 326.3580 0004169 163.6362 196.4596 2.13101718 59313
NOAA 11
1 19531U 88089A 96123.77576350 .00000027 00000-0 39316-4 0 4904
2 19531 99.1886 140.7034 0012491 13.4096 346.7405 14.13090521392033
TDRS 2
1 19548U 88091B 96123.64504649 -.00000190 00000-0 10000-3 0 2024
2 19548 2.4018 72.1214 0000742 176.4944 289.8702 1.00270907 15074
Glonass 40
1 19749U 89001A 96122.25538907 .00000031 00000-0 10000-3 0 5913
2 19749 65.1876 86.9515 0007853 258.6320 101.2745 2.13101643 56853
Glonass 41
1 19750U 89001B 96119.96418219 .00000042 00000-0 10000-3 0 4913
2 19750 65.2119 87.0930 0007405 222.0026 137.9387 2.13101926 56829
GPS BII-01
1 19802U 89013A 96123.27475438 .00000013 00000-0 10000-3 0 2173
2 19802 55.2765 112.4704 0020604 191.4304 168.5564 2.00573946 52801
Akebono
1 19822U 89016A 96123.45645455 .00004629 00000-0 25130-3 0 7189
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2 19822 75.0725 150.4102 3747863 140.8770 253.4129 7.91393748163072
Meteor 2-18
1 19851U 89018A 96121.07369221 .00000027 00000-0 10848-4 0 4752
2 19851 82.5205 319.4485 0015601 108.2647 252.0212 13.84410430362174
MOP-1
1 19876U 89020B 96112.84802737 -.00000078 00000-0 10000-3 0 1967
2 19876 1.8754 71.2923 0020266 281.5144 78.2417 0.97109095 6075
TDRS 3
1 19883U 89021B 96123.58254078 -.00000266 00000-0 00000+0 0 2064
2 19883 0.0252 342.6364 0001406 71.8985 334.8902 1.00268974198652
GPS BII-02
1 20061U 89044A 96118.63002337 -.00000026 00000-0 10000-3 0 2146
2 20061 54.2401 288.4859 0153425 219.0700 139.8048 2.00562439 50447
Nadezhda 1
1 20103U 89050A 96123.83940245 .00000045 00000-0 31492-4 0 7567
2 20103 82.9576 142.1252 0037369 177.8097 182.3230 13.73865307342459
GPS BII-03
1 20185U 89064A 96121.96375348 .00000068 00000-0 10000-3 0 2415
2 20185 55.1089 112.9978 0037310 325.1579 34.6207 2.00550483 49089
GMS 4
1 20217U 89070A 96123.07844907 -.00000364 00000-0 10000-3 0 3583
2 20217 1.6968 75.5067 0001117 145.3592 147.7727 1.00278199 24955
INTERCOSMOS 24
1 20261U 89080A 96121.84186600 .00000185 00000-0 48847-4 0 4947
2 20261 82.5903 300.9575 1242740 149.2772 218.7492 12.47334857300001
GPS BII-04
1 20302U 89085A 96122.49425205 -.00000013 00000-0 10000-3 0 2215
2 20302 53.2580 228.1577 0025770 180.1774 179.8374 2.00562690 47890
Meteor 3-3
1 20305U 89086A 96122.57030256 .00000044 00000-0 10000-3 0 5504
2 20305 82.5589 156.8376 0008465 61.7866 298.4146 13.04432891312120
COBE
1 20322U 89089A 96122.53928257 .00000287 00000-0 21152-3 0 2088
2 20322 98.9459 138.5625 0008477 163.3286 196.8175 14.03457127330388
Kvant-2
1 20335U 89093A 96122.96704365 -.00002776 00000-0 -29739-4 0 5783
2 20335 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261365920
GPS BII-05
1 20361U 89097A 96123.00511868 -.00000040 00000-0 10000-3 0 670
2 20361 55.9698 55.1040 0088348 130.5819 230.1599 2.00565234 37386
COSMOS 2054 (Altair-1)
1 20391U 89101A 96123.65260152 -.00000132 00000-0 00000+0 0 3385
2 20391 3.7617 63.7144 0002562 16.4753 359.2513 1.00276897 23549
SPOT 2
1 20436U 90005A 96123.90428492 .00000169 00000-0 10000-3 0 641
2 20436 98.6996 198.3232 0001529 77.0998 283.0347 14.20044461325417
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1 20437U 90005B 96123.77677094 -.00000013 00000-0 11895-4 0 1791
2 20437 98.5443 207.6384 0011515 340.7595 19.3152 14.29918788327568
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1 20438U 90005C 96121.72849046 -.00000013 00000-0 12079-4 0 9752
2 20438 98.5366 203.6482 0010488 353.0371 7.0660 14.29229267327144
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1 20439U 90005D 96122.19693220 .00000028 00000-0 27532-4 0 9773
2 20439 98.5588 208.2321 0011682 345.7251 14.3600 14.29973585327353
DO-17
1 20440U 90005E 96121.24433215 .00000028 00000-0 27712-4 0 9776
2 20440 98.5614 207.9063 0011875 348.6123 11.4779 14.30115250327240
WO-18
1 20441U 90005F 96123.26217110 .00000021 00000-0 25130-4 0 9826
2 20441 98.5611 209.8363 0012455 342.4168 17.6578 14.30085030327537
LO-19
1 20442U 90005G 96121.23260717 .00000029 00000-0 28114-4 0 9770
2 20442 98.5610 208.3107 0012669 347.4602 12.6256 14.30192897327260
GPS BII-06
1 20452U 90008A 96122.40485279 .00000075 00000-0 10000-3 0 1571
2 20452 54.0272 168.6574 0058390 86.5727 274.2034 2.00567071 45876
MOS-1B
1 20478U 90013A 96121.54245335 -.00000044 00000-0 00000+0 0 9295
2 20478 99.1307 191.5969 0005817 26.5164 333.6293 13.93958880237912
DEBUT
1 20479U 90013B 96120.54396165 -.00000012 00000-0 51135-4 0 9760
2 20479 99.0287 154.8292 0539764 234.1744 120.8061 12.83339747291668
FO-20
1 20480U 90013C 96123.14905635 -.00000052 00000-0 -38159-4 0 8742
2 20480 99.0331 156.7498 0539824 228.8511 126.4805 12.83232437291989
MOS-1B R/B
1 20491U 90013D 96121.84194334 -.00000499 00000-0 -87816-3 0 2365
2 20491 99.0733 219.1726 0470820 45.2697 318.5750 13.02987915295696
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1 20496U 90015A 96124.08837144 .00000505 00000-0 22560-4 0 6450
2 20496 43.1012 100.7908 0008702 123.5942 236.5775 15.35573153346895
Nadezhda 2
1 20508U 90017A 96123.81436777 .00000049 00000-0 35569-4 0 7573
2 20508 82.9502 276.6411 0045160 130.6508 229.8587 13.73507586309669
OKEAN 2
1 20510U 90018A 96119.84318147 .00000153 00000-0 17646-4 0 4945
2 20510 82.5196 271.6501 0020133 114.7760 245.5551 14.78594645332387
GPS BII-07
1 20533U 90025A 96120.31464283 -.00000027 00000-0 10000-3 0 2030
2 20533 54.6329 289.1429 0053511 78.4226 282.1763 2.00556255 44606
PegSat
1 20546U 90028A 96122.54337171 .00003654 00000-0 68428-4 0 9201
2 20546 94.1132 325.8525 0059327 183.2885 176.7989 15.46896911337796
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1 20580U 90037B 96121.26006550 .00000323 00000-0 16773-4 0 7991
2 20580 28.4691 166.6217 0006143 34.3961 325.7022 14.91049569131426
MACSAT 2
1 20608U 90043B 96121.19441661 .00000171 00000-0 26960-4 0 1788
2 20608 89.9311 173.8227 0103197 223.3143 135.9924 14.64915468319260
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Glonass 44
1 20619U 90045A 96120.74639297 -.00000003 00000-0 10000-3 0 2891
2 20619 65.1974 325.6117 0026007 211.5958 148.2959 2.13102570 46271
Glonass 45
1 20620U 90045B 96119.92657695 -.00000005 00000-0 10000-3 0 2839
2 20620 65.2037 325.6375 0009135 36.5947 323.5117 2.13102572 46294
Glonass 46
1 20621U 90045C 96123.74807997 -.00000006 00000-0 10000-3 0 8766
2 20621 65.2117 325.5560 0007051 189.2443 170.7705 2.13102324 46370
Kristall
1 20635U 90048A 96122.96704365 -.00002776 00000-0 -29739-4 0 3708
2 20635 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261336752
ROSAT
1 20638U 90049A 96122.23034381 -.00000309 00000-0 -13028-5 0 5567
2 20638 52.9907 150.5304 0010954 352.1218 7.9606 15.07395321325231
Meteor 2-19
1 20670U 90057A 96121.77278849 -.00000063 00000-0 -69975-4 0 9763
2 20670 82.5487 25.5319 0017141 31.9030 328.3160 13.84135620295187
CRRES
1 20712U 90065A 96122.43598479 -.00000018 00000-0 14837-3 0 2529
2 20712 18.0032 270.7535 7188154 341.5783 1.9221 2.35671957 42019
GPS BII-08
1 20724U 90068A 96123.12943688 .00000058 00000-0 00000+0 0 410
2 20724 54.9411 110.5157 0128052 179.9654 180.1082 2.00565923 40523
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1 20826U 90086A 96122.55904658 .00000054 00000-0 35496-4 0 9869
2 20826 82.5246 321.4373 0012462 295.0703 64.9211 13.83630466282398
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2 20830 55.9218 53.0465 0066308 95.7785 264.9741 2.00563763 41169
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2 20959 55.1423 112.7294 0108308 234.2891 124.7160 2.00564352 39675
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1 20978U 90105A 96123.70198964 .00000088 00000-0 47254-4 0 6074
2 20978 98.6024 195.1925 0078418 305.2858 54.1004 14.32645095283206
Glonass 47
1 21006U 90110A 96123.30268703 -.00000657 00000-0 10000-3 0 8497
2 21006 65.1728 86.2726 0055471 195.4511 164.4156 2.13093053 42042
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2 21007 65.1924 86.3698 0037261 177.8050 182.1905 2.13101108 41992
Glonass 49
1 21008U 90110C 96123.85681017 .00000025 00000-0 00000+0 0 2213
2 21008 65.1680 86.2541 0010619 277.4264 82.4270 2.13099073 42029
AO-21
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RS-12/13
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2 21089 82.9223 223.4055 0030193 3.7908 356.3467 13.74069107262723
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2 21140 0.4542 73.8999 0001158 262.1981 92.9072 1.00268667 21158
Nadezhda 3
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TDRS 4
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Meteor 3-5
1 21655U 91056A 96124.15199036 .00000051 00000-0 10000-3 0 8850
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2 21701 56.9854 304.7599 0005689 115.0833 245.0700 14.96506708253088
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FREJA
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TDRS 5
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ASTRO-D
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UFO F1
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2 22654 3.1178 74.6777 2874376 235.0563 94.5749 1.42203256 10824
GPS BIIA-20
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OKEAN 1-7
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Glonass 71
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GOES 9
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2 23622 64.8288 205.5814 0036823 165.7209 194.4315 2.13102678 5989
Prognoz-M2
1 23632U 95039A 96123.71503530 -.00001909 00000-0 00000+0 0 537
2 23632 70.1570 250.3080 8538140 320.5290 33.7370 0.26381400 733
SICH-1
1 23657U 95046A 96123.36105849 .00000177 00000-0 23716-4 0 757
2 23657 82.5325 242.7291 0026811 195.9146 164.1218 14.73468981 36081
RADARSAT
1 23710U 95059A 96123.92852275 -.00000044 00000-0 00000+0 0 1318
2 23710 98.5884 131.2623 0001458 97.7132 262.4217 14.29987833 25771
Glonass 77
1 23734U 95068A 96120.52710980 .00000008 00000-0 00000+0 0 1053
2 23734 64.8338 205.5241 0018985 322.5320 37.3805 2.13102161 2937
Glonass 78
1 23735U 95068B 96123.09129863 .00000036 00000-0 00000+0 0 952
2 23735 64.8294 205.4308 0007413 217.5041 142.4999 2.13125022 2987
Glonass 79
1 23736U 95068C 96123.10792603 .00000036 00000-0 00000+0 0 830
2 23736 64.8284 205.4398 0007771 201.4939 158.5320 2.13102464 2982
XTE
1 23757U 95074A 96124.14651129 .00000498 00000-0 12711-4 0 493
2 23757 22.9821 358.3283 0013603 238.9398 120.9759 14.97640869 18700
1996010D
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1 23797U 96010D 96123.84379435 .00003801 16698-6 29863-3 0 628
2 23797 48.3141 262.7300 7340196 17.8579 357.9439 2.23522936 1643
Soyuz TM-23
1 23798U 96011A 96122.96704365 -.00002776 00000-0 -29739-4 0 669
2 23798 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261 10990
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96120.33604539 .00000159 00000-0 75600-3 0 465
2 23824 47.9205 264.7806 7252683 16.3302 358.0696 2.21639224 1536
GPS BIIA-25
1 23833U 96019A 96124.02707111 -.00000050 00000-0 00000+0 0 238
2 23833 54.7071 349.9079 0044049 139.9288 220.2727 2.00564960 753
INMARSAT III F1
1 23839U 96020A 96123.88512051 -.00000023 00000-0 00000+0 0 337
2 23839 2.6319 284.0525 0003315 206.2009 97.4734 1.01085836 304
1996020B
1 23840U 96020B 96122.75304983 -.00000091 00000-0 00000+0 0 129
2 23840 21.9082 336.3218 6994974 202.5933 98.0192 2.24191653 629
ASTRA 1F
1 23842U 96021A 96123.95826773 .00000144 00000-0 00000+0 0 310
2 23842 0.0475 181.4054 0003230 221.7721 189.9175 1.00272565 222
1996021D
1 23845U 96021D 96114.54321850 -.00000136 00000-0 00000+0 0 103
2 23845 6.9631 195.5504 3951140 2.1106 359.2772 1.64348675 235
M-SAT 1
1 23846U 96022A 96123.56648082 -.00000083 00000-0 00000+0 0 174
2 23846 0.0319 77.5431 0018020 308.8069 292.0240 1.00268828 161
1996022B
1 23847U 96022B 96123.57393328 .00001001 00000-0 59153-3 0 128
2 23847 6.9818 0.5078 7272388 186.7862 150.4615 2.27342667 273
Priroda
1 23848U 96023A 96122.96704365 -.00002776 00000-0 -29739-4 0 185
2 23848 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261 1312
1996023B
1 23849U 96023B 96123.81112263 .00348834 11624-4 27205-3 0 168
2 23849 51.6579 348.2696 0058993 122.7652 237.9067 16.10115561 1505
1996023C
1 23850U 96023C 96122.68264120 .00789229 10341-4 15470-2 0 100
2 23850 51.6787 357.8612 0283299 136.2410 231.3207 15.55372290 1273
MSX
1 23851U 96024A 96124.22304972 -.00000047 00000-0 00000+0 0 128
2 23851 99.3726 102.5241 0006132 275.5797 84.4652 13.97760768 1213
1996024B
1 23852U 96024B 96123.86059090 .00041793 21018-5 16743-3 0 142
2 23852 96.5795 104.4043 0460749 259.0987 95.8092 15.07676567 1250
Cosmos 2332
1 23853U 96025A 96124.24484081 .00004932 -12896-5 10228-3 0 106
2 23853 82.9588 69.2862 0869117 87.3747 282.6485 13.89693371 1213
```

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1996025B
1 23854U 96025B 96124.09450392 .00005134 -12936-5 10000-3 0 184
2 23854 82.9605 69.3988 0870964 87.2567 282.7315 13.90544010 1181
SAX
1 23857U 96027A 96122.11011787 -.00005789 00000-0 -63513-3 0 55
2 23857 3.9549 105.6524 0014291 0.0060 0.0057 14.91517646 133
1996027B
1 23858U 96027B 96122.09777531 -.00015454 00000-0 -80394-3 0 44
2 23858 3.9943 108.5471 0090105 75.4905 285.5250 15.13696967 131
1996024C
1 23859U 96024C 96123.93810714 -.00000046 00000-0 00000+0 0 83
2 23859 99.3680 102.2326 0089378 89.3725 271.7682 13.96303573 192
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

------------------------------

Date: Fri, 3 May 1996 10:53:21 -0500
From: Gary Watts <gwatts@qni.com>
Subject: QRM During MIR pass 4/21/96

John,
Did you really think that these QRM'ers were No code Techs from the
11 meter band ?
It would seem that these operators are seasoned DX'ers
who know how to get thru in a pile up!
Great operating skills they have learned on the hf bands running ssb..
Not quite the same game on FM !
;-)

------------------------------

Date: 3 May 96 09:30:30 GMT
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Subject: REJECTED: Ham-Space Digest V96 #130

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #130
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Fri, 3 May 96 Volume 96 : Issue 130

Today's Topics:
Antenna's for low orbit satellites
```

FT-736R vs TS-790 vs IC-820H
Help!)scar-13 antenna
QRM During MIR pass 4/21/96
Questions from a Novice
SatTrack for Linux
sunrise/sunset times

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 28 Apr 1996 16:36:02 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Antenna's for low orbit satellites

In article <3172B09C.5C7E@vogon.rain.com> Philip Peake <philip@vogon.rain.com>
writes:
>On a personal note - I spend all day playing with computers, and have
>had internet access for more years than I want to remember, so packet
>seems terribly antiquated, unchallenging and generally boring to me. It
>is rather a pity that most recent satellites are totally packet
>oriented. I could be uncharitable, and say that this is due to a
>generation of electrical engineers who are only comfortable with digital
>techniques - and designing and building a high quality linear
>transponder is more difficult than a store and forward digital mailbox
>-- but, that might just be too uncharitable. Anyway, the plethora of "me
>too" flying digital mailboxes, and lack of linear transponders, I find
>personally dissapointing.

You're being more than uncharitable. The choice to go to digital
satellites was driven by a desire to allow low power stations
with simple antennas to fully participate in global satellite
communications, and to take advantage of the launch opportunities
for very small satellites. PSK encoding allows smaller signal
margins than analog encodings, so low power and simple antennas
become practical for the ground stations. And, because of the
very small size and limited power budget of the microsats, use
of digital also allows the satellite to more effectively use
its limited resources to serve the broadest possible range
of amateurs.

Saying that the satellite builders aren't comfortable with
analog transponder techniques flies in the face of Oscar 10
and Oscar 13, built by pretty much the same small group of

people who have brought us the microsats. They certainly
know how to build analog transponders, but chose not to
for the microsats for sound technical (and economic) reasons.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp
addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: Wed, 01 May 1996 20:50:30 -0700
From: Rick Prather <rprather@telis.org>
Subject: FT-736R vs TS-790 vs IC-820H

LLEDLOW wrote:
>
> rob@pe1chl.ampr.org (Rob Janssen) wrote:
> >In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW
<LLEDLOW@mailgw.sanders.lockheed.com> writes:
> >
> >>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
> >>it can be a bit difficult to get used to, but it's a good rig. The
> >Apparently pricing is different in the USA.
> >In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
> >(two bands, mains supply)
>
> Amateur Electronic Supply has the following prices:
>
> TS790A PS31 FT736R FP700
> MSRP $2200 220 2500 280
> Discount $1850 170 1870 240
>
> At the time I bought the TS790, the price differences were even greater.
>
> 73,
>
> Larry/NA5E

The only trouble with this comparison is that you don't need a power
supply with the 736 (I assume that is what the FP700 is). It is built
in the 736.

Rick

Date: Thu, 2 May 1996 09:30:16 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Help!)scar-13 antenna

In <4m5sc9$k15@news.global1.net> jaggarao@globalone.net (jagg) writes:

>I am planning to try oscar-13. Is it possible to use a seperate
>5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
>for a few months. I can pump in about 70 W on 70 cm.

Well, you should be quick because in a few months the satellite
will be the problem...

I have worked OSCAR 10 and 13 using a 2x15el crossed yagi on 70cm
and 2x6el crossed yagi for 2m. I used about 30 W max on 70cm.
The signal was not strong, but similar to the beacon.
(that is the correct level, many stations use too much power and
are stronger than the beacon)

>Any suggestions on 2 mtr pre-amp. I realise that the antenna
>system is very comprimised. Jag AA2LJ

I used a homemade preamp with a 3SK97, after a commercial preamp
turned out to be unusable because of too little preselection and
strong local VHF signals causing intermodulation.

It should be possible to make some contacts using your setup. Start
out by listening, and optimize the receive side.
The problem over here often was local QRM. No preamp will correct
that situation. When you are in a quiet environment, it should be
much easier.
Then try to locate your own signal using CW, and make sure it is not
stronger than the beacon.

Rob
--
+-------------------------------------+--+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-------------------------------------+--+

Date: 1 May 1996 19:16:35 GMT
From: jaminge@pb2esac.esac.pacbell.com (John Minger)
Subject: QRM During MIR pass 4/21/96

In article <DqJr7D.4HE@scn.org>, SCN User <bd703@scn.org> wrote:
>
>On Sunday April 21 1996, the MIR station passed near Washington and Oregon
>from 22:37 PDT to 22:47 PDT.
>
>During this pass there were several Seattle area hams who attempted to make
>contact (myself included).
>
>The conduct of a few of these stations was appalling. They kept calling
>for R0MIR even though it was VERY OBVIOUS that Shannon was trying very hard
>to have a QSO with a specific station!

>
>Even when Shannon read back the call of the station she was talking to at
>the begining of each transmission, the same few hams would start calling
>as soon as Shannon unkeyed.
>
[edited]
>
>Despite the poor practices of some stations, R0MIR did make a contact
>with WA7TDZ , ?7AAW, KA5UAR, N6JLH, and N5TD.
>
>The TDZ QSO must have been really a tough one, but Shannon did manage pretty
>well.
>
[edited]

Pretty sad, isn't it, Kerwin.

I looked up the three callsigns you posted about, expecting to find
inexperienced refugees from 11 meters engaging in such behavior.
Well, that stereotype didn't hold much water.... All were old enough
to have learned better by now. Two even had higher grade licenses.

The newcomer would be Shannon herself. Let's hope she can see past
the few thoughtless ones to the real hams out here.

-John, KE6DTC
--

Proceed at your own risk (At whose risk were you proceding before?)
<jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
employer's lame posting software cuts off sigs after four lines of informa-

---

Date: Thu, 02 May 96 14:55:04 EDT
From: RNROBERT@UConnVM.UConn.Edu (Rob Robertson)
Subject: Questions from a Novice

Please fill me in...

I am a novice to the amateur radio hobby. I have recently started monitoring
local radio, including emergency services, HAM, and air traffic with a
basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)

I am particularly fascinated by air traffic radio transmissions, and would
like to further my knowledge, and perhaps begin monitoring satellite and
manned spacecraft transmissions. I have noticed that many of the postings to
this group involve antennas and specific satellites. I also read the recent
posting on space shuttle radio frequencies. I notice that many of the freqs
are in ranges that my hand-held scanner is capable of receiving... If I find
the proper frequencies, can I pull down space shuttle radio transmissions with
my scanner? Do I need a special antenna?

I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are other spacecraft or satellites routinely rebroadcast in a manner such that I can receive them with my simple monitor?

What would be involved, in terms of equipment and expense, for a hobbyist to begin monitoring spaceborne radio transmissions?

Thank you for any replies,

Rob

Date: 2 May 1996 13:42:19 GMT
From: J.Vandegeyn@mailbox.uq.oz.au
Subject: SatTrack for Linux

In <318511C1.34B6@net2.intserv.com>, Buck Evans <bevans@net2.intserv.com> writes:
>Hi Everyone de N3VZL--
>
> I'm trying to compile SatTrack for Linux and failing miserably. Slackware v 1.2.3 with X11R6.
I've tracked it
>down to the fact that the Makefile can't find any of the X11 include files, but they are there,
and the
>environment variable set statements look fine.
>
> The box is discon right now, so I don't have the body of the Makefile available at this time.
>
> Has anyone else had problems compiling the app?
>
>TvmIA and 73
>
>Steve
>N3VZL
>
>pl reply to group or steve@gnosis.slac.com, not here

set the LIBRARY_PATH env variable in /etc/.profile to the libs.
like

LIBRARY_PATH=/usr/lib:/usr/X11/lib:
export LIBRARY_PATH

Cheers Good luck
John VK4CJO

Date: 2 May 1996 02:12:39 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: sunrise/sunset times

The OrbitTrack program will do this for any Lon/lat.
It is a Mac platform program. Shareware on most BBS systems

End of Ham-Space Digest V96 #130
****

Date: Mon, 29 Apr 1996 14:47:02 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Satellite Transmissions

In article <4m1fb7$urr@insosf1.netins.net> whitestone@netins.net (KE0PV)
writes:
>I have a satellite set up using the icom 970 H (35 w out) hy gain antennas
>with alt/az tracking preams ... etc. I seem to be able to hear something when

>I tranmit on the return but it is very weak. Is that because I need more
>power or is something else wrong. Have used the antennas and radio on local
>repeaters etc ... and it works ok. What is the normal amount of power
>required.

You don't say which satellite you're trying to use. For Oscar 10 and 13,
35 watts and gain yagis should be sufficient to put your downlink signal
equal to the beacon. Does the beacon sound strong to you? If it doesn't,
you may have one of several problems. If you aren't using a mast mount
preamp, you should be. Or there may be a problem with your Rx antenna.
Or you could be off-pointed from the satellite, or using the wrong
polarization sense. If the beacon does sound strong to you, then the
problem is likely high loss cables to your uplink antenna, or a problem
with the uplink antenna itself, or you may be using the wrong polarization
sense. Or it may be that your Tx antenna isn't boresighted with your
Rx antenna.

If you're trying to use one of the LEOs, then 35 watts is *more*
than enough uplink power (5 watts should be sufficient). Again,
troubleshoot as noted above. Make sure you're receiving the beacon
strongly first (typically S9 or so). This will tell you that your
receiving system is Ok. If your downlink signal is still weak
compared to the beacon, then look for loss terms in the Tx feedline
and antenna.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp
addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: 3 May 1996 01:52:17 GMT
From: milliron@ix.netcom.com (William Milliron)
Subject: Source code for SDP4

I am looking for source code for the SDP4 satellite propagation
model. I already have SGP4 (from sattrack, seesat et. al).
Any help would be greatly appreciated. Also I am interested in
any opinions about the accuracy of sattrack for satellites with
periods > 225 minuts.

Thanks...

Date: Fri, 03 May 1996 17:03:06 -0500
From: Carl Gregory <cgregory@uiuc.edu>
Subject: Source code for SDP4

William Milliron wrote:
>
> I am looking for source code for the SDP4 satellite propagation
> model. I already have SGP4 (from sattrack, seesat et. al).
> Any help would be greatly appreciated. Also I am interested in
> any opinions about the accuracy of sattrack for satellites with
> periods > 225 minuts.
>
> Thanks...

Check out the Project Spacetrack docs at Tom Kelso's web site. It is
a Tex document, but you can find the FORTRAN listings with a standard
text editor. I used this as the starting point for the SGP/SGP4 models
in WinOrbit. SDP4 and SDP8 are also listed.

73
Carl, K8CG

Date: Fri, 03 May 1996 07:19:59 -0400
From: GEORGE LIEPINS <ke4hw@apcserv1.apcnet.com>
Subject: Upcoming 6 mtr DX in July from YL Land

Activating Rare Latvian Grid

As part of a 23cm EME experiment by the Latvian Amateur Radio League
this
summer, grid KO07kn will also be QRV on 6m between July 3rd to the 10th.
The QTH
is at the recently acquired Ventspils International Radio Astronomy
Centre (a
former Soviet military site) 22km northeast of Ventspils in Kurzeme
province
(Courland of Hanseatic League fame). The centre is being refurbished for
civilian use by the Latvian Academy of Sciences with the help of the
Swedish

government. Principal operator will be the immediate past president of
the LRAL,
Vitauts Klimavicus using "YL3AG". All QSLs should be sent to him
directly in
Riga:-
V. Klimavicus
P.K. #111
Riga
LV - 1069
Latvia

73, George KE4HW

Date: (null)
From: (null)

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 1 May 1996, John Minger wrote:

Much stuff deleted
> [edited]
>
> Pretty sad, isn't it, Kerwin.
>
> I looked up the three callsigns you posted about, expecting to find
> inexperienced refugees from 11 meters engaging in such behavior.
> Well, that stereotype didn't hold much water.... All were old enough
> to have learned better by now. Two even had higher grade licenses.
>
> The newcomer would be Shannon herself. Let's hope she can see past
> the few thoughtless ones to the real hams out here.
>
> -John, KE6DTC
> --
>

> Proceed at your own risk (At whose risk were you proceding before?)
> <jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
> employer's lame posting software cuts off sigs after four lines of informa-
>
>

End of Ham-Space Digest V96 #131
****

902. Re: Satellite Transmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DqvLyI.AA3@pe1chl.ampr.org>
Source record: 22464

In <1996Apr29.144702.28024@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>Make sure you're receiving the beacon
>strongly first (typically S9 or so). This will tell you that your
>receiving system is Ok.

Hmmm, I think when you receive Oscar 10/13's beacon S9, your transceiver
suffers from S-meter inflation :-)
(but then, most of them do)

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

903. REJECTED: Ham-Space Digest V96 #132

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Message-ID: <9605041332.AA00036@rtp41.rtp.dg.com>
Source record: 22465

```
----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #132
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Sat, 4 May 96 Volume 96 : Issue 132

Today's Topics:
REJECTED: Ham-Space Digest V96 #131

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 4 May 96 04:50:20 GMT
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Subject: REJECTED: Ham-Space Digest V96 #131

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
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To: Ham-Space@ucsd.edu
Subject: Ham-Space Digest V96 #131
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Fri, 3 May 96 Volume 96 : Issue 131
```

Today's Topics:
FT-736R vs TS-790 vs IC-820H
NORAD Two-Line Orbital Element Sets (TLE805)
QRM During MIR pass 4/21/96
REJECTED: Ham-Space Digest V96 #130
Satellite Transmissions
Source code for SDP4 (2 msgs)
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policies or positions of any party. Your mileage may vary. So there.

Date: 24 Apr 1996 23:45:04 GMT
From: LLEDLOW <LLEDLOW@mailgw.sanders.lockheed.com>
Subject: FT-736R vs TS-790 vs IC-820H

I've used both the FT-736 and TS-790. I own the latter. Ergonomically
it can be a bit difficult to get used to, but it's a good rig. The
FT-736 is very goo, too, and perhaps easier to learn to use. Trouble is,
it's more expensive.

73,

Larry/NA5E

Date: 4 May 1996 02:19:26 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE805)

The most current orbital elements from the NORAD two-line element sets are
carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system.

Element sets (also updated daily) and some documentation and software are
available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the
directory pub/space.

As a service to the satellite user community, the most current of these
elements are uploaded weekly to sci.space.news and rec.radio.amateur.space.
This week's elements are provided below.

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********************************************************************************

- Current Two-Line Element Sets #805 -
Alouette 1
1 00424U 62049A 96121.23929008 .00000061 00000-0 61712-4 0 1926
2 00424 80.4553 331.0604 0022395 154.5377 205.6881 13.67867180675787
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
1 03029U 67111A 96118.42533716 -.00000114 00000-0 10000-3 0 4880
2 03029 14.8990 0.3118 0009590 275.5859 347.4786 1.00273114104254
Starlette
1 07646U 75010A 96121.90298211 -.00000166 00000-0 -16288-4 0 9665
2 07646 49.8267 335.3071 0206473 74.2622 288.0940 13.82190037 72428
LAGEOS
1 08820U 76039A 96123.19271518 .00000014 00000-0 10000-3 0 1900
2 08820 109.8497 10.2538 0043723 138.7121 221.7016 6.38664779210894
ETS-2
1 09852U 77014A 96110.29826175 -.00000091 00000-0 10000-3 0 705
2 09852 13.1653 33.6505 0003404 91.1507 268.8070 0.99994621 17054
GOES 2
1 10061U 77048A 96118.42129942 .00000065 00000-0 10000-3 0 6691
2 10061 12.2919 37.6824 0010610 132.5265 21.9770 1.00289052 13935
IUE
1 10637U 78012A 96123.62693465 -.00000169 00000-0 10000-3 0 2485
2 10637 35.7259 83.8496 1357674 55.5268 271.0486 1.00250297 19477
GPS BI-01
1 10684U 78020A 96121.83679859 -.00000052 00000-0 10000-3 0 4458
2 10684 64.9663 25.2853 0061309 163.6416 196.5976 1.98069378118471
GPS BI-02
1 10893U 78047A 96119.70729909 -.00000015 00000-0 10000-3 0 2406
2 10893 63.1856 262.5876 0230972 14.9537 345.6740 2.01627167131815
GOES 3
1 10953U 78062A 96118.39288110 -.00000128 00000-0 10000-3 0 6520
2 10953 11.2843 40.5370 0001786 336.8923 238.3952 1.00275106 18546
SeaSat 1
1 10967U 78064A 96124.21970402 -.00000021 00000-0 37470-4 0 4832
2 10967 107.9879 81.7041 0001603 246.2639 113.8337 14.38101762934981
GPS BI-03
1 11054U 78093A 96123.49745681 -.00000013 00000-0 10000-3 0 4032
2 11054 62.8649 261.4852 0046473 180.2522 179.6896 1.93505239127777
Nimbus 7
1 11080U 78098A 96120.18015862 -.00000048 00000-0 -57859-5 0 5822
2 11080 98.9523 344.7938 0009661 97.1287 263.0967 13.83695116884390
GPS BI-04
1 11141U 78112A 96121.63787583 -.00000055 00000-0 10000-3 0 405
2 11141 64.9811 27.6409 0049761 27.8767 332.4067 1.92894718 16967
GPS BI-05
1 11690U 80011A 96123.97744078 -.00000040 00000-0 10000-3 0 196
2 11690 65.3085 26.7047 0144793 192.3054 167.3918 2.00571948133293
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1 11783U 80032A 96111.35476604 -.00000019 00000-0 10000-3 0 1410
2 11783 62.3340 255.6026 0226620 29.8497 331.3676 2.03456628117658
GOES 5
1 12472U 81049A 96119.86508792 -.00000007 00000-0 10000-3 0 9294
2 12472 8.0943 50.6814 0005382 39.4391 320.5271 1.00208703 12603
Cosmos 1383
1 13301U 82066A 96122.66505369 .00000014 00000-0 -95106-6 0 4910
2 13301 82.9329 167.9101 0028355 11.1649 349.0125 13.68074055691013
LandSat 4
1 13367U 82072A 96124.25848585 .00122462 00000-0 26597-1 0 9049
2 13367 98.0782 176.5288 0005900 283.8732 76.1795 14.57255957733996
DMSP B5D2-1
1 13736U 82118A 96124.24315300 .00000056 00000-0 41900-4 0 9955
2 13736 98.6250 313.3526 0008701 151.9898 208.1753 14.25782503694666
IRAS
1 13777U 83004A 96123.52564318 .00000386 00000-0 29591-3 0 3030
2 13777 98.9652 309.9928 0011390 219.5979 140.4362 13.99256326346988
Cosmos 1447
1 13916U 83021A 96124.22679497 .00000054 00000-0 41554-4 0 5877
2 13916 82.9449 224.2827 0036617 279.2934 80.4082 13.74339100657566
TDRS 1
1 13969U 83026B 96123.15563869 -.00000294 00000-0 00000+0 0 5824
2 13969 8.9165 44.1111 0004710 0.3729 172.8650 1.00415043 20924
GOES 6
1 14050U 83041A 96122.18371243 -.00000254 00000-0 10000-3 0 5087
2 14050 6.8854 54.2905 0004649 10.7283 145.5640 1.00267412105725
OSCAR 10
1 14129U 83058B 96123.30090279 -.00000058 00000-0 10000-3 0 4197
2 14129 26.2428 211.7043 5992462 12.0200 357.6231 2.05879450 68925
LandSat 5
1 14780U 84021A 96121.21819373 .00000027 00000-0 16435-4 0 4658
2 14780 98.3361 179.0133 0003401 74.6107 285.5466 14.57049002646946
UoSat 2
1 14781U 84021B 96121.94390985 .00000156 00000-0 34147-4 0 8806
2 14781 97.7980 114.7780 0010545 241.3316 118.6834 14.69448368650719
GPS BI-09
1 15039U 84059A 96124.01128917 -.00000042 00000-0 10000-3 0 4092
2 15039 64.6331 21.9049 0082612 19.0912 341.2483 1.92302332 86564
Cosmos 1574
1 15055U 84062A 96121.97847765 .00000037 00000-0 22724-4 0 7874
2 15055 82.9526 280.7521 0028680 110.5148 249.9089 13.73634356594504
GPS BI-10
1 15271U 84097A 96122.59588800 -.00000017 00000-0 10000-3 0 1453
2 15271 62.0461 255.7671 0154261 359.1471 0.7948 2.00611840 84337
Cosmos 1602
1 15331U 84105A 96123.62870175 .00000142 00000-0 13724-4 0 4711
2 15331 82.5344 155.7175 0021991 95.8132 264.5590 14.84748210626219
NOAA 9
1 15427U 84123A 96123.77353334 .00000057 00000-0 53961-4 0 6800
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2 15427 98.9523 188.6634 0016190 81.3743 278.9259 14.13777777587212
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1 16129U 85093A 96115.95746979 -.00000074 00000-0 10000-3 0 7187
2 16129 65.3039 25.7380 0156495 84.7282 277.0767 1.89367971 20912
Mir
1 16609U 86017A 96123.86502842 .00000710 00000-0 15907-4 0 5057
2 16609 51.6500 351.0129 0003973 273.5652 86.4865 15.57982994582948
SPOT 1
1 16613U 86019A 96122.57170972 .00000089 00000-0 62356-4 0 9341
2 16613 98.7330 191.4516 0001793 63.6990 296.4375 14.20008458213698
Cosmos 1766
1 16881U 86055A 96120.29736724 .00000199 00000-0 21092-4 0 3852
2 16881 82.5182 216.5593 0019986 133.2229 227.0642 14.83725570526590
EGP
1 16908U 86061A 96124.19713044 -.00000083 00000-0 10000-3 0 836
2 16908 50.0092 135.3187 0011524 258.1759 101.7783 12.44414592110803
NOAA 10
1 16969U 86073A 96123.84045517 .00000006 00000-0 20681-4 0 6039
2 16969 98.5223 122.2102 0013827 121.9868 238.2659 14.24980574500147
MOS-1
1 17527U 87018A 96123.21453556 -.00000043 00000-0 00000+0 0 4114
2 17527 98.9445 186.2404 0020104 89.3006 271.0461 14.00408391468550
GOES 7
1 17561U 87022A 96123.25817734 -.00000102 00000-0 10000-3 0 8804
2 17561 2.9676 69.8139 0005025 354.1491 144.0255 1.00358083 16845
Kvant-1
1 17845U 87030A 96122.96704365 -.00002776 00000-0 -29739-4 0 6189
2 17845 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261516919
DMSP B5D2-3
1 18123U 87053A 96123.50034892 .00000035 00000-0 40460-4 0 4160
2 18123 98.7723 314.5492 0015114 28.0658 332.1328 14.15439737458038
RS-10/11
1 18129U 87054A 96123.70201278 .00000019 00000-0 45173-5 0 2058
2 18129 82.9269 182.1564 0010406 288.2340 71.7681 13.72364730443933
Meteor 2-16
1 18312U 87068A 96122.83726672 .00000025 00000-0 90066-5 0 4779
2 18312 82.5581 28.8478 0012885 358.4620 1.6498 13.84076778439763
Meteor 2-17
1 18820U 88005A 96122.94230511 .00000063 00000-0 42501-4 0 9237
2 18820 82.5393 83.8922 0018348 57.8105 302.4827 13.84755234417126
DMSP B5D2-4
1 18822U 88006A 96123.55757585 .00000011 00000-0 22907-4 0 2440
2 18822 98.3868 317.7907 0006689 130.2731 229.9035 14.23188291428086
Glonass 34
1 19163U 88043A 96121.19257303 .00000037 00000-0 10000-3 0 739
2 19163 65.2370 87.4535 0008989 159.0078 201.0115 2.13102221 61215
Glonass 36
1 19165U 88043C 96123.12653580 .00000029 00000-0 10000-3 0 4828
2 19165 65.2243 87.3501 0000588 6.0605 353.9132 2.13101850 61877
METEOSAT 3
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1 19215U 88051A 96114.89660415 -.00000061 00000-0 10000-3 0 2579
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AO-13
1 19216U 88051B 96121.99837948 -.00000098 00000-0 17771-3 0 1937
2 19216 57.3020 119.9241 7407580 38.2086 355.9640 2.09769973 28850
OKEAN 1
1 19274U 88056A 96123.56075140 .00000137 00000-0 14157-4 0 869
2 19274 82.5133 314.3083 0018106 277.8303 82.0855 14.82476254422611
Meteor 3-2
1 19336U 88064A 96121.22531747 .00000051 00000-0 10000-3 0 4779
2 19336 82.5442 200.3598 0017512 359.8241 0.2856 13.16977386373166
Glonass 39
1 19503U 88085C 96120.81007153 -.00000002 00000-0 10000-3 0 3711
2 19503 65.5830 326.3580 0004169 163.6362 196.4596 2.13101718 59313
NOAA 11
1 19531U 88089A 96123.77576350 .00000027 00000-0 39316-4 0 4904
2 19531 99.1886 140.7034 0012491 13.4096 346.7405 14.13090521392033
TDRS 2
1 19548U 88091B 96123.64504649 -.00000190 00000-0 10000-3 0 2024
2 19548 2.4018 72.1214 0000742 176.4944 289.8702 1.00270907 15074
Glonass 40
1 19749U 89001A 96122.25538907 .00000031 00000-0 10000-3 0 5913
2 19749 65.1876 86.9515 0007853 258.6320 101.2745 2.13101643 56853
Glonass 41
1 19750U 89001B 96119.96418219 .00000042 00000-0 10000-3 0 4913
2 19750 65.2119 87.0930 0007405 222.0026 137.9387 2.13101926 56829
GPS BII-01
1 19802U 89013A 96123.27475438 .00000013 00000-0 10000-3 0 2173
2 19802 55.2765 112.4704 0020604 191.4304 168.5564 2.00573946 52801
Akebono
1 19822U 89016A 96123.45645455 .00004629 00000-0 25130-3 0 7189
2 19822 75.0725 150.4102 3747863 140.8770 253.4129 7.91393748163072
Meteor 2-18
1 19851U 89018A 96121.07369221 .00000027 00000-0 10848-4 0 4752
2 19851 82.5205 319.4485 0015601 108.2647 252.0212 13.84410430362174
MOP-1
1 19876U 89020B 96112.84802737 -.00000078 00000-0 10000-3 0 1967
2 19876 1.8754 71.2923 0020266 281.5144 78.2417 0.97109095 6075
TDRS 3
1 19883U 89021B 96123.58254078 -.00000266 00000-0 00000+0 0 2064
2 19883 0.0252 342.6364 0001406 71.8985 334.8902 1.00268974198652
GPS BII-02
1 20061U 89044A 96118.63002337 -.00000026 00000-0 10000-3 0 2146
2 20061 54.2401 288.4859 0153425 219.0700 139.8048 2.00562439 50447
Nadezhda 1
1 20103U 89050A 96123.83940245 .00000045 00000-0 31492-4 0 7567
2 20103 82.9576 142.1252 0037369 177.8097 182.3230 13.73865307342459
GPS BII-03
1 20185U 89064A 96121.96375348 .00000068 00000-0 10000-3 0 2415
2 20185 55.1089 112.9978 0037310 325.1579 34.6207 2.00550483 49089
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1 20217U 89070A 96123.07844907 -.00000364 00000-0 10000-3 0 3583
2 20217 1.6968 75.5067 0001117 145.3592 147.7727 1.00278199 24955
INTERCOSMOS 24
1 20261U 89080A 96121.84186600 .00000185 00000-0 48847-4 0 4947
2 20261 82.5903 300.9575 1242740 149.2772 218.7492 12.47334857300001
GPS BII-04
1 20302U 89085A 96122.49425205 -.00000013 00000-0 10000-3 0 2215
2 20302 53.2580 228.1577 0025770 180.1774 179.8374 2.00562690 47890
Meteor 3-3
1 20305U 89086A 96122.57030256 .00000044 00000-0 10000-3 0 5504
2 20305 82.5589 156.8376 0008465 61.7866 298.4146 13.04432891312120
COBE
1 20322U 89089A 96122.53928257 .00000287 00000-0 21152-3 0 2088
2 20322 98.9459 138.5625 0008477 163.3286 196.8175 14.03457127330388
Kvant-2
1 20335U 89093A 96122.96704365 -.00002776 00000-0 -29739-4 0 5783
2 20335 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261365920
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1 20361U 89097A 96123.00511868 -.00000040 00000-0 10000-3 0 670
2 20361 55.9698 55.1040 0088348 130.5819 230.1599 2.00565234 37386
COSMOS 2054 (Altair-1)
1 20391U 89101A 96123.65260152 -.00000132 00000-0 00000+0 0 3385
2 20391 3.7617 63.7144 0002562 16.4753 359.2513 1.00276897 23549
SPOT 2
1 20436U 90005A 96123.90428492 .00000169 00000-0 10000-3 0 641
2 20436 98.6996 198.3232 0001529 77.0998 283.0347 14.20044461325417
UO-14
1 20437U 90005B 96123.77677094 -.00000013 00000-0 11895-4 0 1791
2 20437 98.5443 207.6384 0011515 340.7595 19.3152 14.29918788327568
UO-15
1 20438U 90005C 96121.72849046 -.00000013 00000-0 12079-4 0 9752
2 20438 98.5366 203.6482 0010488 353.0371 7.0660 14.29229267327144
PACSAT
1 20439U 90005D 96122.19693220 .00000028 00000-0 27532-4 0 9773
2 20439 98.5588 208.2321 0011682 345.7251 14.3600 14.29973585327353
DO-17
1 20440U 90005E 96121.24433215 .00000028 00000-0 27712-4 0 9776
2 20440 98.5614 207.9063 0011875 348.6123 11.4779 14.30115250327240
WO-18
1 20441U 90005F 96123.26217110 .00000021 00000-0 25130-4 0 9826
2 20441 98.5611 209.8363 0012455 342.4168 17.6578 14.30085030327537
LO-19
1 20442U 90005G 96121.23260717 .00000029 00000-0 28114-4 0 9770
2 20442 98.5610 208.3107 0012669 347.4602 12.6256 14.30192897327260
GPS BII-06
1 20452U 90008A 96122.40485279 .00000075 00000-0 10000-3 0 1571
2 20452 54.0272 168.6574 0058390 86.5727 274.2034 2.00567071 45876
MOS-1B
1 20478U 90013A 96121.54245335 -.00000044 00000-0 00000+0 0 9295
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2 20478 99.1307 191.5969 0005817 26.5164 333.6293 13.93958880237912
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2 20479 99.0287 154.8292 0539764 234.1744 120.8061 12.83339747291668
FO-20
1 20480U 90013C 96123.14905635 -.00000052 00000-0 -38159-4 0 8742
2 20480 99.0331 156.7498 0539824 228.8511 126.4805 12.83232437291989
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1 20491U 90013D 96121.84194334 -.00000499 00000-0 -87816-3 0 2365
2 20491 99.0733 219.1726 0470820 45.2697 318.5750 13.02987915295696
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1 20496U 90015A 96124.08837144 .00000505 00000-0 22560-4 0 6450
2 20496 43.1012 100.7908 0008702 123.5942 236.5775 15.35573153346895
Nadezhda 2
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2 20508 82.9502 276.6411 0045160 130.6508 229.8587 13.73507586309669
OKEAN 2
1 20510U 90018A 96119.84318147 .00000153 00000-0 17646-4 0 4945
2 20510 82.5196 271.6501 0020133 114.7760 245.5551 14.78594645332387
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2 20533 54.6329 289.1429 0053511 78.4226 282.1763 2.00556255 44606
PegSat
1 20546U 90028A 96122.54337171 .00003654 00000-0 68428-4 0 9201
2 20546 94.1132 325.8525 0059327 183.2885 176.7989 15.46896911337796
HST
1 20580U 90037B 96121.26006550 .00000323 00000-0 16773-4 0 7991
2 20580 28.4691 166.6217 0006143 34.3961 325.7022 14.91049569131426
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2 20608 89.9311 173.8227 0103197 223.3143 135.9924 14.64915468319260
Glonass 44
1 20619U 90045A 96120.74639297 -.00000003 00000-0 10000-3 0 2891
2 20619 65.1974 325.6117 0026007 211.5958 148.2959 2.13102570 46271
Glonass 45
1 20620U 90045B 96119.92657695 -.00000005 00000-0 10000-3 0 2839
2 20620 65.2037 325.6375 0009135 36.5947 323.5117 2.13102572 46294
Glonass 46
1 20621U 90045C 96123.74807997 -.00000006 00000-0 10000-3 0 8766
2 20621 65.2117 325.5560 0007051 189.2443 170.7705 2.13102324 46370
Kristall
1 20635U 90048A 96122.96704365 -.00002776 00000-0 -29739-4 0 3708
2 20635 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261336752
ROSAT
1 20638U 90049A 96122.23034381 -.00000309 00000-0 -13028-5 0 5567
2 20638 52.9907 150.5304 0010954 352.1218 7.9606 15.07395321325231
Meteor 2-19
1 20670U 90057A 96121.77278849 -.00000063 00000-0 -69975-4 0 9763
2 20670 82.5487 25.5319 0017141 31.9030 328.3160 13.84135620295187
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1 20712U 90065A 96122.43598479 -.00000018 00000-0 14837-3 0 2529
2 20712 18.0032 270.7535 7188154 341.5783 1.9221 2.35671957 42019
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1 20724U 90068A 96123.12943688 .00000058 00000-0 00000+0 0 410
2 20724 54.9411 110.5157 0128052 179.9654 180.1082 2.00565923 40523
Feng Yun1-2
1 20788U 90081A 96124.04376931 .00000108 00000-0 10000-3 0 8776
2 20788 98.8073 131.0771 0013512 258.0866 101.8734 14.01329700289773
Meteor 2-20
1 20826U 90086A 96122.55904658 .00000054 00000-0 35496-4 0 9869
2 20826 82.5246 321.4373 0012462 295.0703 64.9211 13.83630466282398
GPS BII-09
1 20830U 90088A 96123.18360207 -.00000043 00000-0 10000-3 0 258
2 20830 55.9218 53.0465 0066308 95.7785 264.9741 2.00563763 41169
GPS BIIA-10
1 20959U 90103A 96119.09418104 .00000070 00000-0 10000-3 0 9981
2 20959 55.1423 112.7294 0108308 234.2891 124.7160 2.00564352 39675
DMSP B5D2-5
1 20978U 90105A 96123.70198964 .00000088 00000-0 47254-4 0 6074
2 20978 98.6024 195.1925 0078418 305.2858 54.1004 14.32645095283206
Glonass 47
1 21006U 90110A 96123.30268703 -.00000657 00000-0 10000-3 0 8497
2 21006 65.1728 86.2726 0055471 195.4511 164.4156 2.13093053 42042
Glonass 48
1 21007U 90110B 96122.08565815 .00000031 00000-0 10000-3 0 9829
2 21007 65.1924 86.3698 0037261 177.8050 182.1905 2.13101108 41992
Glonass 49
1 21008U 90110C 96123.85681017 .00000025 00000-0 00000+0 0 2213
2 21008 65.1680 86.2541 0010619 277.4264 82.4270 2.13099073 42029
AO-21
1 21087U 91006A 96123.73282696 .00000094 00000-0 82657-4 0 7003
2 21087 82.9410 355.3566 0035957 335.8145 24.1317 13.74567975263761
RS-12/13
1 21089U 91007A 96123.23842086 .00000030 00000-0 15776-4 0 8858
2 21089 82.9223 223.4055 0030193 3.7908 356.3467 13.74069107262723
MOP-2
1 21140U 91015B 96123.57885764 -.00000008 00000-0 00000+0 0 1793
2 21140 0.4542 73.8999 0001158 262.1981 92.9072 1.00268667 21158
Nadezhda 3
1 21152U 91019A 96123.85140251 .00000032 00000-0 17608-4 0 4466
2 21152 82.9258 179.3682 0043274 107.4295 253.1604 13.73532354257529
Glonass 50
1 21216U 91025A 96120.50597415 -.00000004 00000-0 10000-3 0 5033
2 21216 64.9415 325.1806 0006186 188.2307 171.8113 2.13103398 39484
Glonass 51
1 21217U 91025B 96119.16882976 -.00000008 00000-0 10000-3 0 9042
2 21217 64.9423 325.2180 0008907 226.7719 133.2016 2.13101544 39449
Glonass 52
1 21218U 91025C 96123.50273855 -.00000088 00000-0 10000-3 0 3824
2 21218 64.9222 325.0591 0010979 327.5160 32.4529 2.13100681 39544
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1 21225U 91027B 96121.22502337 .00001404 00000-0 24275-4 0 3542
2 21225 28.4611 159.1245 0002842 46.4411 313.6375 15.43927262162513
Meteor 3-4
1 21232U 91030A 96122.33039098 .00000050 00000-0 10000-3 0 8873
2 21232 82.5420 45.9179 0011989 281.7255 78.2517 13.16472127241377
NOAA 12
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2 21655 82.5543 352.2761 0012781 287.3783 72.5939 13.16846830226747
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Glonass 61
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ASTRO-D
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UFO F1
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Meteor 2-21
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2 23847 6.9818 0.5078 7272388 186.7862 150.4615 2.27342667 273
Priroda
1 23848U 96023A 96122.96704365 -.00002776 00000-0 -29739-4 0 185
2 23848 51.6501 355.5145 0004146 271.5880 88.5540 15.57975261 1312
1996023B
1 23849U 96023B 96123.81112263 .00348834 11624-4 27205-3 0 168
2 23849 51.6579 348.2696 0058993 122.7652 237.9067 16.10115561 1505
1996023C
1 23850U 96023C 96122.68264120 .00789229 10341-4 15470-2 0 100
2 23850 51.6787 357.8612 0283299 136.2410 231.3207 15.55372290 1273
MSX
1 23851U 96024A 96124.22304972 -.00000047 00000-0 00000+0 0 128
2 23851 99.3726 102.5241 0006132 275.5797 84.4652 13.97760768 1213
1996024B
1 23852U 96024B 96123.86059090 .00041793 21018-5 16743-3 0 142
2 23852 96.5795 104.4043 0460749 259.0987 95.8092 15.07676567 1250
Cosmos 2332
1 23853U 96025A 96124.24484081 .00004932 -12896-5 10228-3 0 106
2 23853 82.9588 69.2862 0869117 87.3747 282.6485 13.89693371 1213
1996025B
1 23854U 96025B 96124.09450392 .00005134 -12936-5 10000-3 0 184
2 23854 82.9605 69.3988 0870964 87.2567 282.7315 13.90544010 1181
SAX
1 23857U 96027A 96122.11011787 -.00005789 00000-0 -63513-3 0 55
2 23857 3.9549 105.6524 0014291 0.0060 0.0057 14.91517646 133
1996027B
1 23858U 96027B 96122.09777531 -.00015454 00000-0 -80394-3 0 44
2 23858 3.9943 108.5471 0090105 75.4905 285.5250 15.13696967 131
1996024C
1 23859U 96024C 96123.93810714 -.00000046 00000-0 00000+0 0 83
2 23859 99.3680 102.2326 0089378 89.3725 271.7682 13.96303573 192
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

------------------------------

Date: Fri, 3 May 1996 10:53:21 -0500
From: Gary Watts <gwatts@qni.com>
```

Subject: QRM During MIR pass 4/21/96

John,
Did you really think that these QRM'ers were No code Techs from the
11 meter band ?
It would seem that these operators are seasoned DX'ers
who know how to get thru in a pile up!
Great operating skills they have learned on the hf bands running ssb..
Not quite the same game on FM !
;-)

Date: 3 May 96 09:30:30 GMT
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Subject: REJECTED: Ham-Space Digest V96 #130

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #130
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Fri, 3 May 96 Volume 96 : Issue 130

Today's Topics:
Antenna's for low orbit satellites
FT-736R vs TS-790 vs IC-820H
Help!)scar-13 antenna
QRM During MIR pass 4/21/96
Questions from a Novice
SatTrack for Linux
sunrise/sunset times

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 28 Apr 1996 16:36:02 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Antenna's for low orbit satellites

In article <3172B09C.5C7E@vogon.rain.com> Philip Peake <philip@vogon.rain.com>
writes:
>On a personal note - I spend all day playing with computers, and have
>had internet access for more years than I want to remember, so packet
>seems terribly antiquated, unchallenging and generally boring to me. It
>is rather a pity that most recent satellites are totally packet
>oriented. I could be uncharitable, and say that this is due to a
>generation of electrical engineers who are only comfortable with digital
>techniques - and designing and building a high quality linear
>transponder is more difficult than a store and forward digital mailbox
>-- but, that might just be too uncharitable. Anyway, the plethora of "me
>too" flying digital mailboxes, and lack of linear transponders, I find
>personally dissapointing.

You're being more than uncharitable. The choice to go to digital
satellites was driven by a desire to allow low power stations
with simple antennas to fully participate in global satellite
communications, and to take advantage of the launch opportunities
for very small satellites. PSK encoding allows smaller signal
margins than analog encodings, so low power and simple antennas
become practical for the ground stations. And, because of the
very small size and limited power budget of the microsats, use
of digital also allows the satellite to more effectively use
its limited resources to serve the broadest possible range
of amateurs.

Saying that the satellite builders aren't comfortable with
analog transponder techniques flies in the face of Oscar 10
and Oscar 13, built by pretty much the same small group of
people who have brought us the microsats. They certainly
know how to build analog transponders, but chose not to
for the microsats for sound technical (and economic) reasons.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp
addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: Wed, 01 May 1996 20:50:30 -0700
From: Rick Prather <rprather@telis.org>
Subject: FT-736R vs TS-790 vs IC-820H

LLEDLOW wrote:
>

> rob@pe1chl.ampr.org (Rob Janssen) wrote:
> >In <4lmee0$s3b@news.sanders.lockheed.com> LLEDLOW
<LLEDLOW@mailgw.sanders.lockheed.com> writes:
> >
> >>I've used both the FT-736 and TS-790. I own the latter. Ergonomically
> >>it can be a bit difficult to get used to, but it's a good rig. The
> >Apparently pricing is different in the USA.
> >In Europe, a TS-790 is much more expensive than a similar FT-736 setup.
> >(two bands, mains supply)
>
> Amateur Electronic Supply has the following prices:
>
> TS790A PS31 FT736R FP700
> MSRP $2200 220 2500 280
> Discount $1850 170 1870 240
>
> At the time I bought the TS790, the price differences were even greater.
>
> 73,
>
> Larry/NA5E

The only trouble with this comparison is that you don't need a power
supply with the 736 (I assume that is what the FP700 is). It is built
in the 736.

Rick

Date: Thu, 2 May 1996 09:30:16 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Help!)scar-13 antenna

In <4m5sc9$k15@news.global1.net> jaggarao@globalone.net (jagg) writes:

>I am planning to try oscar-13. Is it possible to use a seperate
>5 or 6 el yagis for 2mtr RX and 70 cm Tx? Space is my problem
>for a few months. I can pump in about 70 W on 70 cm.

Well, you should be quick because in a few months the satellite
will be the problem...

I have worked OSCAR 10 and 13 using a 2x15el crossed yagi on 70cm
and 2x6el crossed yagi for 2m. I used about 30 W max on 70cm.
The signal was not strong, but similar to the beacon.
(that is the correct level, many stations use too much power and
are stronger than the beacon)

>Any suggestions on 2 mtr pre-amp. I realise that the antenna
>system is very comprimised. Jag AA2LJ

I used a homemade preamp with a 3SK97, after a commercial preamp
turned out to be unusable because of too little preselection and
strong local VHF signals causing intermodulation.

It should be possible to make some contacts using your setup. Start
out by listening, and optimize the receive side.
The problem over here often was local QRM. No preamp will correct
that situation. When you are in a quiet environment, it should be
much easier.
Then try to locate your own signal using CW, and make sure it is not
stronger than the beacon.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 1 May 1996 19:16:35 GMT
From: jaminge@pb2esac.esac.pacbell.com (John Minger)
Subject: QRM During MIR pass 4/21/96

In article <DqJr7D.4HE@scn.org>, SCN User <bd703@scn.org> wrote:
>
>On Sunday April 21 1996, the MIR station passed near Washington and Oregon
>from 22:37 PDT to 22:47 PDT.
>
>During this pass there were several Seattle area hams who attempted to make
>contact (myself included).
>
>The conduct of a few of these stations was appalling. They kept calling
>for R0MIR even though it was VERY OBVIOUS that Shannon was trying very hard
>to have a QSO with a specific station!
>
>Even when Shannon read back the call of the station she was talking to at
>the begining of each transmission, the same few hams would start calling
>as soon as Shannon unkeyed.
>
[edited]
>
>Despite the poor practices of some stations, R0MIR did make a contact
>with WA7TDZ , ?7AAW, KA5UAR, N6JLH, and N5TD.
>
>The TDZ QSO must have been really a tough one, but Shannon did manage pretty
>well.
>
[edited]

Pretty sad, isn't it, Kerwin.

I looked up the three callsigns you posted about, expecting to find
inexperienced refugees from 11 meters engaging in such behavior.
Well, that stereotype didn't hold much water.... All were old enough
to have learned better by now. Two even had higher grade licenses.

The newcomer would be Shannon herself. Let's hope she can see past
the few thoughtless ones to the real hams out here.

-John, KE6DTC
--

Proceed at your own risk (At whose risk were you proceding before?)
<jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
employer's lame posting software cuts off sigs after four lines of informa-

---

Date: Thu, 02 May 96 14:55:04 EDT
From: RNROBERT@UConnVM.UConn.Edu (Rob Robertson)
Subject: Questions from a Novice

Please fill me in...

I am a novice to the amateur radio hobby. I have recently started monitoring
local radio, including emergency services, HAM, and air traffic with a
basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)

I am particularly fascinated by air traffic radio transmissions, and would
like to further my knowledge, and perhaps begin monitoring satellite and
manned spacecraft transmissions. I have noticed that many of the postings to
this group involve antennas and specific satellites. I also read the recent
posting on space shuttle radio frequencies. I notice that many of the freqs
are in ranges that my hand-held scanner is capable of receiving... If I find
the proper frequencies, can I pull down space shuttle radio transmissions with
my scanner? Do I need a special antenna?

I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are
other spacecraft or satellites routinely rebroadcast in a manner such that I
can receive them with my simple monitor?

What would be involved, in terms of equipment and expense, for a hobbyist to
begin monitoring spaceborne radio transmissions?

Thank you for any replies,

Rob

Date: 2 May 1996 13:42:19 GMT
From: J.Vandegeyn@mailbox.uq.oz.au
Subject: SatTrack for Linux

In <318511C1.34B6@net2.intserv.com>, Buck Evans <bevans@net2.intserv.com>
writes:
>Hi Everyone de N3VZL--

>
> I'm trying to compile SatTrack for Linux and failing miserably. Slackware v
1.2.3 with X11R6.
I've tracked it
>down to the fact that the Makefile can't find any of the X11 include files,
but they are there,
and the
>environment variable set statements look fine.
>
> The box is discon right now, so I don't have the body of the Makefile
available at this time.
>
> Has anyone else had problems compiling the app?
>
>TvmIA and 73
>
>Steve
>N3VZL
>
>pl reply to group or steve@gnosis.slac.com, not here

set the LIBRARY_PATH env variable in /etc/.profile to the libs.
like

LIBRARY_PATH=/usr/lib:/usr/X11/lib:
export LIBRARY_PATH

Cheers Good luck
John VK4CJO

Date: 2 May 1996 02:12:39 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: sunrise/sunset times

The OrbitTrack program will do this for any Lon/lat.
It is a Mac platform program. Shareware on most BBS systems

End of Ham-Space Digest V96 #130
****

Date: Mon, 29 Apr 1996 14:47:02 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Satellite Transmissions

In article <4m1fb7$urr@insosf1.netins.net> whitestone@netins.net (KE0PV)
writes:
>I have a satellite set up using the icom 970 H (35 w out) hy gain antennas
>with alt/az tracking preams ... etc. I seem to be able to hear something when

>I tranmit on the return but it is very weak. Is that because I need more
>power or is something else wrong. Have used the antennas and radio on local
>repeaters etc ... and it works ok. What is the normal amount of power
>required.

You don't say which satellite you're trying to use. For Oscar 10 and 13,
35 watts and gain yagis should be sufficient to put your downlink signal
equal to the beacon. Does the beacon sound strong to you? If it doesn't,
you may have one of several problems. If you aren't using a mast mount
preamp, you should be. Or there may be a problem with your Rx antenna.
Or you could be off-pointed from the satellite, or using the wrong
polarization sense. If the beacon does sound strong to you, then the
problem is likely high loss cables to your uplink antenna, or a problem
with the uplink antenna itself, or you may be using the wrong polarization
sense. Or it may be that your Tx antenna isn't boresighted with your
Rx antenna.

If you're trying to use one of the LEOs, then 35 watts is *more*
than enough uplink power (5 watts should be sufficient). Again,
troubleshoot as noted above. Make sure you're receiving the beacon
strongly first (typically S9 or so). This will tell you that your
receiving system is Ok. If your downlink signal is still weak
compared to the beacon, then look for loss terms in the Tx feedline
and antenna.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp
addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: 3 May 1996 01:52:17 GMT
From: milliron@ix.netcom.com (William Milliron)
Subject: Source code for SDP4

I am looking for source code for the SDP4 satellite propagation
model. I already have SGP4 (from sattrack, seesat et. al).
Any help would be greatly appreciated. Also I am interested in
any opinions about the accuracy of sattrack for satellites with
periods > 225 minuts.

Thanks...

Date: Fri, 03 May 1996 17:03:06 -0500
From: Carl Gregory <cgregory@uiuc.edu>
Subject: Source code for SDP4

William Milliron wrote:
>
> I am looking for source code for the SDP4 satellite propagation
> model. I already have SGP4 (from sattrack, seesat et. al).
> Any help would be greatly appreciated. Also I am interested in
> any opinions about the accuracy of sattrack for satellites with
> periods > 225 minuts.
>
> Thanks...

Check out the Project Spacetrack docs at Tom Kelso's web site. It is
a Tex document, but you can find the FORTRAN listings with a standard
text editor. I used this as the starting point for the SGP/SGP4 models
in WinOrbit. SDP4 and SDP8 are also listed.

73
Carl, K8CG

Date: Fri, 03 May 1996 07:19:59 -0400
From: GEORGE LIEPINS <ke4hw@apcserv1.apcnet.com>
Subject: Upcoming 6 mtr DX in July from YL Land

Activating Rare Latvian Grid

As part of a 23cm EME experiment by the Latvian Amateur Radio League
this
summer, grid KO07kn will also be QRV on 6m between July 3rd to the 10th.
The QTH
is at the recently acquired Ventspils International Radio Astronomy
Centre (a
former Soviet military site) 22km northeast of Ventspils in Kurzeme
province
(Courland of Hanseatic League fame). The centre is being refurbished for
civilian use by the Latvian Academy of Sciences with the help of the
Swedish
government. Principal operator will be the immediate past president of
the LRAL,
Vitauts Klimavicus using "YL3AG". All QSLs should be sent to him
directly in
Riga:-
V. Klimavicus
P.K. #111
Riga
LV - 1069
Latvia

73, George KE4HW

Date: (null)
From: (null)

Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

On 1 May 1996, John Minger wrote:

Much stuff deleted
> [edited]
>
> Pretty sad, isn't it, Kerwin.
>
> I looked up the three callsigns you posted about, expecting to find
> inexperienced refugees from 11 meters engaging in such behavior.
> Well, that stereotype didn't hold much water.... All were old enough
> to have learned better by now. Two even had higher grade licenses.
>
> The newcomer would be Shannon herself. Let's hope she can see past
> the few thoughtless ones to the real hams out here.
>
> -John, KE6DTC
> --
>

> Proceed at your own risk (At whose risk were you proceding before?)
> <jaminge@pacbell.com> I'd love to put a really good disclaimer here, but my
> employer's lame posting software cuts off sigs after four lines of informa-
>
>

End of Ham-Space Digest V96 #131
****

End of Ham-Space Digest V96 #132
****

904. Re: RS-12 Questions + STS tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-05-04 00:00:00 UTC
From: millerj@dnaco.net
Message-ID: <4mfv7f$hbt@sisko.dnaco.net>
Source record: 22466

dnorris@k7no.com wrote:

>A couple questions about RS-12 and STS satellite tracking program.

>1) Is it still in mode K... 15 in/10 out?

>2) Where can I find upgrades to STS? The last one I got was in 1995.
>Or, in the alternative, is there an better shareware program available
>on I'net?

>Thanks in advance...

> C. Dean Norris
> Amateur Radio Station K7NO
> e-mail to dnorris@k7no.com
> http://www.syspac.com/~dnorris/

Gos to ftp.amsat.org for the sts-plus software latest ver.
Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

905. Re: FT-736R vs TS-790 vs IC-820H

Newsgroup: rec.radio.amateur.space
Date: 1996-05-05 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DqxG5x.G7p@cix.compulink.co.uk>
Source record: 22322

I have a 736 and when I bought it, the radios under consideration were:-

Ft736, Icom 820H, Icom 275h+Icom475h and a pair of Kenwood mono band multi modes. The problem I had in deciding was that I was interested in Satellite work, and, imo, the 736 is better equipped, more control-able but the Icoms had better RX. 736+mast head pre amp works very well, and, of course, the radio will do 2/70+6m+23cms with the additional modules.

The only other option under consideration was an HF+6m or HF only radio with a transverter, Ft1000mp+transverter or TS950/850/870+transverter. Again, the Yaesu is better as I believe you can programme the display on the ft1000 to show the true TX/RX frequency on the display, without having to do the mental arithmetic.

Just my 2 pennies worth.

906. REJECTED: Ham-Space Digest V96 #134

Newsgroup: rec.radio.amateur.space
Date: 1996-05-05 00:00:00 UTC
From: MAILER-DAEMON@RTP41.ceo.dg.COM
Message-ID: <9605051452.AI00031@rtp41.rtp.dg.com>
Source record: 22323

----- Mail rejected by CEO. -----
No Routing Link Available Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #134
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Sun, 5 May 96 Volume 96 : Issue 134

Today's Topics:
ARLK031 Keplerian data
Mir operating suggestions and thoughts..
Need MIR Info.
R0MIR contact!
RS-12 Questions + STS tra
RS-12 Questions + STS tracker
Satellite Transmissions
Yeasu FT-290

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 4 May 1996 13:55:39 -0400
From: w1aw@arrl.org
Subject: ARLK031 Keplerian data

SB KEP @ ARL $ARLK031
ARLK031 Keplerian data

ZCZC SK31
QST de W1AW
Keplerian Bulletin 31 ARLK031

Date: 4 May 1996 20:22:14 GMT
From: dhend@cyberportal.net
Subject: Mir operating suggestions and thoughts..

Hello to all .
I am Dave N1PPP and have operated Mir under many circustances and in many ways.. there is one clear rule the loudest
signal makes it.. however the person on the Mir station doesn't necessarilly want to talk to the loudest signal. He or she as it is
now has their own set of ideas needs, wants and desires.
I have found most of the crews on Mir get lonely after they have been up there for a month or two, but there are exceptions.
The soviet operating crews tend to be there to do business and only operate the station when and if they really have spare time
and have nothing else constructive to do, the americans, on the other hand try to use the radio to get in touch with friends and
relatives, and to stay in touch with American culture, activities, and interests.
The argumentative comments I have seen in this newsgroup amount to no more than childish tantrums.
Operators can be calling Mir from literally all over the Uninted States and Canada some are in phase and can hear, others are
out of phase and really don't know what is going on, or can't hear who is talking or what they are saying, there is always going
to be competition if an exotic station operates on a single frequency, and Mir is no exception. There are a few stations operating
kansas city trackers with 22 element beams and 600 watt amps and they are going to be heard or at least destroy any
possiblility of a 50 watt station making it through. If two of these powerful stations are competing there is little chance of any of
the smaller stations being heard, and for the good news.. most of the Mir crews like to talk to the little guys so if the big guys
don't get mad and jam the smaller stations (which happens) the Mir operator often calls the weaker signals. I taked to Norm
Thaggard regarding a school contact while at the drive up at a local McDonalds on a 5 watt HT and got my message through
before a local bad operator thought I was talking to Norm (another Ham locally) on the Mir freq and jammed me off. Norm
Thaggard remembered his callsign and never answered his calls.
The only suggestion I can constructively make is to be on your best behavior when you operate Mir behave as you would have
someone else behave. remember if you jam someone else you will get jammed too.
This radio is an important source of enjoyment and entertainment for the Mir crew so do your best to make it enjoyable for them
have something nice ready to tell them, a short joke a quick piece of sports news try to please them and you will be rewarded, I
have been called by Mir by many crews and personally thanked for being there to offer them a little enjoyment in what otherwise
is a rather spartan existance, and you can to.
Get the best antenna setup you can arrange, I built an azimuth elevation rotor from two old tv rotors and use a 13b2 vertically

polarized and generally have been able to make sucessfull contacts with 25 watts. at other times it is impossible to get through
with 150 watts. The conditions vary considerably and the number of people trying varies drastically and when there are a 1000
people putting out 50 watts of qrm each Mir hears nothing except junk, undecipherable and annoying and they shut the radio
off. If you are interested in Mir information and some interesting documents concerning Mir visit my web page at
http://www.cyberportal.net/dhend/dave1.html
I haven't been able to udate it recently but there are some very good up to date links and some messages from U8MIR and a
dissertation by Miles WF1F about conduct on the Mir frequency which is if nothing else informative.
Most Important
if you are not having fun. shut the dam thing off and look for something you can do to have fun..
73 DAVE

Date: Sat, 27 Apr 96 00:49:46 GMT
From: trandall@mhv.net
Subject: Need MIR Info.

In article <4ln2js$412@newsbf02.news.aol.com>, rickcrider@aol.com (RICKCRIDER) wrote:
>>The call sign is R0MIR, and frequency is 145.550
>>simplex.
>
>Is the call sign R0 (ZERO?) MIR ..... or RO (O 'Oscar'?) MIR.......????
>
>Thanks.....
>
>Rick Crider
>KD4FXA

The call is R "ZERO" MIR.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

Date: Fri, 03 May 1996 23:44:06 -0700
From: kd6fyk <kd6fyk@wco.com>
Subject: R0MIR contact!

Tim Taylor wrote:
>

> ghansen@accessone.com (Glenn Hansen) wrote:
>
> >On April 21 at 0634 UTC made my first call to R0MIR and was rewarded with a
> >return call from Shannon. A real thrill for me and more than likely for
> >Shannon too! :-) She sounds a bit taken back by it all but I bet she gets
> >the hang of it soon enough. Mir certainly had a solid strong signal to
> >Tacoma, Wa. I am using a Yaesu FT-2500 running 50 watts into a Cushcraft
> >AR270 vertical up about 40ft.
>
> >A bonus to all of this was a ham in Astoria, Oregon taped the whole QSO.
> >Thank you NR7F!!
>
> >BTW, can anybody tell me the QSL route for Shannon/Mir??
>
> It use to be that a person could make a mir contact with just an HT.
> I did it myself quite a few times including on paket. But now with
> everyone running 50 plus watts, it's almost impossible to get in on an
> HT. With the no code license in effect, people seem to have forgotten
> the minimum power rules.
> Congradulations on your contact, try it with less power next pass.
>
> >73 - Glenn - KB7PKC

the nocode rule has nothing to do with it!

73 sew----50.125usb---145.850fm etc.

Date: 03 May 96 08:58:00
From: Bill.White@3821-7.woodybbs.com (Bill White)
Subject: RS-12 Questions + STS tra

Hello, OM,
By now you've probably gotten several messages saying that rs-12 is
alive and doing fine. The 10 meter downlink is still loud and clear at
my house. They have turned on the 2 meter downlink also, and I believe
that you could probably get better reception on that band (haven't
tried it yet. I can't comment on STS software.
Hope to work you on rs-12 soon.

Bill White-N5XYN
North Little Rock, ARK
--
|Fidonet: Bill White 1:3821/7
|Internet: Bill.White@3821-7.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

Date: Sat, 04 May 1996 16:05:00 GMT
From: millerj@dnaco.net

Subject: RS-12 Questions + STS tracker

dnorris@k7no.com wrote:

>A couple questions about RS-12 and STS satellite tracking program.

>1) Is it still in mode K... 15 in/10 out?

>2) Where can I find upgrades to STS? The last one I got was in 1995.
>Or, in the alternative, is there an better shareware program available
>on I'net?

>Thanks in advance...

> C. Dean Norris
> Amateur Radio Station K7NO
> e-mail to dnorris@k7no.com
> http://www.syspac.com/~dnorris/

Gos to ftp.amsat.org for the sts-plus software latest ver.
Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

Date: Sat, 4 May 1996 10:18:18 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Satellite Transmissions

In <1996Apr29.144702.28024@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>Make sure you're receiving the beacon
>strongly first (typically S9 or so). This will tell you that your
>receiving system is Ok.

Hmmm, I think when you receive Oscar 10/13's beacon S9, your transceiver
suffers from S-meter inflation :-)
(but then, most of them do)

Rob
--
+-----------------------------------+-------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+-------------------------------------+

Date: 3 May 1996 17:49:32 -0400
From: lewiss3@aol.com (LewisS3)

Subject: Yeasu FT-290

I am considering this readio, an all mode for 2 meters. Can it be used to
work satellites?

Lewis KC5PSX

Date: (null)
From: (null)

SB KEP ARL ARLK031
ARLK031 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96124.12159969 .00001399 00000-0 24927-4 0 05196
2 16609 51.6503 349.7267 0003937 273.8865 86.1677 15.57985578582980
AO-10
1 14129U 83058B 96123.30090279 -.00000058 00000-0 10000-3 0 4197
2 14129 26.2428 211.7043 5992462 12.0200 357.6231 2.05879450 68925
RS-10/11
1 18129U 87054A 96124.13945991 .00000013 00000-0 -18855-5 0 02088
2 18129 82.9269 181.8333 0010378 286.7244 73.2763 13.72364670443994
UO-11
1 14781U 84021B 96123.98672925 .00000117 00000-0 27666-4 0 08938
2 14781 97.7982 116.7298 0010649 233.3935 126.6291 14.69448676651012
RS-12/13
1 21089U 91007A 96123.82095932 .00000029 00000-0 14575-4 0 08891
2 21089 82.9223 222.9733 0030216 2.2188 357.9096 13.74069108262805
AO-13
1 19216U 88051B 96122.47509327 -.00000038 00000-0 18342-3 0 01948
2 19216 57.3012 119.8276 7407756 38.2497 355.9625 2.09769513028863
UO-14
1 20437U 90005B 96124.12664064 -.00000013 00000-0 11888-4 0 01808
2 20437 98.5443 207.9817 0011515 339.7308 20.3416 14.29918809327617
RS-15
1 23439U 94085A 96124.04214846 -.00000039 00000-0 10000-3 0 01380
2 23439 64.8144 96.0868 0162675 207.1386 152.0965 11.27524741055698
AO-16
1 20439U 90005D 96124.08615684 -.00000010 00000-0 12879-4 0 09883
2 20439 98.5587 210.0887 0011558 340.4948 19.5797 14.29973410327628
DO-17
1 20440U 90005E 96124.11286950 .00000015 00000-0 22722-4 0 09915
2 20440 98.5616 210.7285 0011742 340.5334 19.5394 14.30115368327655

```
WO-18
1 20441U 90005F 96124.10176082 -.00000009 00000-0 13335-4 0 09867
2 20441 98.5611 210.6619 0012373 339.9212 20.1464 14.30084831327655
LO-19
1 20442U 90005G 96124.10098899 -.00000007 00000-0 14277-4 0 09928
2 20442 98.5614 211.1337 0012422 339.7664 20.3016 14.30192773327678
FO-20
1 20480U 90013C 96124.08468677 -.00000053 00000-0 -41035-4 0 08812
2 20480 99.0243 157.5046 0539804 226.7317 128.7527 12.83232530292103
AO-21
1 21087U 91006A 96124.09678201 .00000094 00000-0 82657-4 0 07026
2 21087 82.9410 355.0874 0035998 334.7675 25.1717 13.74567947263811
UO-22
1 21575U 91050B 96124.13999565 .00000020 00000-0 21131-4 0 07042
2 21575 98.3534 191.8543 0008701 41.9946 318.1908 14.37021631251594
KO-23
1 22077U 92052B 96124.54522074 -.00000037 00000-0 10000-3 0 5741
2 22077 66.0796 282.9281 0011289 310.3850 49.6182 12.86296968175063
KO-25
1 22828U 93061F 96124.14482012 .00000042 00000-0 34341-4 0 04669
2 22828 98.5788 200.7122 0011344 352.6483 7.4524 14.28139362103686
IO-26
1 22826U 93061D 96124.15306298 -.00000030 00000-0 53859-5 0 04764
2 22826 98.5791 200.6622 0009941 8.1845 351.9501 14.27801586135575
AO-27
1 22825U 93061C 96124.15332856 -.00000007 00000-0 14782-4 0 04936
2 22825 98.5802 200.5078 0009203 7.9415 352.1911 14.27693683135566
PO-28
1 22829U 93061G 96124.23091197 .00000031 00000-0 29840-4 0 4622
2 22829 98.5768 200.8527 0010409 353.5848 6.5197 14.28119738135610

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
May 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #134
******************************
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907. Re: R0MIR contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-05 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4miah7$66o@news.mhv.net>
Source record: 22324

In article <4mblv6$1c1@news.tcd.net>, ttaylor@trib.com (Tim Taylor) wrote:

>It use to be that a person could make a mir contact with just an HT.
>I did it myself quite a few times including on paket. But now with
>everyone running 50 plus watts, it's almost impossible to get in on an
>HT. With the no code license in effect, people seem to have forgotten
>the minimum power rules.
>Congradulations on your contact, try it with less power next pass.
>
>>73 - Glenn - KB7PKC

There are also people who are makeing a contact at EVERY pass. I always see the same people connecting to the PBBS. I have yet to get into it. I have connected to the keyboard, but alas at night when they are asleep.
There are 2 calls that I always see in there at every pass. They know who they are. How about giving others a chance? Do you really need to be there at every pass?

What's the status of the packet station onboard? She's been very quiet for a while now.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and they are not that of MHV.NET!

908. WWW Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-05-05 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <318cf054.6007640@news.innotts.co.uk>
Source record: 22325

The local server programme which processes forms has thrown a wobbly
this weekend, so if I've missed anyone's messages, please be patient.

http://www.innotts.co.uk/~asperges/

The pages are still functioning fine however and have been recently
updated. If you haven't visited yet, do please drop by.

73 de
Jeremy G4NJH
asperges@innotts.co.uk
[Am Radio, SWL pages: http://www.innotts.co.uk/~asperges/]

909. Re: Questions from a Novice

Newsgroup: rec.radio.amateur.space
Date: 1996-05-05 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996May5.165121.28810@ke4zv.atl.ga.us>
Source record: 22326

In article <1777BD1C8S86.RNROBERT@UConnVM.UConn.Edu> RNROBERT@UConnVM.UConn.Edu (Rob Robertson) writes:
>
>Please fill me in...
>
>I am a novice to the amateur radio hobby. I have recently started monitoring
>local radio, including emergency services, HAM, and air traffic with a
>basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)
>
>I am particularly fascinated by air traffic radio transmissions, and would
>like to further my knowledge, and perhaps begin monitoring satellite and
>manned spacecraft transmissions. I have noticed that many of the postings to
>this group involve antennas and specific satellites. I also read the recent
>posting on space shuttle radio frequencies. I notice that many of the freqs
>are in ranges that my hand-held scanner is capable of receiving... If I find
>the proper frequencies, can I pull down space shuttle radio transmissions with
>my scanner? Do I need a special antenna?

You *may* be able to receive Shuttle and MIR transmissions with just
the handheld. I've heard both with an amateur handheld. The only reservations
would be whether your scanner has the sensitivity of my HT, and whether
you're listening to a favorable pass. A special antenna is very helpful,
especially when the pass is near your horizon. If you don't care if you
understand what you hear, you can also hear the pacsats pass overhead.
(If you buy packet equipment, you can decode and read these messages.)

>I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are
>other spacecraft or satellites routinely rebroadcast in a manner such that I
>can receive them with my simple monitor?

I've heard of gateway stations which allow HT equipped amateurs to
work the Oscar analog satellites. I don't know if there are any in
your area. There are also digital gateway stations for relaying amateur
packet transmissions via satellite. I don't expect you'd find listening
to one of those very interesting, however, unless you invest in packet
equipment to decode the signals.

>What would be involved, in terms of equipment and expense, for a hobbyist to
>begin monitoring spaceborne radio transmissions?

What you have is a start. Try for MIR and Shuttle (next time it is up
with a SAREX payload). You need an orbit tracking program so you'll
know when to listen. An outside antenna may help, a steerable beam
antenna certainly would. Some of the easiest satellites to receive
are the pacsats. You'd need packet equipment to decode their messages
(sort of like reading a BBS). And there are the polar orbiting Wx

satellites. With the proper decoding software, you can receive pix
of the global cloud cover direct from these satellites and do your
own weather forcasts, lots of fun.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

910. NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: maloney@albany.net
Message-ID: <4mjvgf$e1v@lori.albany.net>
Source record: 22327

Is there a NASA FTP site (that is kept current during shuttle missions!) that contains Keps?
-Patrick

911. Re: Mir operating suggestions and thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4mk8g0$7uc@paperboy.ids.net>
Source record: 22328

In article <4mge9m$a2q@news.cyberportal.net> , dhend@cyberportal.net writes:
>Hello to all .
>I am Dave N1PPP and have operated Mir under many circustances and in many
>ways.. there is one clear rule the loudest
>signal makes it.. however the person on the Mir station doesn't necessarilly
>want to talk to the loudest signal. He or she as it is
>now has their own set of ideas needs, wants and desires.

Quite true - unlike the OSCAR satellites having a person at the other end of the mike makes a difference. If the person aboard a spacecraft doesn't like some form of oboxious behavior - don't expect them to answer.

>the americans, on the other hand try
>to use the radio to get in touch with friends and
>relatives, and to stay in touch with American culture, activities, and interests.

This is a pretty general statement to make considering that there have been only two long term Amercians aboard Mir - Norm Thagard and Shannon Lucid. But overall, I'd say that it's a good general statement.

It's important to note that while neither of them has a valid U.S. ham license, they both have had exposure to amateur radio.

Norm Thagard was a ham while growing up in Jacksonville Florida, and enthusiastic operating on shortwave bands. So he knows from personal experience what it's like to try to get that 'special station' and the frustration of not being able to get through due to the 'heavy guns' constantly using more power or fancier equipment. His ham license lapsed when he went to Vietnam as a Marine fighter pilot and he never renewed his license.

Shannon Lucid got to use the SAREX equipment aboard her previous shuttle flight, STS-58. She used it for a family personal contact, and I think she did a school contact. So she's aware of how many hams on the ground are interested in talking to a spacecraft in orbit, but doesn't have the ham background Norm did of trying to get through to a rare station.

Both have used the radio on a regular basis to talk to their fellow ham astronauts as often as possible when flying over Houston. As much as anything else it's catching up on office gossip.

>The argumentative comments I have seen in this newsgroup amount to no more than

>childish tantrums.

But also legitimate concerns. I am rather concerned about the case where people were - almost certainly - intentionally trying to 'force' their way in to a Mir conversation even though it was clear that the person aboard Mir was already talking to somebody else.

>There are a few stations operating
>kansas city trackers with 22 element beams and 600 watt amps and they
are
>going to be heard or at least destroy any
>possiblility of a 50 watt station making it through. If two of these
powerful
>stations are competing there is little chance of any of
>the smaller stations being heard

Quite true - Dick Richards KB5SIW once commented to me "He who has the power rules the airwaves".

>and for the good news.. most of the Mir crews
>like to talk to the little guys so if the big guys
>don't get mad and jam the smaller stations (which happens) the Mir
operator
>often calls the weaker signals. I taked to Norm
>Thaggard regarding a school contact while at the drive up at a local
McDonalds
>on a 5 watt HT and got my message through
>before a local bad operator thought I was talking to Norm (another Ham
locally
>) on the Mir freq and jammed me off. Norm
>Thaggard remembered his callsign and never answered his calls.

kudos to Norm! When I interviewed him after the mission he told me that there were these big guns who he had talked to 'any number of times' who kept trying. And he would ignore them because he wanted to give others a chance.

5 watts isn't an unreasonable amount of power to use when contacting Mir. I talked to Sergei Adeev of the Mir 20 crew using a 5 watt handheld in to a J-pole antenna - succeeding primarily because it was 3 am local, and I didn't have much competition!

>This radio is an important source of enjoyment and entertainment for the
Mir
>crew so do your best to make it enjoyable for them

Which is something always to remember - for both the ground and the person in space. For the space travellers (notice how I carefully avoid using astronaut/cosmonaut?) the radio on Mir is a source of recreation, and for the Americans also a link home. For the hams on the ground it's a feather to put in your cap - an unusual contact. But the folks aboard Mir are more likely to want to chat with somebody and just talk - shooting the breeze since they're up there for a long time.

>Get the best antenna setup you can arrange, I built an azimuth elevation
rotor
>from two old tv rotors and use a 13b2 vertically
>polarized and generally have been able to make sucessfull contacts with
25
>watts. at other times it is impossible to get through
>with 150 watts. The conditions vary considerably and the number of
people
>trying varies drastically and when there are a 1000
>people putting out 50 watts of qrm each Mir hears nothing except junk,
>undecipherable and annoying and they shut the radio off.

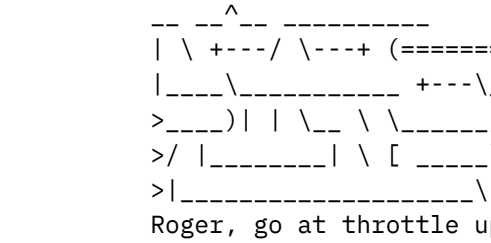
Quite true. I use a 45 watt mobile in to a J-pole antenna now, but plan
to upgrade to a directional set up in the near future. But the current
setup has enough power -- as long as folks cooperate and don't try to
step over each other!

>Most Important if you are not having fun. shut the dam thing off and
look for something you
>can do to have fun..

Agreed. Which also applies just as much on the ground as in space.
You've made some excellent comments Dave.

73s,

Philip Chien, KC4YER

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET


Roger, go at throttle up CHR$(32) the final frontier

912. Radio Station Database Program Stand Alone

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Charles Bolland <chuck@flinet.com>
Message-ID: <318E27BD.1D66@flinet.com>
Source record: 22329
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc.,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.noncomm,rec.radio.scanner,rec.radio.swap

Sir,

It's still available. The IBM/DOS Broadcasting Radio Station Database Program for Longwave, Mediumwave, and Shortwave. Over 4,000 records included already. The program is completely read and write. Records can be added or changed. Sorts in many different formats both on your screen and printing.

If you would like a copy of the program, send your request to "chuck@flinet.com". Please include your MAILING ADDRESS - SNAIL MAIL. For example, your street number, city, state and zipcode. Also include your EMAIL address.

The program will be sent to you via EMail probably within 24 hour is not sooner. If you reqeust the program and havenn't received it in that period, check back with me. Sometimes things get lost on the internet.

Remember to send your address. Requests without a mailing address will not be acknowledge to save time on the internet. In the past requests without an address were reminded with a message. Usually, the reminder went unanswered anyway. If it wasn't, the reply was sometimes very rude.

This program is FREE! Everything works. It has many features and they all work, not like shareware where some of the features work and other don't.

Your Postal address and EMail address will be kept CONFIDENTIAL. I may in the future contact you via Snail mail with a description about the Voyageur Database program. That's it.

Hope to hear from you and best regards.

Chuck Bolland
P.O. Box 18402
West Palm Beach, FL 33416

chuck@flinet.com

913. Re: Mir operating suggestions and thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960506102105.16854H-100000@qni.com>
Source record: 22330

Dave,
Bottom line is that we all should use proper operating procedure
that have been outlined before for Mir contacts on both voice and packet !
DO NOT CALL MIR UNTIL YOU SEE OR HEAR A CQ from MIR
How much easier could this be..
I believe that too many hf contesters went out and bought a ringo ranger
and a brick connected to their standard ht's are all trying to make the
big contact

Good luck with your next contacts
Gary Watts de N0OXV
Kansas City Mo
81 GL1100I

914. How do I get Noaa images using SoundBlaster V2 card.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: djb@digweed.win-uk.net
Message-ID: <37@digweed.win-uk.net>
Source record: 22331

I have just read some info. printed by DALLAS REMOTE IMADING GROUP,
received from a local BB. along with a programme called SBDSP.

Has any one managed to Demodulate a recording of the received NOAA
satellite signals, in to an image file using a SoundBlaster2 card. ?

The programme SBDSP Demodulates a .VOC file in to a .IMG file so
that it can be viewed.

I seem to have a problem running the SBDSP
programme. I can't make a .VOC file without an
header which upsets the SBDSP programme.

My alternative method is to build the AM. A to D. decoder
interface, refered to by JVFAX software. Then use JVFAX to view.

I have spent the last 18 months building a suitable receiver for
weather satellite reception with a frequency deviation of +/- 20KHz.
This is now up and running with good results. I am at the stage were
I need to decode the audible output.

Can any body help.

THANKS inadvance

Derek

915. Re: Yeasu FT-290

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: sufana@ceco.ceco.com
Message-ID: <Dqzw9F.5Hr@ceco.ceco.com>
Source record: 22332

In article hhr@newsbf02.news.aol.com, lewiss3@aol.com (LewisS3) writes:
> I am considering this readio, an all mode for 2 meters. Can it be used to
> work satellites?
>
> Lewis KC5PSX

Lewis,

I use the FT290RII for my satellite and SAREX work. I also run a
150w amp that helps. The nice thing about the radio is that is also
has an RIT control that is often not found on the FM only radios. It
has come in handy for the SAREX contacts. If you only have so much money
to spend and you want portability along with all-mode, then this is the
radio to get. Good luck.

73s,

Charlie Sufana AJ9N Internet sufana@ceco.ceco.com (preferred)
tsdys@ccmail.ceco.com (secondary)

ComEd - A Div. of Unicom (formerly Commonwealth Edison Co.)
Work address: ComEd, System Protection Dept. 1039E, 125 S. Clark St.,
P.O. Box 767, Chicago, Il. 60690
Work phone: (312) 394-2815, work fax: (312) 394-4583

Who are you going to call? Fault busters!

916. Re: Keps please?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: ken.thompson@Symbios.COM
Message-ID: <ken.thompson.1234.000E88D1@Symbios.COM>
Source record: 22333

In article <4mkorm$bup@dopey.magg.net> horse@magg.net writes:
>From: horse@magg.net
>Subject: Keps please?
>Date: Thu, 02 May 1996 05:34:28 GMT

>
>I would appreciate receiving the latest Keps, including Mir. Thanks.

If you can be patient they are posted here at least ervery two weeks.

917. Re: Keps please?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Doyle <dkdoyle@ix.netcom.com>
Message-ID: <318EAB86.2210@ix.netcom.com>
Source record: 22334

ken.thompson wrote:
>
> In article <4mkorm$bup@dopey.magg.net> horse@magg.net writes:
> >From: horse@magg.net
> >Subject: Keps please?
> >Date: Thu, 02 May 1996 05:34:28 GMT
>
> >
> >I would appreciate receiving the latest Keps, including Mir. Thanks.
>
> If you can be patient they are posted here at least ervery two weeks.ken if you have
links to the internet as you seem to have why not just
jump to amsat , or many of the other links who provide keps..
explore , keps are everywhere , just like ham's.
jim kd4hur

918. Re: Keps please?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Doyle <dkdoyle@ix.netcom.com>
Message-ID: <318EACE1.7D67@ix.netcom.com>
Source record: 22335

ken.thompson wrote:
>
> In article <4mkorm$bup@dopey.magg.net> horse@magg.net writes:
> >From: horse@magg.net
> >Subject: Keps please?
> >Date: Thu, 02 May 1996 05:34:28 GMT
>
> >
> >I would appreciate receiving the latest Keps, including Mir. Thanks.
>
> If you can be patient they are posted here at least ervery two weeks.KEN :
YOU MIGHT GIVE AMSAT.ORG A TRY , ALSO ARRL HAS MANY LINKS,
BESIDES HAVING FUN SEARCHING YOU WILL HAVE LOTS OF FUN CHECKING OUT THE
HAM RADIO LINKS WHICH RESIDE ALLOVER THE WEB.
JIM KD4HUR

919. Yeasu FT-290

Newsgroup: rec.radio.amateur.space
Date: 1996-05-06 00:00:00 UTC
From: Bill.White@3821-7.woodybbs.com
Message-ID: <6a4_9605071135@woodybbs.com>
Source record: 22336

Hello Lewis,
First of, I am not familiar with this radio. But just knowing that
it is a 2 meter all-mode says to me that it could be used for satellite
a
work. I'm making contacts thru rs-10 and rs-12. RS-10 has a two meter
up-link. I'm using a j-pole and a 20 watt 2 meter source (transmit
converter and amplifier). I have made contacts running only 2 watts.
RS-10 has a 10 meter down-link, so you will need another rig to
recieve on 10 meters. RS-12 has a 15 meter up-link and a 10 meter and 2
meter down-link. I think that the 2 meter down-link would be easier to
hear, but I've not listened to it (only the 10 meter down-link).
A 2 meter all-mode rig would be perfect for either the up-link or
the down-link on 4 satellites that I know of (the Japanese satellite has
a 2 meter up-link and a 70 centimeter down-link (you can get a kit from
Hamtronics to convert 70 centimeters to 10 meters for 60 or 70 dollars I
think.
Good luck and maybe I'll catch you
on the bird soon. 73's--Bill N5XYN
--
|Fidonet: Bill White 1:3821/7
|Internet: Bill.White@3821-7.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

920. THINNING HAIR?....MINOXIDIL USERS?....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-07 00:00:00 UTC
From: Peawee@sys280.chatlink.com
Message-ID: <599042@280.chatlink.com>
Source record: 22337

AD>Now available in the U.S. Pentadecanoic Acid Glyceride. World's
AD>leading treatments for thinning hair from Japan. 2.5X more
AD>effective than minoxidil. Featured on CNN, NEWSWEEK,
AD>New York Times. Doctor recommended. For free info,
AD>please call 1-800-555-8655

What does thinning hair have to do with amateur tadio???? s!

921. Re: How do I get Noaa images using SoundBlaster V2 card.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-07 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4mng26$eqe@service2.uky.edu>
Source record: 22338

In article <37@digweed.win-uk.net>, djb@digweed.win-uk.net (Derek Bayley) says:
>
>I have just read some info. printed by DALLAS REMOTE IMADING GROUP,
>received from a local BB. along with a programme called SBDSP.
>
>Has any one managed to Demodulate a recording of the received NOAA
>satellite signals, in to an image file using a SoundBlaster2 card. ?
>
>The programme SBDSP Demodulates a .VOC file in to a .IMG file so
>that it can be viewed.
>
>I seem to have a problem running the SBDSP
>programme. I can't make a .VOC file without an
>header which upsets the SBDSP programme.
>
>My alternative method is to build the AM. A to D. decoder
>interface, refered to by JVFAX software. Then use JVFAX to view.
>
>I have spent the last 18 months building a suitable receiver for
>weather satellite reception with a frequency deviation of +/- 20KHz.
>This is now up and running with good results. I am at the stage were
>I need to decode the audible output.
>
>Can any body help.
>
>THANKS inadvance
>
>Derek
>
>
>
While I have yet to view an image captured with SBDSP, if you "record"
the pass as a voc, then use the voc to wav converter that comes from
creative labs with the SB, SBDSP will process the resultant wav file with
errors. Of course then you have to veiw the file, I have tried several
different "viewers" with rather poor results.
I use JVFAX 7.0 (I like to capture passes as GIFs, easier for me to work
with than TGA(JVFAX 7.1 uses the TGA picture format). I use an A&A
NOAA WEFAX demod, feeding a modified printer board for my pc.
IF you go to the finnish funet site(sorry I do not have the url handy),
in one of the subdirectories under hamradio (like fax/sstv or something
like that), there is a program called Channelx (Copyright 1993 by
Johannes Lehtinen) that should capture, proccess, and display the NOAA
wesat image. The documentation is in Finnish, and that is on language

that I can not even begin to "decypher". When you run channelx, the screen commands are in English. I have not had a chance to try Channelx. The wx has been rather stormy here in central Kentucky, and I have disconnected my NOAA antenna. While it has lightening "protection" (kind of an oxymoron), I tend to disconnect the antenna feedline during this type of weather. IF you can not find channelx on funet, just Email me and I will attach it to a return email. I use Eudora, and a lot of people hate the methode Eudora uses to attach files. Unless you are using Eudora, my email attachment might not be too usefull to you.
Good luck and good viewing. You really want to have you NOAA receive setup working by late summer. The huuricanes are real interesting to watch.

922. ARLK032 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-07 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk032.1996@arrl.org>
Source record: 22339
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK032
ARLK032 Keplerian data

ZCZC SK32
QST de W1AW
Keplerian Bulletin 32 ARLK032
From ARRL Headquarters
Newington, CT May 7, 1996
To all radio amateurs

SB KEP ARL ARLK032
ARLK032 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96127.13629717 .00001773 00000-0 29810-4 0 05094
2 16609 51.6508 334.6110 0004042 287.1503 72.9048 15.57999992583453
HST
1 20580U 90037B 96127.55208463 .00000327 00000-0 17112-4 0 8012
2 20580 28.4686 126.1800 0006350 97.9922 262.1383 14.91051342132361
AO-10
1 14129U 83058B 96124.27226767 -.00000024 00000-0 10000-3 0 04202
2 14129 26.2405 211.5407 5993218 12.2919 357.5611 2.05879391068948
RS-10/11
1 18129U 87054A 96127.12868308 .00000014 00000-0 -10986-5 0 02321
2 18129 82.9269 179.6248 0010219 277.1583 82.8413 13.72364655444406
UO-11
1 14781U 84021B 96126.98286377 .00000099 00000-0 24539-4 0 08860
2 14781 97.7982 119.5911 0010815 223.4809 136.5539 14.69449277651451
RS-12/13
1 21089U 91007A 96127.24337227 -.00000009 00000-0 -25141-4 0 8865
2 21089 82.9226 220.4361 0030148 352.8387 7.2304 13.74068714263278
AO-13
1 19216U 88051B 96127.24214400 .00000928 00000-0 29007-3 0 1962
2 19216 57.2979 118.8150 7410364 38.7089 355.8150 2.09766162 28965
UO-14
1 20437U 90005B 96127.13551931 .00000020 00000-0 24760-4 0 01990
2 20437 98.5442 210.9347 0011406 331.1001 28.9559 14.29919387328045
```

```
RS-15
1 23439U 94085A 96127.41251786 -.00000039 00000-0 10000-3 0 1311
2 23439 64.8149 90.6355 0162457 206.5734 152.6792 11.27524819 56075
AO-16
1 20439U 90005D 96127.16489184 .00000003 00000-0 18127-4 0 09837
2 20439 98.5583 213.1144 0011165 331.7430 28.3148 14.29973702328068
DO-17
1 20440U 90005E 96127.12133588 -.00000001 00000-0 16410-4 0 09864
2 20440 98.5616 213.6881 0011648 332.0016 28.0538 14.30115364328086
WO-18
1 20441U 90005F 96127.32018800 -.00000015 00000-0 11213-4 0 9834
2 20441 98.5610 213.8270 0012110 330.7215 29.3272 14.30084912328113
LO-19
1 20442U 90005G 96127.17925148 .00000006 00000-0 19053-4 0 09895
2 20442 98.5617 214.1630 0012304 330.8727 29.1771 14.30193143328118
FO-20
1 20480U 90013C 96127.51534180 -.00000013 00000-0 46582-4 0 8756
2 20480 99.0252 160.2851 0539885 218.9416 137.1618 12.83233005292541
AO-21
1 21087U 91006A 96127.15400177 .00000093 00000-0 82657-4 0 7019
2 21087 82.9408 352.8247 0035921 326.4138 33.4740 13.74568102264234
UO-22
1 21575U 91050B 96127.13402484 .00000031 00000-0 24657-4 0 07008
2 21575 98.3531 194.7602 0008591 34.4083 325.7662 14.37021997252020
KO-23
1 22077U 92052B 96126.87773091 -.00000037 00000-0 10000-3 0 05926
2 22077 66.0798 278.0445 0011636 310.2441 49.7558 12.86297085175366
KO-25
1 22828U 93061F 96127.15744554 .00000003 00000-0 18819-4 0 04585
2 22828 98.5789 203.6723 0010992 344.4693 15.6151 14.28139180104110
IO-26
1 22826U 93061D 96127.23647536 -.00000005 00000-0 15677-4 0 4700
2 22826 98.5803 203.6925 0009862 359.6670 0.4501 14.27802049136011
AO-27
1 22825U 93061C 96127.16689251 -.00000023 00000-0 82287-5 0 04860
2 22825 98.5819 203.4701 0009203 0.5528 359.5663 14.27693772135994
PO-28
1 22829U 93061G 96127.17351663 -.00000001 00000-0 17009-4 0 04807
2 22829 98.5766 203.7437 0010458 345.1477 14.9401 14.28119689136032

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
May 11, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

923. Re: Radio Station Database Program Stand Alone

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: w9sz@prairienet.org
Message-ID: <4mq6m5$4t1@vixen.cso.uiuc.edu>
Source record: 22340

In a previous article, chuck@flinet.com (Charles Bolland) says:

>Sir,
>
>It's still available. The IBM/DOS Broadcasting Radio Station Database
>Program for Longwave, Mediumwave, and Shortwave. Over 4,000 records
>included already. The program is completely read and write. Records
>can be added or changed. Sorts in many different formats both on your
>screen and printing.
>

Just a couple notes on the program.

It's a great program and database; I've gotten some use out of it and
it's fun!

Be warned, however, that it it is a MIME-encoded zipped file which is
almost 1 meg in size. My mailbox here only holds 1 meg and I had quite a
time getting it when it first arrived!

73, Zack W9SZ

924. Special Invitation: X Prize May 18th Gala Debut!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: xprize@aol.com
Message-ID: <4mqho8$kn3@newsbf02.news.aol.com>
Source record: 22341

****

ON MAY 18TH, YOU ARE INVITED TO BEGIN

THE ULTIMATE HUMAN ADVENTURE ...

THE X PRIZE

"Enabling Human Ingenuity

and

Adventure in Space!"

****

On May 20th, 1927, The Spirit of St. Louis carried Charles Lindbergh from New York to Paris and into the hearts and minds of the world. On May 18th, 1996, all eyes will be on St. Louis again.

"The X Prize is an exciting program which will do
for astronautics what Charles Lindbergh did for
aviation in 1927."
- Mr. Arthur C. Clarke, Author & Scientist

"If the X Prize is half as successful as the aviation
competitions have been, it will serve as an important
milestone in opening the space frontier to commercial
passengers and space tourism."
- Mr. Daniel S. Goldin, NASA Administrator

On May 18th, the most ambitious prize in aviation and space history will be announced at the St. Louis Science Center. The X Prize. A multi-million dollar international space prize which will shape the future of commercial space travel for private citizens. Scientists, explorers, astronauts, and business leaders from around the world will convene in St. Louis -- by invitation -- to take part in this historic announcement. Please join us.

THE X PRIZE DINNER COMMITTEE

[Co-Chairmen] Dr. Buzz Aldrin
Apollo 11 Astronaut
Chairman, National Space
Society

Mr. Erik Lindbergh
Grandson of Charles Lindbergh
Pilot

[Astronauts Attending May 18th Event]

Dr. Buzz Aldrin, Gemini 12, Apollo 11
Captain Daniel C. Brandenstein
Colonel Gerald P. Carr, Skylab 4
Mr. Robert J. Cenker
Dr. Mary L. Cleave
Colonel Richard O. Covey, STS 51-I, STS 26, STS 38, STS 61
Mr. R. Walter Cunningham, Apollo 7
Dr. Samuel T. Durrance, STS 35
Dr. Owen K. Garriott, Skylab 3, STS 9
Dr. Linda M. Godwin
Mr. Richard J. Hieb
Dr. Byron Lichtenberg, STS 9, STS 45
Captain Jon A. McBride, STS 41-G
Col. Steven R. Nagel
Colonel William R. Pogue, Skylab 4
Dr. Harrison H. Schmitt, Apollo 17
General Thomas P. Stafford, Gemini 6, Gemini 9, Apollo 10
Dr. Charles Walker, STS 41-D, STS 51-D, STS 61-B
Dr. Taylor G. Wang, STS 51-B

You are invited to join astronauts, explorers, aerospace and business leaders at a black-tie gala event on May 18th.

The X Prize is endorsed by the following Space Organizations:
* Aero Club of France
* Aerospace States Association
* Association of Space Explorers
* The Explorers Club
* Federation Aeronautique Internationale
* National Space Society
* National Aeronautics & Space Administration
* Society of Experimental Test Pilots
* Space Frontier Foundation
* U.S. Space Foundation

[EVENT DETAILS]
Location: St. Louis Science Center, St. Louis, MO.
Cocktails: 6:30 p.m.
Dinner & Event: 8:00 p.m.
Price: $500 per ticket*
$4,000 per table of eight (two members of the New Spirit of St. Louis Committee and/or astronauts will join your table for a total of ten).
Dress: Black-Tie
Valet Parking

*Approximately $400 of the $500 is tax-deductible

Please RSVP no later than May 10, 1996.
For more infomation, please call 314 - 982 - 9172.
or e-mail to Xprize@aol.com

To RSVP: Please send the following information:

Name:_____

Organization:_____

Address:_____

City:_____State: _____ Zip: _____

Tel: _____

Number of Tickets Requested: _____

I have enclosed a check for: $_____ ($500 per seat)

Please seat the following guests at my table:
(1) {include your name}
(2)
(3)
(4)
(5)
(6)
(7)
(8)

Please send check and above information to:
The X Prize Foundation, 200 N. Broadway, Suite 1800
St. Louis, MO USA 63102. Tel: 314-982-9172

X PRIZE GENERAL INFORMATION:
The X Prize has been created to educate the public about space tourism and to accelerate the development of low-cost, reusable launch vehicles and thereby jump-start the creation of a space tourism industry.

Prizes work. In the 1920's and 1930's hundreds of aviation prizes pushed the envelope of speed, distance, endurance and safety in the fledgling aeronautical industry. In 1926 and 1927 alone, more than $100 million worth or prizes (in 1996 dollars) were offered to challenge the flying community. Today, only 70 years later, aviation is a global $250 billion industry.

The X Prize follows in the long-standing tradition of aviation prizes. This is the first-ever human spaceflight prize. The multi-million cash prize will be awarded to the first group to privately build and demonstrate a spaceship which can carry at least three people to a 100 km (sub-orbital) altitude on a repeatable basis. Details of the X Prize rules will be announced on May 18th.

It is the intent of the X Prize Foundation, that those who compete for and win the X Prize will soon become modern-day heroes and transportation innovators. The X Prize will inspire today's greatest entrepreneurs.

925. noaa pictures

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: m.aschauer@magnet.at
Message-ID: <56950750.2106369@magnet.at>
Source record: 22342

Hi there,
Derek, if you have a receiver for the noaa polar orbiters, you did a good job.
i have even brewed a wx satellit receiver. and im using a decoder from a german ham.
his name is siegfried hari, callsign dk9fn.
adress:po.box 1224-L
D-63488 Seligenstadt
he has a fax/sstv decoder for 198.- DM the kit, and 239.-DM the plug-in box. if you have any questions about this... mail me, ill try to help.

michael

--- OffRoad 1.9n unregistered

926. InstanTrack and Win95

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4mqrg8$cjp@tilde.csc.ti.com>
Source record: 22343

I just got a new computer with Win95 loaded. The old 386 ran Instantrack just fine, but it is a DOS program. Will it run OK in a DOS window from within Win95? A lot of the DOS commands are missing in the crippled Win95 version and I don't want to load DOS 6.22 on top of the Win95 DOS version 7.0 (incomplete) because of possible backward incompatibility.

Ken Durham K5MBV mbv@ti.com

927. New WWW ham page, new HAM CHAT page.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: baack@monet.umecut.maine.edu
Message-ID: <4mqvsg$1cto@sol.caps.maine.edu>
Source record: 22344
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.space

NEW ham radio WWW site, as well as a CHAT script.
covering topic such as solar power, space communications..(MIR?)
Portable systems..
check it out.
http://www.umecut.maine.edu/~baack

73's Jason N1RWY

928. Re: NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dr3GEu.GE@pe1chl.ampr.org>
Source record: 22345

In <4mjvgf$e1v@lori.albany.net> maloney@albany.net (Patrick J. Maloney) writes:

>Is there a NASA FTP site (that is kept current during shuttle missions!) that
>contains Keps?

Do you require it to be a NASA site? Why not archive.afit.af.mil?

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

929. Radio Meteor Obs. Bull. April 1996 Lyrids

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.65.319104D2@vvs.innet.be>
Source record: 22346

Radio Meteor Observation Bulletin No. 33 May 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA, Bratislava
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

April 1996
Lyrids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Apr	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	32	53	61	58	77	76	86	68	93	89	73
2- 3	20	37	46	61	71	62	86	93	77	87	77
3- 4	-	-	-	-	-	-	-	-	-	-	-
4- 5	-	-	-	-	-	-	-	-	-	-	-
5- 6	40	51	56	74	66	79	71	77	76	71	100
6- 7	39	51	55	74	68	92	70	92	89	109	105
7- 8	32	65	71	82	65	85	98	87	76	75	77
8- 9	23	38	49	77	85	78	67	83	77	84	95

```
9-10 | 37 56 51 71 65 58 76 78 80 75 73
10-11 | 30 52 54 73 70 79 77 78 88 88 96
11-12 | 18 43 65 49 63 73 56 76 83 73 78
12-13 | - - - - - - - - - - -
13-14 | 22 38 37 51 68 53 74 61 83 83 84
14-15 | 30 55 63 71 72 98 85 97 85 91 62
15-16 | 33 46 74 73 84 73 90 81 71 87 75
16-17 | 51 87 59 80 70 86 78 84 122? 134? 127?
17-18 | 39 53 55 75 91 104 94 101 107 101 121?
18-19 | 36 62 57 78 67 77 84 74 77 84 92
19-20 | 43 61 61 77 83 76 85 107 84 98 84
20-21 | 51 58 76 71 77 77 79 90 101 102 104
21-22 | 38 65 76 104* 121* 122* 122* 98 86 124 101
22-23 | 46 68 49 69 71 60 85 59 81 70 72
23-24 | - 55 41 75 68 54 71 78 105 105 -
24-25 | - - - - - - - - - - -
25-26 | 23 46 58 41 66 54 67 67 80 77 90
26-27 | 31 29 43 51 74 57 64 71 58 90 78
27-28 | 25 59 39 44 75 53 59 72 62 90 85
28-29 | 52 40 56 53 70 50 74 85 73 104 82
29-30 | 38 44 46 66 52 83 76 93 74 102 85
30- 1 | 32 42 51 67 65 73 93 119 113 118 115
------|-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Apr | UT
```

Notes:

. local time = UT + 2 hours
. * the Lyrid maximum took place at about April 22, 2h UT
. ? possibly direct reception

Maurice De Meyere / Chris Steyaert

Location: Astronomical Observatory, University of Ghent, Belgium
(3 42' 32" E, 51 01' 25" N)
Antenna (2x): 4 elements horizontal Yagi, pointed East, elevation= 30 degs
Antenna amplifier: 10dB gain, smallband resonance lambda/4 antenna filter.
Frequency: (1)=66.29 Mhz (signal) and (2)=65.3 Mhz (interference control)
Receiver (2x): modified commercial FM receiver
Data acquisition: 12 bits PC-based A/D convertor, 250 Hz sampling rate
Interference rejection:
dual setup: receiver (1) tuned at distant transmitter, receiver (2)
tuned at empty frequency. Anticoincindence measurement rejects
registration of broadbanded spurious signals (lightnings, computers,
ingition motors, etc).
Further information:
see WWW page (additional info + observational data)
http://allserv.rug.ac.be/~hdejongh/astro/meteor/meteor.html
Data format:

results are shown as total reflection time, expressed as
a percentage. The actual number shows 10 times this value.
When no figure is shown, the equipment was either out of service,
or results could have been affected by interference, sporadic E.

| Apr 1996 | 10x % reflec. time | horiz: day | vert: time |

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	14	13	11	16	14	9	14	10	16	14	9	11	17	13	15
1	16	12	17	15	7	17	15	19	27	20	19	23	19	17	18
2	23	23	19	27	16	21	30	23	21	19	29	25	28	16	31
3	31	35	29	34	20	20	23	21	20	27	33	29	27	19	50
4	40	36	36	22	24	22	37	49	35	32	48	37	54	31	43
5	36	50	31	19	26	23	26	31	29	69	47	66	36	31	44
6	38	25	26	38	33	27	35	30	42	46	47	44	33	53	42
7	51	29	18	21	28	37	38	53	32	30	32	42	51	42	20
8	27	25	23	21	22	49	41	41	20	43	34	31	45	42	23
9	30	28	34	22	28	37	36	39	27	32	37	33	30	42	19
10	36	35	29	27	25	38	28	55	33	21	25	28	30	41	28
11	25	48	27	28	16	37	31	34	19	21	21	41	29	24	19
12	20	12	18	12	12	20	20	27	17	12	10	13	29	40	20
13	15	13	8	7	12	16	20	23	18	9	16	18	25	19	14
14	9	10	7	13	9	25	20	17	8	11	7	16	20	30	6
15	7	16	6	7	11	11	14	13	13	8	9	19	14	17	16
16	12	11	14	11	15	8	12	17	19	9	10	25	17	21	25
17	14	13	16	11	10	16	9	8	15	9	7	13	20	14	10
18	14	12	7	10	12	15	8	10	20	11	9	14	18	14	10
19	13	10	16	10	6	12	11	16	15	13	7	25	13	13	9
20	12	15	18	16	9	11	20	24	12	13	14	10	16	22	13
21	9	15	10	10	11	11	14	8	13	12	9	12	9	15	8
22	10	17	13	12	9	11	10	7	12	14	13	11	7	9	6
23	9	10	10	12	10	11	7	11	7	10	8	10	10	12	9

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

| Apr 1996 | 10x % reflec. time | horiz: day | vert: time |

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	11	15	13	19	11	18	34	8	14	13	12	16	16	11	18
1	16	16	14	17	17	16	46*	13	9	21	47	19	23	23	17
2	36	21	24	23	34	44	100*	31	21	18	27	22	23	29	36
3	35	24	39	27	29	82	99*	27	29	38	34	30	27	34	37
4	29	35	42	39	48	56	71*	53	47	23	22	27	31	57	32
5	21	38	54	43	34	52	75	46	44	48	34	35	49	52	34
6	32	23	45	41	27	59	67	31	37	37	41	59	31	58	49
7	24	20	29	35	35	49	14	44	23	19	49	55	49	44	39
8	32	26	26	35	52	50	25	36	49	35	50	25	43	40	48

9 | 14 20 35 23 30 30 48 17 26 45 35 46 49 23 36
10 | 12 19 19 16 37 16 28 23 21 42 30 30 25
11 | 7 21 13 17 29 24 18 21 14 13 18 27 31
12 | 7 13 14 14 24 13 15 20 18 8 15 68? 11 19
13 | 4 7 14 4 11 11 9 12 17 8 11 14 11 11
14 | 4 10 10 8 5 11 6 11 8 11 21 20 9 9
15 | 8 3 11 9 10 7 8 8 8 9 7 11 15 6 6
16 | 8 12 10 9 4 10 32 10 11 6 7 8 10 13 7
17 | 12 15 10 5 5 12 10 6 6 8 10 10 9 5 5
18 | 11 9 12 7 9 9 21 6 10 10 9 11 10 9 6
19 | 10 17 11 14 6 35 14 8 10 8 5 8 8 11 11
20 | 14 9 14 7 14 34 11 10 11 8 7 11 10 6 8
21 | 6 10 10 8 10 39 7 10 8 8 5 8 10 8 6
22 | 9 7 9 5 14 37 13 10 9 10 8 11 8 8 10
23 | 9 8 13 10 6 49 14 12 7 6 9 12 12 9 8

| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

* Lyrid maximum on Apr 22, 2-3h UT.

Paul Vauterin

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: narrow band FM, detected signal level >-122dBm.
Antenna: 2 element Yagi with 4dBd gain to SW.
Antenna Azimuth: 45 o (SW)
Computer: T-1000SE
Data sampling system: threshold crossing detection is fed in binary
form (1 bit) from the receiver to the computer.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.

Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft42.zip

Counts in one hour intervals starting at:

Lyrids 1996

UT | 21 Apr 22 Apr 23 Apr 24 Apr
---
0 | 150 312* 149 152
1 | 172 374* 191 192
2 | 180 458* 189 168
3 | 235 474* 172 187
4 | 321 433* 229 240
5 | 243 458* 243 240
6 | 295 322* 299 272

```
7 | 286 441* 279 268
8 | 280 385* 249 315
9 | 224 291 226 297
10 | 440? 188 150 227
11 | 127 171 157 167
12 | 122 145 183 179
13 | 145 137 102 168
14 | 80 112 126 127
15 | 94 74 116 58
16 | 64 112 65 86
17 | 45 108 56 52
18 | 120 96 50 76
19 | 143 77 85 76
20 | 167 145 118 81
21 | 212 132 128 136
22 | 209 164 116 143
23 | 342* 145 129 150
---------------------------------------
UT | 21 Apr 22 Apr 23 Apr 24 Apr
```

. * Lyrid maximum during the morning hours of April 22.
. ? possibly Es or direct reception

Ilkka Yrlola / via M. De Meyere

2. ANNOUNCEMENT

MBC, Meteor Burst Communications Europe, is a starting company which will implement a wireless network using meteor scatter. By early 1997 the network should be covering the Benelux, France, Germany, Switzerland and Denmark.
They can be contacted at: PO Box 189, NL-6500 AD Nijmegen, Netherlands, tel 024 3666703, fax 024 3666705.

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list,
please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge
from J. Van Wassenhove (current or back-issues).

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--
Christian Steyaert (RMOB9604) 8 May 1996
--

930. Instant track time problem.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: Marty Wallace <mart@ois.com.au>
Message-ID: <3190A87F.6F93@ois.com.au>
Source record: 22347

I have a problem with Instanttrack.
When I look at the coordinates for the sun or moon they appear way out.
ie. It indicates that the sun should be up even though it's night time.

I am using windows 95 on a 90 M Pentium.

The time reads right in the program and in the windows setup.
I am using the new patch for the character problem. (Fixed it up nicely)
The program worked ok on my old 386 but this is the first time I've had
it running on the Pentium.

What is the problem?

931. Coaxial and/or Counterwound Helix Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-08 00:00:00 UTC
From: blanton@ni.net
Message-ID: <blanton-0805962242300001@xband.ni.net>
Source record: 22348
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

I'm thinking about building some circularly polarized antennas for Oscar use (145 & 435 MHz). Has anyone tried installing a 435 MHz helix coaxially inside a 145 MHz helix? Or would there be too much interaction?

In a related question, has anyone tried building counterwound helices for the same frequency band on a common framework for left and right circular polarizations (but separately fed, of course)?

If anyone can point me to some references in these two areas I'd really appreciate it. Thanks.

Lee, WA8YBT/6

932. Which of the oscars/hamsats have 2 meter or 440 fm downlink?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-09 00:00:00 UTC
From: n9xlt@holli.com
Message-ID: <Dr4twr.75t@iquest.net>
Source record: 22349

Which of the ham satellites have 2 meter or 440 mhz fm
downlinks? I have the necessary tracking resources, but would greatly
appriciate any satellite names, freqs, etc... that have fm downlinks.
Even URLs of sites containing this information would help. I have on
occasion listened to some of these birds from my car and other radios so
I know there are some using simple 2 meter fm.

Please respond to n9xlt@holli.com or if this information would
benifit others, post in this group.

Thanks again,
David A. Wallace
n9xlt@holli.com

933. Re: Coaxial and/or Counterwound Helix Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: moritz@ipers1.e-technik.uni-stuttgart.de
Message-ID: <4mupjq$1sru@info4.rus.uni-stuttgart.de>
Source record: 22350
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

>In a related question, has anyone tried building counterwound helices for
>the same frequency band on a common framework for left and right circular
>polarizations (but separately fed, of course)?

Lee,

For the same amount of material / weight / wind load a cross yagi
is better.

73, Moritz DL5UH

934. Re: InstanTrack and Win95

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: ppiercey@nlnet.nf.ca
Message-ID: <4mvas9$8b@coranto.ucs.mun.ca>
Source record: 22351

In article <4mqrg8$cjp@tilde.csc.ti.com>, mbv@ti.com (Ken Durham) wrote:
>I just got a new computer with Win95 loaded. The old 386 ran Instantrack
>just fine, but it is a DOS program. Will it run OK in a DOS window from
>within Win95?

Runs fine on mine.

==
Paul J. Piercey (VO1HE)

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Agent - The Mutual Group

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Mutual Investco Inc.

16 Forest Rd.
St. John's, NF Canada
A1C 2B9

*** Personal Stuff ***

President - Society of Newfoundland Radio Amateurs
Member - Royal Astronomical Society of Canada

Packet Address VO1HE@VO1AAA.#ENF.NF.CAN.NOAM
Internet Address ppiercey@nlnet.nf.ca
==

935. NORAD Two-Line Orbital Element Sets (TLE809)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4mvn9e$rd0@blackbird.afit.af.mil>
Source record: 22352

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #809 -
Alouette 1
1 00424U 62049A 96129.57780246 .00000049 00000-0 46657-4 0 1949
2 00424 80.4535 322.8277 0022603 132.3932 227.9118 13.67867677676922
ATS 1
1 02608U 66110A 96109.08453090 -.00000395 00000-0 10000-3 0 9660
2 02608 14.6223 353.4778 0009417 74.5120 285.5371 1.00366422 24262
ATS 3
1 03029U 67111A 96130.32587332 -.00000127 00000-0 10000-3 0 4914
2 03029 14.9065 0.2105 0008727 271.0789 328.0237 1.00273279104378
Starlette
1 07646U 75010A 96130.36220396 -.00000128 00000-0 13329-4 0 9686
2 07646 49.8260 301.9231 0206084 102.1678 260.2382 13.82190793 73598
LAGEOS
1 08820U 76039A 96127.57727249 .00000009 00000-0 10000-3 0 1918
2 08820 109.8480 11.7598 0043005 136.9800 223.4395 6.38664944211170
ETS-2
1 09852U 77014A 96110.29826175 -.00000091 00000-0 10000-3 0 705
2 09852 13.1653 33.6505 0003404 91.1507 268.8070 0.99994621 17054
GOES 2
1 10061U 77048A 96127.50519733 .00000061 00000-0 10000-3 0 6721
2 10061 12.3036 37.5825 0011229 133.1014 61.2820 1.00292922 14026
IUE
1 10637U 78012A 96124.80788889 -.00000175 00000-0 10000-3 0 2501
2 10637 35.7321 83.8495 1359067 55.5578 337.2588 1.00251386 19498
GPS BI-01
1 10684U 78020A 96130.92457130 -.00000071 00000-0 10000-3 0 4477
2 10684 64.9701 25.0194 0060138 163.2310 196.9975 1.98069409118656

```
GPS BI-02
1 10893U 78047A 96126.65084992 .00000003 00000-0 10000-3 0 2422
2 10893 63.1890 262.3616 0231470 14.9563 345.6987 2.01627216131959
GOES 3
1 10953U 78062A 96129.41573391 -.00000140 00000-0 10000-3 0 6572
2 10953 11.2999 40.4122 0002265 330.6065 264.0171 1.00274921 18659
SeaSat 1
1 10967U 78064A 96128.53240555 -.00000066 00000-0 22806-4 0 4847
2 10967 107.9895 90.6271 0001603 245.9845 114.1126 14.38102077935608
GPS BI-03
1 11054U 78093A 96123.49745681 -.00000013 00000-0 10000-3 0 4032
2 11054 62.8649 261.4852 0046473 180.2522 179.6896 1.93505239127777
Nimbus 7
1 11080U 78098A 96128.64034881 -.00000020 00000-0 19187-4 0 5845
2 11080 98.9524 352.8486 0009826 74.3822 285.8415 13.83695495885564
GPS BI-04
1 11141U 78112A 96127.85895252 -.00000045 00000-0 10000-3 0 418
2 11141 64.9822 27.4680 0049771 27.9284 332.3842 1.92894724 17085
GPS BI-05
1 11690U 80011A 96129.96031592 -.00000061 00000-0 10000-3 0 217
2 11690 65.3017 26.5275 0143850 189.7058 169.9367 2.00572384133411
GPS BI-06
1 11783U 80032A 96124.62536567 -.00000005 00000-0 10000-3 0 1425
2 11783 62.3281 255.1559 0227065 29.8228 331.4179 2.03456624117929
GOES 5
1 12472U 81049A 96128.84576073 -.00000007 00000-0 10000-3 0 9301
2 12472 8.1108 50.5552 0005522 39.7744 320.1820 1.00210299 12694
Cosmos 1383
1 13301U 82066A 96127.19949548 .00000011 00000-0 -48373-5 0 4925
2 13301 82.9329 164.5863 0028092 358.8427 1.2653 13.68074037691635
LandSat 4
1 13367U 82072A 96130.91914920 .00000015 00000-0 13166-4 0 9136
2 13367 98.0777 182.9899 0005485 261.0451 99.0127 14.57178247734960
DMSP B5D2-1
1 13736U 82118A 96130.34853432 .00000051 00000-0 39889-4 0 01
2 13736 98.6247 319.3602 0009115 135.1799 225.0121 14.25783748695533
IRAS
1 13777U 83004A 96130.53320746 .00000187 00000-0 15900-3 0 3100
2 13777 98.9659 316.8519 0011388 201.1108 158.9594 13.99259276347963
Cosmos 1447
1 13916U 83021A 96128.23097444 .00000023 00000-0 87451-5 0 5882
2 13916 82.9452 221.3220 0036370 267.4393 92.2602 13.74338783658116
TDRS 1
1 13969U 83026B 96131.16638836 -.00000309 00000-0 10000-3 0 5867
2 13969 8.9249 44.0450 0004666 359.6681 189.4868 1.00412223 21001
GOES 6
1 14050U 83041A 96127.15928944 -.00000262 00000-0 10000-3 0 5095
2 14050 6.8940 54.2423 0004649 10.8617 141.4909 1.00265834105772
OSCAR 10
1 14129U 83058B 96123.30090279 -.00000058 00000-0 10000-3 0 4197
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2 14129 26.2428 211.7043 5992462 12.0200 357.6231 2.05879450 68925
LandSat 5
1 14780U 84021A 96130.76364565 .00000033 00000-0 17602-4 0 4683
2 14780 98.3356 188.5642 0003336 54.9397 305.2112 14.57050048648334
UoSat 2
1 14781U 84021B 96130.93231412 .00000042 00000-0 14907-4 0 8822
2 14781 97.7986 123.3638 0011066 209.6495 150.4095 14.69449523652031
GPS BI-09
1 15039U 84059A 96124.01128917 -.00000042 00000-0 10000-3 0 4092
2 15039 64.6331 21.9049 0082612 19.0912 341.2483 1.92302332 86564
Cosmos 1574
1 15055U 84062A 96130.86503244 .00000006 00000-0 -10293-4 0 7890
2 15055 82.9528 274.1949 0029038 86.6915 273.7560 13.73634315595729
GPS BI-10
1 15271U 84097A 96129.57455559 -.00000008 00000-0 10000-3 0 1496
2 15271 62.0541 255.5333 0151054 0.0859 359.8960 2.00611669 84474
Cosmos 1602
1 15331U 84105A 96128.14404095 .00000138 00000-0 13301-4 0 4724
2 15331 82.5340 151.4878 0022166 82.4804 277.8928 14.84749149626888
NOAA 9
1 15427U 84123A 96130.77993664 .00000106 00000-0 79858-4 0 6879
2 15427 98.9525 195.6783 0016150 63.0858 297.1959 14.13779630588207
GPS BI-11
1 16129U 85093A 96127.04708099 -.00000042 00000-0 10000-3 0 7197
2 16129 65.3086 25.4449 0156578 84.6474 277.1781 1.89367969 21129
Mir
1 16609U 86017A 96130.34341050 .00000973 00000-0 19347-4 0 5109
2 16609 51.6493 318.5349 0004124 302.4071 57.6509 15.57999523583950
SPOT 1
1 16613U 86019A 96128.77233923 .00000089 00000-0 62356-4 0 9367
2 16613 98.7333 197.5716 0001764 61.7467 298.3885 14.20010319214570
Cosmos 1766
1 16881U 86055A 96128.72731895 .00000185 00000-0 19409-4 0 3878
2 16881 82.5191 208.6624 0020776 106.7797 253.5699 14.83727256527849
EGP
1 16908U 86061A 96128.21280305 -.00000083 00000-0 10000-3 0 843
2 16908 50.0095 122.9725 0011461 267.9290 92.0231 12.44414705111306
NOAA 10
1 16969U 86073A 96130.86209244 .00000015 00000-0 24396-4 0 6114
2 16969 98.5230 129.0301 0014079 102.8396 257.4355 14.24981440501145
MOS-1
1 17527U 87018A 96129.21609552 -.00000043 00000-0 00000+0 0 4131
2 17527 98.9437 192.1121 0020163 73.5365 286.8009 14.00406251469399
GOES 7
1 17561U 87022A 96130.40624918 -.00000133 00000-0 10000-3 0 8881
2 17561 2.9845 69.7416 0005157 355.7556 205.0713 1.00358248 16913
Kvant-1
1 17845U 87030A 96130.92070970 .00001818 00000-0 30392-4 0 6284
2 17845 51.6488 315.6445 0004139 307.8134 52.3633 15.58005439518152
DMSP B5D2-3
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1 18123U 87053A 96130.49854802 .00000025 00000-0 35010-4 0 4240
2 18123 98.7723 321.4337 0014859 8.9406 351.2030 14.15440539459020
RS-10/11
1 18129U 87054A 96128.22230121 .00000014 00000-0 -10986-5 0 2060
2 18129 82.9270 178.8168 0010196 274.1348 85.8641 13.72364678444557
Meteor 2-16
1 18312U 87068A 96131.22301602 .00000057 00000-0 37514-4 0 4799
2 18312 82.5581 22.1989 0012129 335.5244 24.5339 13.84077304440920
Meteor 2-17
1 18820U 88005A 96130.89041638 .00000014 00000-0 -50717-6 0 9305
2 18820 82.5402 77.5698 0018155 37.3501 322.8916 13.84755029418225
DMSP B5D2-4
1 18822U 88006A 96130.58806435 -.00000009 00000-0 14283-4 0 2491
2 18822 98.3862 324.4871 0006940 111.8559 248.3358 14.23188908429087
Glonass 34
1 19163U 88043A 96129.16999508 .00000037 00000-0 10000-3 0 756
2 19163 65.2405 87.1854 0008441 159.5899 200.4227 2.13102226 61384
Glonass 36
1 19165U 88043C 96127.81914257 .00000034 00000-0 10000-3 0 4836
2 19165 65.2261 87.1928 0000646 358.1247 1.8524 2.13101873 61976
METEOSAT 3
1 19215U 88051A 96130.36785323 -.00000057 00000-0 10000-3 0 2581
2 19215 3.1894 67.9433 0002049 144.7412 215.0561 0.96946755 16801
AO-13
1 19216U 88051B 96130.10240777 .00000574 00000-0 29240-3 0 1996
2 19216 57.2961 118.2624 7411299 38.9485 355.7773 2.09772571 29025
OKEAN 1
1 19274U 88056A 96128.01550708 .00000147 00000-0 15428-4 0 876
2 19274 82.5119 310.1346 0018065 260.9937 98.9234 14.82477345423273
Meteor 3-2
1 19336U 88064A 96129.27828492 .00000051 00000-0 10000-3 0 4790
2 19336 82.5436 194.6619 0017110 340.1283 19.9171 13.16977715374222
Glonass 39
1 19503U 88085C 96129.72599479 -.00000019 00000-0 10000-3 0 3748
2 19503 65.5861 326.0545 0004341 163.1194 196.9270 2.13101731 59505
NOAA 11
1 19531U 88089A 96130.78554045 .00000040 00000-0 46585-4 0 4989
2 19531 99.1898 147.8989 0012016 354.6110 5.4930 14.13091422393026
TDRS 2
1 19548U 88091B 96130.80765691 -.00000207 00000-0 10000-3 0 2036
2 19548 2.4188 72.0183 0000697 171.7560 0.2661 1.00269588 15147
Glonass 40
1 19749U 89001A 96126.94797792 .00000030 00000-0 10000-3 0 5922
2 19749 65.1904 86.7942 0007794 259.6538 100.2258 2.13101624 56951
Glonass 41
1 19750U 89001B 96127.00306392 .00000031 00000-0 10000-3 0 4935
2 19750 65.2134 86.8523 0007712 220.4148 139.4847 2.13101835 56972
GPS BII-01
1 19802U 89013A 96130.25488215 .00000056 00000-0 10000-3 0 2230
2 19802 55.3161 112.1967 0023607 151.2372 208.8955 2.00574630 52932
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Akebono
1 19822U 89016A 96131.16717404 .00005026 00000-0 27618-3 0 7220
2 19822 75.0694 145.9508 3746878 135.0526 262.3097 7.91458367163685
Meteor 2-18
1 19851U 89018A 96129.89107063 .00000065 00000-0 44703-4 0 4775
2 19851 82.5166 312.4114 0015889 86.3427 273.9550 13.84411267363393
MOP-1
1 19876U 89020B 96127.26300876 -.00000100 00000-0 10000-3 0 1973
2 19876 1.9051 71.3329 0020647 283.1758 76.0390 0.97109584 6214
TDRS 3
1 19883U 89021B 96130.46995864 -.00000283 00000-0 10000-3 0 2114
2 19883 0.0616 54.1217 0001644 36.2390 265.3769 1.00265595198720
GPS BII-02
1 20061U 89044A 96130.59595436 -.00000034 00000-0 10000-3 0 2163
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2 20185 55.1126 112.6397 0045867 324.7588 34.9457 2.00549358 49263
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2 20261 82.5877 295.8257 1242845 131.0609 240.4804 12.47336046301006
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2 20302 53.2663 227.9522 0031048 186.7845 173.3686 2.00564314 47996
Meteor 3-3
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2 20305 82.5432 151.5642 0008971 40.6731 319.5043 13.04435730313110
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1 21855U 92005C 96130.16881088 .00000033 00000-0 00000+0 0 2714
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Glonass 64
1 23045U 94021C 96129.71685366 -.00000021 00000-0 00000+0 0 3266
2 23045 64.6380 325.2800 0012148 35.9954 324.1079 2.13102653 16167
GOES 8
1 23051U 94022A 96130.51147939 -.00000269 00000-0 00000+0 0 5236
2 23051 0.0510 263.1299 0003679 205.8586 227.5339 1.00282347 14979
MSTI 2
1 23101U 94028A 96130.90442259 .00004752 00000-0 75644-4 0 3121
2 23101 97.0848 324.8484 0013247 101.9138 258.3615 15.53668048113357
STRV-1A
1 23125U 94034B 96104.61290806 -.00000517 00000-0 -18192-3 0 2706
2 23125 7.2812 268.3264 7248108 5.8961 359.8441 2.31897885 14623
STRV-1B
1 23126U 94034C 96129.25362169 -.00005891 00000-0 -10425-2 0 2469
2 23126 7.1761 257.3059 7260456 26.9676 356.7211 2.31756378 15222
Nadezhda 4
1 23179U 94041A 96127.87408132 .00000037 00000-0 22963-4 0 1873
2 23179 82.9427 267.2058 0034896 239.1637 120.6087 13.75680347 91117
Glonass 65
1 23203U 94050A 96129.38525452 .00000011 00000-0 00000+0 0 2814
2 23203 64.7735 205.4499 0007151 150.6930 209.4097 2.13101941 13552
Glonass 66
1 23204U 94050B 96130.55750912 -.00000000 00000-0 00000+0 0 3053
2 23204 64.7584 205.4368 0015317 344.9714 15.0418 2.13102348 13573
Glonass 67
1 23205U 94050C 96128.09390723 .00000027 00000-0 00000+0 0 2800
2 23205 64.7629 205.5073 0002124 295.1832 64.8635 2.13102372 13523
DMSP B5D2-7
1 23233U 94057A 96130.69288403 .00000137 00000-0 97717-4 0 7665
2 23233 98.8311 190.0169 0011684 293.6903 66.3040 14.12703541 87397
OKEAN 1-7
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1 23317U 94066A 96129.93432170 .00000161 00000-0 21013-4 0 1516
2 23317 82.5423 95.1401 0024469 205.8247 154.1736 14.74016171 84758
ELEKTRO
1 23327U 94069A 96128.78148102 -.00000113 00000-0 00000+0 0 1483
2 23327 0.1439 228.9284 0005014 296.3213 58.0548 1.00273888 5593
RESURS 1-3
1 23342U 94074A 96130.34405059 .00000094 00000-0 23815-4 0 4886
2 23342 97.9695 188.3201 0001828 79.1574 280.9848 14.69833716 81103
Glonass 68
1 23396U 94076A 96130.28364082 .00000032 00000-0 00000+0 0 2550
2 23396 65.0657 85.6066 0028914 193.9121 165.9812 2.13102076 11416
Glonass 69
1 23397U 94076B 96128.11322853 .00000032 00000-0 00000+0 0 2493
2 23397 65.0530 85.6857 0014476 318.4431 41.4228 2.13101987 11364
Glonass 70
1 23398U 94076C 96128.46620724 .00000033 00000-0 00000+0 0 2659
2 23398 65.0461 85.6500 0005143 290.2592 69.6573 2.13102027 11382
LUCH (Altair-2)
1 23426U 94082A 96130.90485821 -.00000291 00000-0 00000+0 0 3138
2 23426 1.5226 268.7475 0003545 150.4101 229.7294 1.00270272 5127
RS-15
1 23439U 94085A 96127.41251786 -.00000039 00000-0 10000-3 0 1311
2 23439 64.8149 90.6355 0162457 206.5734 152.6792 11.27524819 56075
NOAA 14
1 23455U 94089A 96130.79580334 .00000070 00000-0 63233-4 0 5935
2 23455 98.9424 76.3956 0009985 356.6606 3.4485 14.11586505 70036
Glonass 71
1 23511U 95009A 96129.83343335 -.00000021 00000-0 00000+0 0 1821
2 23511 64.6844 325.5484 0004688 208.3773 151.6180 2.13103332 9136
Glonass 72
1 23512U 95009B 96129.95198333 -.00000021 00000-0 00000+0 0 1944
2 23512 64.6732 325.5515 0006307 336.6654 23.3249 2.13102090 9132
Glonass 73
1 23513U 95009C 96130.71370908 -.00000020 00000-0 00000+0 0 2064
2 23513 64.6709 325.5336 0011891 196.0504 163.9321 2.13102995 9152
GMS 5
1 23522U 95011B 96118.49214581 -.00000290 00000-0 10000-3 0 1212
2 23522 0.4236 334.0617 0001625 143.3462 55.6570 1.00266610 3948
DMSP B5D2-8
1 23533U 95015A 96130.83724652 .00000046 00000-0 48606-4 0 5008
2 23533 98.8416 133.7975 0007229 154.7034 205.4493 14.12737006 58217
Microlab 1
1 23547U 95017C 96126.88081550 .00000158 00000-0 61863-4 0 1042
2 23547 69.9792 268.2477 0014905 241.2238 118.7394 14.45522367 57556
OFEQ 3
1 23549U 95018A 96129.23110837 .00007862 00000-0 19119-3 0 2404
2 23549 143.3689 344.6553 0227406 162.2859 198.5932 15.14652684 60301
GFZ-1
1 23558U 86017JE 96130.19636699 .00002633 00000-0 35513-4 0 1248
2 23558 51.6510 310.0629 0006839 80.7118 279.4660 15.62033861583910
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ERS-2
1 23560U 95021A 96131.20675249 .00000047 00000-0 33653-4 0 2110
2 23560 98.5490 205.8239 0000950 71.2292 288.8995 14.32249429 55132
Spektr
1 23579U 95024A 96130.92070970 .00001818 00000-0 30392-4 0 3408
2 23579 51.6488 315.6445 0004139 307.8134 52.3633 15.58005439 55474
GOES 9
1 23581U 95025A 96131.24972753 .00000070 00000-0 00000+0 0 1829
2 23581 0.1335 77.0749 0002237 248.3207 217.4200 1.00268733 3534
Helios 1A
1 23605U 95033A 96128.88404865 .00000030 00000-0 14792-4 0 2134
2 23605 98.1197 65.1734 0001692 60.0565 300.0806 14.63834185 44636
UPM SAT 1
1 23606U 95033B 96130.37776979 .00000091 00000-0 24710-4 0 1632
2 23606 98.0999 67.5818 0007142 318.5222 41.5434 14.67240924 45026
CERISE
1 23607U 95033C 96130.36630999 .00000116 00000-0 29313-4 0 870
2 23607 98.1021 67.4613 0006123 321.0336 39.0426 14.66940297 45043
TDRS 6
1 23613U 95035B 96121.44015279 .00000129 00000-0 00000+0 0 1632
2 23613 0.5852 83.3617 0002820 335.5850 168.0921 1.00282422 2905
Glonass 74
1 23620U 95037A 96128.15155881 .00000026 00000-0 00000+0 0 1323
2 23620 64.8271 205.3484 0018352 169.6803 190.4274 2.13102791 6134
Glonass 75
1 23621U 95037B 96131.14418897 -.00000003 00000-0 00000+0 0 1388
2 23621 64.8392 205.2476 0018354 180.2662 179.7903 2.13102019 6191
Glonass 76
1 23622U 95037C 96129.32547543 .00000012 00000-0 00000+0 0 1364
2 23622 64.8215 205.3144 0036984 166.2031 193.9632 2.13102383 6159
Prognoz-M2
1 23632U 95039A 96130.71503530 -.00002048 00000-0 00000+0 0 552
2 23632 70.1570 250.2510 8510960 320.8220 336.7190 0.26352100 748
SICH-1
1 23657U 95046A 96127.36768000 .00000108 00000-0 13133-4 0 762
2 23657 82.5329 239.0421 0027152 182.3027 177.8059 14.73469429 36673
RADARSAT
1 23710U 95059A 96129.52615410 -.00000044 00000-0 00000+0 0 1330
2 23710 98.5893 136.7814 0002119 113.2185 246.9236 14.29989613 26575
Glonass 77
1 23734U 95068A 96129.91230864 .00000006 00000-0 00000+0 0 1095
2 23734 64.8276 205.2062 0018744 321.5112 38.4107 2.13102026 3137
Glonass 78
1 23735U 95068B 96129.19166667 .00000014 00000-0 00000+0 0 1005
2 23735 64.8296 205.2256 0007289 217.5658 142.9363 2.13124940 3118
Glonass 79
1 23736U 95068C 96131.08536021 -.00000003 00000-0 00000+0 0 875
2 23736 64.8265 205.1754 0007716 202.2526 157.7708 2.13101572 3154
XTE
1 23757U 95074A 96128.87679965 .00000574 00000-0 19078-4 0 505
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2 23757 22.9812 326.1245 0012849 296.9095 63.0085 14.97643345 19410
1996010D
1 23797U 96010D 96129.65885054 .00006672 33573-7 40452-3 0 686
2 23797 48.2950 261.1352 7341969 19.3002 357.9364 2.23594927 1777
Soyuz TM-23
1 23798U 96011A 96130.92070970 .00001818 00000-0 30392-4 0 764
2 23798 51.6488 315.6445 0004139 307.8134 52.3633 15.58005439 12234
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96130.71285118 .00000150 00000-0 65966-3 0 506
2 23824 47.8693 262.0977 7256075 18.8109 357.7838 2.21642291 1764
GPS BIIA-25
1 23833U 96019A 96129.01307348 -.00000068 00000-0 00000+0 0 240
2 23833 54.7077 349.7047 0043946 140.0299 220.3299 2.00564709 859
1996021D
1 23845U 96021D 96127.32002648 -.00000092 00000-0 00000+0 0 127
2 23845 6.9561 194.5974 3949929 3.8335 358.6615 1.64349059 440
M-SAT 1
1 23846U 96022A 96129.39966907 -.00000085 00000-0 10000-3 0 201
2 23846 0.0259 263.8179 0015403 112.9486 247.2039 1.00265945 325
1996022B
1 23847U 96022B 96126.20257180 .00000907 00000-0 51210-3 0 137
2 23847 6.9833 359.4613 7272342 188.8806 141.8240 2.27347023 338
Priroda
1 23848U 96023A 96130.92070970 .00001818 00000-0 30392-4 0 291
2 23848 51.6488 315.6445 0004139 307.8134 52.3633 15.58005439 2565
1996023B
1 23849U 96023B 96131.24414841 .00628006 11774-4 33078-3 0 311
2 23849 51.6580 307.8656 0041430 155.1744 205.1281 16.17169646 2702
1996023C
1 23850U 96023C 96131.20162822 .04305412 10942-4 32548-2 0 221
2 23850 51.6380 314.2410 0148826 168.9564 191.7019 15.95052515 2611
MSX
1 23851U 96024A 96130.88021161 -.00000047 00000-0 00000+0 0 145
2 23851 99.3734 109.3188 0007074 244.2479 115.7953 13.97749420 2140
1996024B
1 23852U 96024B 96131.22616352 .00060639 24102-5 23600-3 0 205
2 23852 96.5784 110.7500 0458969 233.0668 122.7698 15.08419999 2365
Cosmos 2332
1 23853U 96025A 96129.86060332 .00007715 -12595-5 16520-3 0 129
2 23853 82.9582 64.9714 0868955 71.1019 298.2259 13.89753465 1995
1996025B
1 23854U 96025B 96130.85784616 .00014268 -12375-5 28993-3 0 291
2 23854 82.9607 64.1936 0871400 67.6518 301.4586 13.90683837 2128
SAX
1 23857U 96027A 96122.11011787 -.00005789 00000-0 -63513-3 0 55
2 23857 3.9549 105.6524 0014291 0.0060 0.0057 14.91517646 133
1996027B
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1 23858U 96027B 96122.09777531 -.00015454 00000-0 -80394-3 0 44
2 23858 3.9943 108.5471 0090105 75.4905 285.5250 15.13696967 131
1996024C
1 23859U 96024C 96130.88877107 .00000193 00000-0 16737-3 0 107
2 23859 99.3727 109.3052 0088961 70.6851 290.3908 13.96303637 1165
Progress M-31
1 23860U 96028A 96130.92070970 .00001818 00000-0 30392-4 0 212
2 23860 51.6488 315.6445 0004139 307.8134 52.3633 15.58005439 736
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

936. Re: Instant track time problem.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: Doyle <dkdoyle@ix.netcom.com>
Message-ID: <31939173.5848@ix.netcom.com>
Source record: 22353

Marty Wallace wrote:
>
> I have a problem with Instanttrack.
> When I look at the coordinates for the sun or moon they appear way out.
> ie. It indicates that the sun should be up even though it's night time.
>
> I am using windows 95 on a 90 M Pentium.
>
> The time reads right in the program and in the windows setup.
> I am using the new patch for the character problem. (Fixed it up nicely)
> The program worked ok on my old 386 but this is the first time I've had
> it running on the Pentium.
>
> What is the problem?from jim kd4hur
FIRST THING I WOULD DO IS TO CHECK YOUR TIMEZONE SETTING IN THE
COMPUTER, SET TZ=EST-4 IF YOU ARE IN THE EASTERN ZONE ECT..
IF YOUR COMPUTER HAS THE RIGHT TIME THAT IS PROBABLY WHAT IT IS...
73' FROM KD4HUR

937. Re: NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: "Howard O. Ehlers" <hehlers@powergrid.electriciti.com>
Message-ID: <4n0bqa$s04@watt.electriciti.com>
Source record: 22354

With regard to your recommendation on using archive.afit.af.mil for obtaining orbital elements. Is this site still functioning? I used to use it all the time with great success but it seems it has been months since I have been able to get a response from that site. Are there alternatives?

--
Howard O. Ehlers WA6CYE Retired Engineer: General Dynamics/Hughes
San Diego (Rancho Bernardo) Phone: (619) 485-1185
California 92128 E-Mail: hehlers@powergrid.electriciti.com

938. dsp 232 by AEA any good for sats?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-10 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4n0akh$1hki@ns2-1.CC.Lehigh.EDU>
Source record: 22355

see the title :)

they only sell for like 200+$, and the only other sat. cap. modem is the pk2232
and that costs about 800+

which should i get for sat work?

thanks

David
|---|
| David Roseman | c002@lehigh.edu OUTTA ORDER!
SysOp of NODE 3 BBS	The Flying HAm - BBS	
Running OBV/2 Software	Technomage - BBS	
610.838.2989	N3SQE/1 - HAm V
(Parttime system)	N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

939. Re: Instant track time problem.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-11 00:00:00 UTC
From: ppiercey@nlnet.nf.ca
Message-ID: <4n14u7$rqb@coranto.ucs.mun.ca>
Source record: 22356

In article <31939173.5848@ix.netcom.com>, Doyle <dkdoyle@ix.netcom.com> wrote:
>Marty Wallace wrote:
>>
>> I have a problem with Instanttrack.
>> When I look at the coordinates for the sun or moon they appear way out.
>> ie. It indicates that the sun should be up even though it's night time.
>>
>> I am using windows 95 on a 90 M Pentium.
>>
>> The time reads right in the program and in the windows setup.
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>> The program worked ok on my old 386 but this is the first time I've had
>> it running on the Pentium.
>>
>> What is the problem?from jim kd4hur
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>COMPUTER, SET TZ=EST-4 IF YOU ARE IN THE EASTERN ZONE ECT..
>IF YOUR COMPUTER HAS THE RIGHT TIME THAT IS PROBABLY WHAT IT IS...
> 73' FROM KD4HUR

Further to that, I run my computer time as UTC. Being in a half-hour time zone, it helps out a great deal as there are very few programs on the market that take this into account. Too bad everything gets written for hourly time differences but, I guess you have to market to where the population is greatest.

==========
Paul J. Piercey (VO1HE)

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Agent - The Mutual Group

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Mutual Investco Inc.

16 Forest Rd.
St. John's, NF Canada
A1C 2B9

*** Personal Stuff ***

President - Society of Newfoundland Radio Amateurs
Member - Royal Astronomical Society of Canada

Packet Address VO1HE@VO1AAA.#ENF.NF.CAN.NOAM
Internet Address ppiercey@nlnet.nf.ca

==========

940. ARLK033 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-11 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk033.1996@arrl.org>
Source record: 22357
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK033
ARLK033 Keplerian data

ZCZC SK33
QST de W1AW
Keplerian Bulletin 33 ARLK033
From ARRL Headquarters
Newington, CT May 11, 1996
To all radio amateurs

SB KEP ARL ARLK033
ARLK033 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96131.04897284 .00002069 00000-0 33667-4 0 05437
2 16609 51.6494 314.9983 0004058 306.1946 53.8672 15.58005843584069
AO-10
1 14129U 83058B 96124.27226767 -.00000024 00000-0 10000-3 0 04202
2 14129 26.2405 211.5407 5993218 12.2919 357.5611 2.05879391068948
RS-10/11
1 18129U 87054A 96131.13861612 .00000014 00000-0 -10986-5 0 02261
2 18129 82.9271 176.6618 0010125 264.9203 95.0797 13.72364786444952
UO-11
1 14781U 84021B 96131.06850183 .00000030 00000-0 12948-4 0 08841
2 14781 97.7986 123.4939 0011098 208.9825 151.0756 14.69449435652055
RS-12/13
1 21089U 91007A 96131.24832347 .00000016 00000-0 82561-6 0 8871
2 21089 82.9224 217.4663 0029686 342.1491 17.8625 13.74068988263827
AO-13
1 19216U 88051B 96131.05581748 .00000184 00000-0 29291-3 0 02003
2 19216 57.2953 118.0729 7411661 39.0279 355.7757 2.09776049029044
UO-14
1 20437U 90005B 96131.12403256 .00000027 00000-0 27387-4 0 01984
2 20437 98.5442 214.8495 0011122 319.8786 40.1568 14.29919834328616
RS-15
1 23439U 94085A 96131.04897045 -.00000039 00000-0 10000-3 0 01588
2 23439 64.8152 84.7545 0162589 205.8779 153.3951 11.27524749056483
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AO-16
1 20439U 90005D 96131.15325232 .00000029 00000-0 28280-4 0 09811
2 20439 98.5583 217.0351 0011330 320.5301 39.5056 14.29974381328637
DO-17
1 20440U 90005E 96131.10930153 .00000005 00000-0 18798-4 0 09842
2 20440 98.5613 217.6103 0011342 320.2683 39.7651 14.30115692328656
WO-18
1 20441U 90005F 96131.09833980 .00000024 00000-0 26302-4 0 00056
2 20441 98.5609 217.5429 0012124 320.0425 39.9854 14.30085747328657
LO-19
1 20442U 90005G 96131.09703879 .00000016 00000-0 22907-4 0 09855
2 20442 98.5619 218.0182 0012416 319.2734 40.7502 14.30193711328671
FO-20
1 20480U 90013C 96131.10195537 -.00000024 00000-0 21323-4 0 09024
2 20480 99.0266 163.1922 0539843 210.8245 146.0093 12.83232905293008
AO-21
1 21087U 91006A 96131.08471365 .00000093 00000-0 82657-4 0 07057
2 21087 82.9403 349.9148 0035583 315.4500 44.3795 13.74568266264772
UO-22
1 21575U 91050B 96131.10285211 .00000042 00000-0 28293-4 0 06941
2 21575 98.3532 198.6136 0008515 24.0789 336.0798 14.37022667252592
KO-23
1 22077U 92052B 96130.84299836 -.00000037 00000-0 10000-3 0 05872
2 22077 66.0791 269.7405 0011777 308.6120 51.3841 12.86297028175870
KO-25
1 22828U 93061F 96131.15092327 .00000061 00000-0 41874-4 0 04585
2 22828 98.5787 207.5964 0010890 333.7336 26.3287 14.28140074104685
IO-26
1 22826U 93061D 96131.09074085 .00000027 00000-0 28324-4 0 04876
2 22826 98.5808 207.4791 0009730 349.1774 10.9219 14.27802649136560
AO-27
1 22825U 93061C 96131.16161592 -.00000001 00000-0 17338-4 0 04790
2 22825 98.5819 207.3935 0009218 348.9110 11.1862 14.27694167136563
PO-28
1 22829U 93061G 96131.09698588 .00000037 00000-0 32321-4 0 04771
2 22829 98.5767 207.5976 0010408 334.2042 25.8597 14.28120626136596

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Teusday,
May 14, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

941. Re: Instant track time problem.

Newsgroup: rec.radio.amateur.space
Date: 1996-05-11 00:00:00 UTC
From: Marty Wallace <mart@ois.com.au>
Message-ID: <3194A2C2.14B3@ois.com.au>
Source record: 22358

Paul J. Piercey VO1HE wrote:
>
> In article <31939173.5848@ix.netcom.com>, Doyle <dkdoyle@ix.netcom.com> wrote:
> >Marty Wallace wrote:
> >>
> >> I have a problem with Instanttrack.
> >> When I look at the coordinates for the sun or moon they appear way out.
> >> ie. It indicates that the sun should be up even though it's night time.
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>
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>
> ==
> Paul J. Piercey (VO1HE)
>
> *** Work Stuff ***
> Agent - The Mutual Group
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>
> 16 Forest Rd.
> St. John's, NF Canada
> A1C 2B9
>
> *** Personal Stuff ***
>

> President - Society of Newfoundland Radio Amateurs
> Member - Royal Astronomical Society of Canada
>
> Packet Address VO1HE@VO1AAA.#ENF.NF.CAN.NOAM
> Internet Address ppiercey@nlnet.nf.ca
> ===

I have sorted out the problem by using the above info but I would have
thought that the timezone setting in the win 95 setup would have taken
care of this. Apparently not.

Thanks to all that responded.
73's vk6abc

942. imarsat faxes

Newsgroup: rec.radio.amateur.space
Date: 1996-05-12 00:00:00 UTC
From: t9456079@minyos.its.rmit.EDU.AU
Message-ID: <4n4bcm$6bk@aggedor.rmit.EDU.AU>
Source record: 22359

Anybody been involved in computer programmes to rx faxes from immarsat ?.

--
+--------------------------------------+
| John Elliott RMIT AUSTRALIA |
| t9456079@minyos.its.rmit.edu.au |
| Amateur VK3CVF |
+--------------------------------------+

943. WEATHER PICS

Newsgroup: rec.radio.amateur.space
Date: 1996-05-13 00:00:00 UTC
From: Piers Rochford <piers@sling.demon.co.uk>
Message-ID: <89351356wnr@sling.demon.co.uk>
Source record: 22360

-- A plea for assistance:

Does anybody know of any way to recieve the moving (tv) pictures
from the weather satalites. I do not know which satalite this is
broadcast from but I do know that the CNN news network from the USA
use this display for their weather forcasts.

Is it beyond the means of the average listener/viewer or can
ex commercial equipment or home build stuff be used??????????

Thanks in advance :-)

Piers.

---

piers@sling.demon.co.uk

---

944. 2m/70cm/antenna plans

Newsgroup: rec.radio.amateur.space
Date: 1996-05-13 00:00:00 UTC
From: ve9so@nbnet.nb.ca
Message-ID: <3009414635-ve9so@nbnet.nb.ca>
Source record: 22361

I'm looking for plans or drawings for building circular polarized antennas.anybody can help? are they available on the www?
thanks,
73,dan ve9so@nbnet.nb.ca

945. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-13 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199605142237.PAA11696@UCSD.EDU>
Source record: 22362

```
From Ham-Space Fri May 10 04:30:25 PDT 1996 remote from ucsd.edu
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA02450; Fri, 10 May 96 12:15:55 PDT
Received: by mail.ucsd.edu; id EAA18056
sendmail 8.6.12/UCSD-2.2-sun
Fri, 10 May 1996 04:30:29 -0700 for ham-space-list
Errors-To: ham-space-relay@ucsd.edu
Sender: ham-space-relay@ucsd.edu
Precedence: List
Received: by mail.ucsd.edu; id EAA18046
sendmail 8.6.12/UCSD-2.2-sun
Fri, 10 May 1996 04:30:27 -0700 for ham-space-ddist
Message-Id: <199605101130.EAA18046@ mail.ucsd.edu>
Date: Fri, 10 May 96 04:30:25 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #139
To: Ham-Space@ucsd.edu

Ham-Space Digest Fri, 10 May 96 Volume 96 : Issue 139

Today's Topics:
Coaxial and/or Counterwound Helix Antennas
InstanTrack and Win95
New WWW ham page, new HAM CHAT page.
Questions from a Novice
Radio Meteor Obs. Bull. April 1996 Lyrids
Radio Station Database Program Stand Alone

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: Wed, 08 May 1996 22:42:30 -0800
From: blanton@ni.net (J. L. Blanton)
Subject: Coaxial and/or Counterwound Helix Antennas
```

I'm thinking about building some circularly polarized antennas for Oscar use (145 & 435 MHz). Has anyone tried installing a 435 MHz helix coaxially inside a 145 MHz helix? Or would there be too much interaction?

In a related question, has anyone tried building counterwound helices for the same frequency band on a common framework for left and right circular polarizations (but separately fed, of course)?

If anyone can point me to some references in these two areas I'd really appreciate it. Thanks.

Lee, WA8YBT/6

Date: 8 May 1996 19:08:56 GMT
From: mbv@ti.com (Ken Durham)
Subject: InstanTrack and Win95

I just got a new computer with Win95 loaded. The old 386 ran Instantrack just fine, but it is a DOS program. Will it run OK in a DOS window from within Win95? A lot of the DOS commands are missing in the crippled Win95 version and I don't want to load DOS 6.22 on top of the Win95 DOS version 7.0 (incomplete) because of possible backward incompatibility.

Ken Durham K5MBV mbv@ti.com

Date: 8 May 1996 20:23:44 GMT
From: baack@monet.umecut.maine.edu (Jason Baack)
Subject: New WWW ham page, new HAM CHAT page.

NEW ham radio WWW site, as well as a CHAT script.
covering topic such as solar power, space communications..(MIR?)
Portable systems..
check it out.
http://www.umecut.maine.edu/~baack

73's Jason N1RWY

Date: Sun, 5 May 1996 16:51:21 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Questions from a Novice

In article <1777BD1C8S86.RNROBERT@UConnVM.UConn.Edu> RNROBERT@UConnVM.UConn.Edu (Rob Robertson) writes:
>
>Please fill me in...
>
>I am a novice to the amateur radio hobby. I have recently started monitoring
>local radio, including emergency services, HAM, and air traffic with a
>basic commercial scanner.(It's a PRO-23 handheld unit, very simple.)
>

>I am particularly fascinated by air traffic radio transmissions, and would
>like to further my knowledge, and perhaps begin monitoring satellite and
>manned spacecraft transmissions. I have noticed that many of the postings to
>this group involve antennas and specific satellites. I also read the recent
>posting on space shuttle radio frequencies. I notice that many of the freqs
>are in ranges that my hand-held scanner is capable of receiving... If I find
>the proper frequencies, can I pull down space shuttle radio transmissions with
>my scanner? Do I need a special antenna?

You *may* be able to receive Shuttle and MIR transmissions with just
the handheld. I've heard both with an amateur handheld. The only reservations
would be whether your scanner has the sensitivity of my HT, and whether
you're listening to a favorable pass. A special antenna is very helpful,
especially when the pass is near your horizon. If you don't care if you
understand what you hear, you can also hear the pacsats pass overhead.
(If you buy packet equipment, you can decode and read these messages.)

>I noticed there are amateur rebroadcasts of shuttle radio transmissions. Are
>other spacecraft or satellites routinely rebroadcast in a manner such that I
>can receive them with my simple monitor?

I've heard of gateway stations which allow HT equipped amateurs to
work the Oscar analog satellites. I don't know if there are any in
your area. There are also digital gateway stations for relaying amateur
packet transmissions via satellite. I don't expect you'd find listening
to one of those very interesting, however, unless you invest in packet
equipment to decode the signals.

>What would be involved, in terms of equipment and expense, for a hobbyist to
>begin monitoring spaceborne radio transmissions?

What you have is a start. Try for MIR and Shuttle (next time it is up
with a SAREX payload). You need an orbit tracking program so you'll
know when to listen. An outside antenna may help, a steerable beam
antenna certainly would. Some of the easiest satellites to receive
are the pacsats. You'd need packet equipment to decode their messages
(sort of like reading a BBS). And there are the polar orbiting Wx
satellites. With the proper decoding software, you can receive pix
of the global cloud cover direct from these satellites and do your
own weather forcasts, lots of fun.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: Wed, 8 May 1996 20:32:18 GMT
From: steyaert@vvs.innet.be (Christian Steyaert)
Subject: Radio Meteor Obs. Bull. April 1996 Lyrids

Radio Meteor Observation Bulletin No. 33 May 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East), elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA, Bratislava
The receiver was calibrated with a Marconi TF2008 signal generator. Sensitivity: 5 muV (modulation frequency 1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution. [Time and details of all individual meteor reflections are stored on file in the University of Ghent format (Prometeos), and are available for further analysis. Reduction software for DOS and Windows available].

April 1996
Lyrids

Raw counts of reflections with a duration of at least 0.027 s during one hour interval starting at UT:

Apr	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	32	53	61	58	77	76	86	68	93	89	73
2- 3	20	37	46	61	71	62	86	93	77	87	77
3- 4	-	-	-	-	-	-	-	-	-	-	-
4- 5	-	-	-	-	-	-	-	-	-	-	-
5- 6	40	51	56	74	66	79	71	77	76	71	100
6- 7	39	51	55	74	68	92	70	92	89	109	105
7- 8	32	65	71	82	65	85	98	87	76	75	77
8- 9	23	38	49	77	85	78	67	83	77	84	95
9-10	37	56	51	71	65	58	76	78	80	75	73
10-11	30	52	54	73	70	79	77	78	88	88	96
11-12	18	43	65	49	63	73	56	76	83	73	78
12-13	-	-	-	-	-	-	-	-	-	-	-
13-14	22	38	37	51	68	53	74	61	83	83	84
14-15	30	55	63	71	72	98	85	97	85	91	62
15-16	33	46	74	73	84	73	90	81	71	87	75

```
16-17 | 51 87 59 80 70 86 78 84 122? 134? 127?
17-18 | 39 53 55 75 91 104 94 101 107 101 121?
18-19 | 36 62 57 78 67 77 84 74 77 84 92
19-20 | 43 61 61 77 83 76 85 107 84 98 84
20-21 | 51 58 76 71 77 77 79 90 101 102 104
21-22 | 38 65 76 104* 121* 122* 122* 98 86 124 101
22-23 | 46 68 49 69 71 60 85 59 81 70 72
23-24 | - 55 41 75 68 54 71 78 105 105 -
24-25 | - - - - - - - - - - -
25-26 | 23 46 58 41 66 54 67 67 80 77 90
26-27 | 31 29 43 51 74 57 64 71 58 90 78
27-28 | 25 59 39 44 75 53 59 72 62 90 85
28-29 | 52 40 56 53 70 50 74 85 73 104 82
29-30 | 38 44 46 66 52 83 76 93 74 102 85
30- 1 | 32 42 51 67 65 73 93 119 113 118 115
------|-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Apr | UT
```

Notes:

. local time = UT + 2 hours
. * the Lyrid maximum took place at about April 22, 2h UT
. ? possibly direct reception

Maurice De Meyere / Chris Steyaert

Location: Astronomical Observatory, University of Ghent, Belgium
(3 42' 32" E, 51 01' 25" N)
Antenna (2x): 4 elements horizontal Yagi, pointed East, elevation= 30 degs
Antenna amplifier: 10dB gain, smallband resonance lambda/4 antenna filter.
Frequency: (1)=66.29 Mhz (signal) and (2)=65.3 Mhz (interference control)
Receiver (2x): modified commercial FM receiver
Data acquisition: 12 bits PC-based A/D convertor, 250 Hz sampling rate
Interference rejection:
dual setup: receiver (1) tuned at distant transmitter, receiver (2)
tuned at empty frequency. Anticoincindence measurement rejects
registration of broadbanded spurious signals (lightnings, computers,
ingition motors, etc).
Further information:
see WWW page (additional info + observational data)
http://allserv.rug.ac.be/~hdejongh/astro/meteor/meteor.html
Data format:
results are shown as total reflection time, expressed as
a percentage. The actual number shows 10 times this value.
When no figure is shown, the equipment was either out of service,
or results could have been affected by interference, sporadic E.

| Apr 1996 | 10x % reflec. time | horiz: day | vert: time |

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
---
0 | 14 13 11 16 14 9 14 10 16 14 9 11 17 13 15
1 | 16 12 17 15 7 17 15 19 27 20 19 23 19 17 18
2 | 23 23 19 27 16 21 30 23 21 19 29 25 28 16 31
3 | 31 35 29 34 20 20 23 21 20 27 33 29 27 19 50
4 | 40 36 36 22 24 22 37 49 35 32 48 37 54 31 43
5 | 36 50 31 19 26 23 26 31 29 69 47 66 36 31 44
6 | 38 25 26 38 33 27 35 30 42 46 47 44 33 53 42
7 | 51 29 18 21 28 37 38 53 32 30 32 42 51 42 20
8 | 27 25 23 21 22 49 41 41 20 43 34 31 45 42 23
9 | 30 28 34 22 28 37 36 39 27 32 37 33 30 42 19
10 | 36 35 29 27 25 38 28 55 33 21 25 28 30 41 28
11 | 25 48 27 28 16 37 31 34 19 21 21 41 29 24 19
12 | 20 12 18 12 12 20 20 27 17 12 10 13 29 40 20
13 | 15 13 8 7 12 16 20 23 18 9 16 18 25 19 14
14 | 9 10 7 13 9 25 20 17 8 11 7 16 20 30 6
15 | 7 16 6 7 11 11 14 13 13 8 9 19 14 17 16
16 | 12 11 14 11 15 8 12 17 19 9 10 25 17 21 25
17 | 14 13 16 11 10 16 9 8 15 9 7 13 20 14 10
18 | 14 12 7 10 12 15 8 10 20 11 9 14 18 14 10
19 | 13 10 16 10 6 12 11 16 15 13 7 25 13 13 9
20 | 12 15 18 16 9 11 20 24 12 13 14 10 16 22 13
21 | 9 15 10 10 11 11 14 8 13 12 9 12 9 15 8
22 | 10 17 13 12 9 11 10 7 12 14 13 11 7 9 6
23 | 9 10 10 12 10 11 7 11 7 10 8 10 10 12 9

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

| Apr 1996 | 10x % reflec. time | horiz: day | vert: time |

| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
---
0 | 11 15 13 19 11 18 34 8 14 13 12 16 16 11 18
1 | 16 16 14 17 17 16 46* 13 9 21 47 19 23 23 17
2 | 36 21 24 23 34 44 100* 31 21 18 27 22 23 29 36
3 | 35 24 39 27 29 82 99* 27 29 38 34 30 27 34 37
4 | 29 35 42 39 48 56 71* 53 47 23 22 27 31 57 32
5 | 21 38 54 43 34 52 75 46 44 48 34 35 49 52 34
6 | 32 23 45 41 27 59 67 31 37 37 41 59 31 58 49
7 | 24 20 29 35 35 49 14 44 23 19 49 55 49 44 39
8 | 32 26 26 35 52 50 25 36 49 35 50 25 43 40 48
9 | 14 20 35 23 30 30 48 17 26 45 35 46 49 23 36
10 | 12 19 19 16 37 16 28 23 21 42 30 30 25
11 | 7 21 13 17 29 24 18 21 14 13 18 27 31
12 | 7 13 14 14 24 13 15 20 18 8 15 68? 11 19
13 | 4 7 14 4 11 11 9 12 17 8 11 14 11 11
14 | 4 10 10 8 5 11 6 11 8 11 21 20 9 9
15 | 8 3 11 9 10 7 8 8 8 9 7 11 15 6 6

```
16 | 8 12 10 9 4 10 32 10 11 6 7 8 10 13 7
17 | 12 15 10 5 5 12 10 6 6 8 10 10 9 5 5
18 | 11 9 12 7 9 9 21 6 10 10 9 11 10 9 6
19 | 10 17 11 14 6 35 14 8 10 8 5 8 8 11 11
20 | 14 9 14 7 14 34 11 10 11 8 7 11 10 6 8
21 | 6 10 10 8 10 39 7 10 8 8 5 8 10 8 6
22 | 9 7 9 5 14 37 13 10 9 10 8 11 8 8 10
23 | 9 8 13 10 6 49 14 12 7 6 9 12 12 9 8
-----------------------------------------------------------------
| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

* Lyrid maximum on Apr 22, 2-3h UT.

Paul Vauterin

-----------------------------------------------------------------
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: narrow band FM, detected signal level >-122dBm.
Antenna: 2 element Yagi with 4dBd gain to SW.
Antenna Azimuth: 45 o (SW)
Computer: T-1000SE
Data sampling system: threshold crossing detection is fed in binary
form (1 bit) from the receiver to the computer.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.

Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft42.zip

Counts in one hour intervals starting at:

Lyrids 1996

UT | 21 Apr 22 Apr 23 Apr 24 Apr
---------------------------------------
0 | 150 312* 149 152
1 | 172 374* 191 192
2 | 180 458* 189 168
3 | 235 474* 172 187
4 | 321 433* 229 240
5 | 243 458* 243 240
6 | 295 322* 299 272
7 | 286 441* 279 268
8 | 280 385* 249 315
9 | 224 291 226 297
10 | 440? 188 150 227
11 | 127 171 157 167
12 | 122 145 183 179
13 | 145 137 102 168
```

```
14 | 80 112 126 127
15 | 94 74 116 58
16 | 64 112 65 86
17 | 45 108 56 52
18 | 120 96 50 76
19 | 143 77 85 76
20 | 167 145 118 81
21 | 212 132 128 136
22 | 209 164 116 143
23 | 342* 145 129 150
-------------------------------------
UT | 21 Apr 22 Apr 23 Apr 24 Apr
```

. * Lyrid maximum during the morning hours of April 22.
. ? possibly Es or direct reception

Ilkka Yrlola / via M. De Meyere

2. ANNOUNCEMENT

MBC, Meteor Burst Communications Europe, is a starting company which will implement a wireless network using meteor scatter. By early 1997 the network should be covering the Benelux, France, Germany, Switzerland and Denmark.
They can be contacted at: PO Box 189, NL-6500 AD Nijmegen, Netherlands, tel 024 3666703, fax 024 3666705.

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

4. CONTRIBUTORS / USEFUL ADDRESSES

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Call: ON4NU, packet: ON4NU@ON4AWP
E-mail: via Chris Steyaert

Chris Steyaert, VVS
Kruisven 66, B-2400 Mol, Belgium
tel: +32 (14) 31 51 04
E-mail: steyaert@vvs.innet.be
Compuserve: 72650,3513

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tel: +358 (951)402 2797
Call: OH51Y
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--
Christian Steyaert (RMOB9604) 8 May 1996
--

Date: 8 May 1996 13:13:41 GMT
From: w9sz@prairienet.org (Zack Widup)
Subject: Radio Station Database Program Stand Alone

In a previous article, chuck@flinet.com (Charles Bolland) says:

>Sir,
>
>It's still available. The IBM/DOS Broadcasting Radio Station Database
>Program for Longwave, Mediumwave, and Shortwave. Over 4,000 records
>included already. The program is completely read and write. Records
>can be added or changed. Sorts in many different formats both on your
>screen and printing.
>

Just a couple notes on the program.

It's a great program and database; I've gotten some use out of it and
it's fun!

Be warned, however, that it it is a MIME-encoded zipped file which is
almost 1 meg in size. My mailbox here only holds 1 meg and I had quite a
time getting it when it first arrived!

73, Zack W9SZ

End of Ham-Space Digest V96 #139
****

946. Re: WEATHER PICS

Newsgroup: rec.radio.amateur.space
Date: 1996-05-14 00:00:00 UTC
From: zz951281@polar.etsiig.uniovi.es
Message-ID: <1996May14.154445.8432@polar.etsiig.uniovi.es>
Source record: 22363

In article <89351356wnr@sling.demon.co.uk>, Piers Rochford <piers@sling.demon.co.uk>
writes:
> -- A plea for assistance:
>
> Does anybody know of any way to recieve the moving (tv) pictures
> from the weather satalites. I do not know which satalite this is
> broadcast from but I do know that the CNN news network from the USA
> use this display for their weather forcasts.
>
> Is it beyond the means of the average listener/viewer or can
> ex commercial equipment or home build stuff be used??????????
>
> Thanks in advance :-)
>
> Piers.
>
>
> ---
>
> piers@sling.demon.co.uk
> ---
>
Hi Piers!

I guess they make up a "little film" out of diferent
pictures. They play all the photos in order and in a continous
period. So they seem to be moving...

Have you seen a flower opening? Its real slow. But you
shot a photo each half our or twenty minutes. Then stick them all
and play them with a certain speed. It looks continous. Just the
same with Sat-photos.

I jope it's clear for you...

73s de EB1CFL & EC1AJY
Op- Alberto

947. Re: WEATHER PICS

Newsgroup: rec.radio.amateur.space
Date: 1996-05-14 00:00:00 UTC
From: markw@news
Message-ID: <4na8nj$ioq@hacgate2.hac.com>
Source record: 22364

Piers:

I think I'd have to agree with Alberto(?). I beleive you can do the
same thing. The pictures come from one of several satellites.
There are the GOES (Geosynchronous Orbiting Earth Satellite, I
believe), the TIROS (Television Infrared Observational Satellite,
again I think this is correct). Each one of these satellites
have instruments that are public property, meaning, the data is
your to collect if you have the equipment.

You would want to look more into the GOES satellites, because they
pretty much sit in one place looking at the same thing the whole
time. TIROS satellites are polar orbiters and only go over a spot a
couple of times a day. They get much higher resolution images
(2 km/pixel I believe).

If you want to make weather movies, I suggest this is what you do.
First get ahold of "The Weather Satellite Handbook," it is available
through ARRL. Next, find out what animation shareware packages
are available. I saw a couple several years ago. Find out what
format the pictures need to be in and run with it from there.

Good luck,

Markus Wilkinson
Hughes Space and Communications

Net: markw@sdds0.es.hac.com, mark@solkan.physics.usu.edu
Phone: 310/416-4647 (voice), 310/416-4073 (fax)

I used to think that it was terrible that life was so unfair. And then I
thought, 'What if life were fair?' Then all the terrible things that
happened to us would be because we deserved them. I take great comfort in
the general hostility and unfairness of the universe.
Markus Cole, paraphrased

Figaredo Martin, Alberto Ignac (zz951281@polar.etsiig.uniovi.es) wrote:
: In article <89351356wnr@sling.demon.co.uk>, Piers Rochford <piers@sling.demon.co.uk>
writes:
: > -- A plea for assistance:
: >
: > Does anybody know of any way to recieve the moving (tv) pictures
: > from the weather satalites. I do not know which satalite this is
: > broadcast from but I do know that the CNN news network from the USA
: > use this display for their weather forcasts.
: >

: > Is it beyond the means of the average listener/viewer or can
: > ex commercial equipment or home build stuff be used??????????
: >
: > Thanks in advance :-)
: >
: > Piers.
: >
: >
: > ____
: >
: > piers@sling.demon.co.uk
: > ____
: >
: Hi Piers!

: I guess they make up a "little film" out of diferent
: pictures. They play all the photos in order and in a continous
: period. So they seem to be moving...

: Have you seen a flower opening? Its real slow. But you
: shot a photo each half our or twenty minutes. Then stick them all
: and play them with a certain speed. It looks continous. Just the
: same with Sat-photos.

: I jope it's clear for you...

: 73s de EB1CFL & EC1AJY
: Op- Alberto
:

948. ARLK034 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-14 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk034.1996@arrl.org>
Source record: 22365
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK034
ARLK034 Keplerian data

ZCZC SK34
QST de W1AW
Keplerian Bulletin 34 ARLK034
From ARRL Headquarters
Newington, CT May 14, 1996
To all radio amateurs

SB KEP ARL ARLK034
ARLK034 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
1 99977U 96140.46798995 .00003995 00000-0 89987-5 0 25
2 99977 39.0081 273.3005 0008171 270.3851 295.4207 15.96521956 16
Mir
1 16609U 86017A 96135.66714835 .00002725 00000-0 42200-4 0 5138
2 16609 51.6496 291.8464 0004263 325.3695 34.7018 15.58036962584787
HST
1 20580U 90037B 96135.38360630 .00000364 00000-0 20766-4 0 08602
2 20580 28.4678 75.8422 0006181 177.8565 182.2048 14.91054307133539
AO-10
1 14129U 83058B 96135.44308295 -.00000250 00000-0 10000-3 0 4212
2 14129 26.2229 209.7377 5996448 15.3133 356.9663 2.05880950 69176
RS-10/11
1 18129U 87054A 96135.14854950 .00000014 00000-0 -10986-5 0 02296
2 18129 82.9273 173.6986 0010038 252.4220 107.5837 13.72364950445502
UO-11
1 14781U 84021B 96135.42651109 .00000078 00000-0 20951-4 0 08869
2 14781 97.7959 127.6567 0011508 192.8152 167.2766 14.69451272652690
RS-12/13
1 21089U 91007A 96135.25327283 .00000073 00000-0 61901-4 0 8881
2 21089 82.9226 214.4976 0029306 331.2819 28.6713 13.74069817264376
AO-13
1 19216U 88051B 96135.34602143 .00000526 00000-0 29920-3 0 02034
2 19216 57.2913 117.2124 7413373 39.3886 355.7180 2.09776430029133
```

```
UO-14
1 20437U 90005B 96135.25249276 .00000037 00000-0 31188-4 0 01987
2 20437 98.5445 218.9020 0011020 308.5827 51.4362 14.29920496329205
RS-15
1 23439U 94085A 96135.30627979 -.00000039 00000-0 10000-3 0 01544
2 23439 64.8156 77.8709 0162288 205.1400 154.1557 11.27524847056965
AO-16
1 20439U 90005D 96135.28155478 .00000029 00000-0 28160-4 0 09842
2 20439 98.5587 221.0955 0011344 309.1332 50.8839 14.29974841329220
DO-17
1 20440U 90005E 96135.23719438 .00000042 00000-0 32913-4 0 09858
2 20440 98.5613 221.6709 0011244 308.4710 51.5454 14.30116659329246
WO-18
1 20441U 90005F 96135.29628786 -.00000018 00000-0 98857-5 0 00080
2 20441 98.5607 221.6714 0011784 307.2750 52.7357 14.30085639329255
LO-19
1 20442U 90005G 96135.29466843 .00000026 00000-0 27011-4 0 09850
2 20442 98.5616 222.1474 0012213 306.9548 53.0513 14.30194258329272
FO-20
1 20480U 90013C 96135.15640710 -.00000047 00000-0 -32829-4 0 09019
2 20480 99.0266 166.4769 0539971 201.6175 156.1319 12.83232715293524
AO-21
1 21087U 91006A 96135.08821995 .00000093 00000-0 82657-4 0 07105
2 21087 82.9399 346.9516 0035267 304.5713 55.2116 13.74568277265328
UO-22
1 21575U 91050B 96135.21093460 .00000027 00000-0 23331-4 0 06974
2 21575 98.3535 202.6025 0008467 12.5747 347.5648 14.37023172253189
KO-23
1 22077U 92052B 96135.43026779 -.00000037 00000-0 10000-3 0 05900
2 22077 66.0790 260.1354 0011778 306.9959 52.9975 12.86297096176465
KO-25
1 22828U 93061F 96135.21446225 .00000011 00000-0 21888-4 0 04584
2 22828 98.5787 211.5887 0010297 321.3280 38.7167 14.28140053105262
IO-26
1 22826U 93061D 96135.22531558 -.00000018 00000-0 10183-4 0 04929
2 22826 98.5815 211.5423 0009417 337.5784 22.4988 14.27802612137157
AO-27
1 22825U 93061C 96135.22642135 .00000006 00000-0 20167-4 0 04831
2 22825 98.5819 211.3854 0009215 337.4724 22.6047 14.27694608137146
PO-28
1 22829U 93061G 96135.23064296 -.00000048 00000-0 -17439-5 0 04817
2 22829 98.5783 211.6615 0009997 322.2715 37.7766 14.28120171137186

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
May 18, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

949. Post My Message

Newsgroup: rec.radio.amateur.space
Date: 1996-05-14 00:00:00 UTC
From: ramki@nrkrish.hss.hns.COM
Message-ID: <31987185.5EE01E9E@nrkrish.hss.hns.com>
Source record: 22366

```
Hi friends
I am interested in HAM Activities and ardent user of
Linux I would like to know more about packet radio
and would like to know what extra hardware is required
for in TNC and Software for the same.
I would be gratefull if someone could guide me in this area
--
N Ramakrishnan
nrkrish@hss.hns.com
```

950. New Anonymous Remailer

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: privacy@interlink-bbs.com
Message-ID: <9605141452.D9200LL@interlink-bbs.com>
Source record: 22367

You may be familiar with anon.penet.fi, which give you an anonymous account.

Our service allows YOU to choose what the return address will be!

Please write for more info.

951. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_832159577@rtfm.mit.edu>
Source record: 22368
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

952. Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: MarshallK@agt.net
Message-ID: <4nbihg$i5p@news.agt.net>
Source record: 22369

Can someone recommend a good Satellite Tracking Program? I use windows 95! Thanks in advance!

953. Old news, now history?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: zz951281@polar.etsiig.uniovi.es
Message-ID: <1996May15.144451.8461@polar.etsiig.uniovi.es>
Source record: 22370

Hi all!

I'm thinking of making a sort of "diary" for the Oscar.
But I need some data from time ago. I was thinking of the "Space
News" boletin or something like it. Just to tell the history of
each Oscar. Please, in English or Spanish.

If you have anything, just send a mail.
Thank you.

EB1CFL & EC1AJY Op. ALberto
zz951281@polar.etsiig.uniovi.es
AX25: eb1cfl@ea1ura.eao.esp.eu
Gij&#65533;n, Spain

954. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: Stephanie Steele <kc7dba@primenet.com>
Message-ID: <3199E834.2772@primenet.com>
Source record: 22371

Marshall wrote:
>
> Can someone recommend a good Satellite Tracking Program? I use windows
> 95! Thanks in advance!

I recommend LogSat and their URL is included below. Nothing else even
comes close!

http://206.103.128.4:80/logsat/

--
Stephanie Steele

e-mail address kc7dba@primenet.com
packet address kc7dba@kb7cfd.id.pnw.usa.noam

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YES ============================== NO
+------------ Does the Darn Thing work? -----------+
V ============================== V
+----------+ +---------+ +---------+
| Don't | NO | Does | +-------+ YES | Did you |
| mess | +---| anyone |<------| You |<---------| mess |
| with it! | | | know? | | Moron | | with it |
+----------+ | +---------+ +-------+ +---------+
| V | YES | NO
| +------+ +-----------V V
| | Hide | +--------+ +-----------+
| | it! | | You | YES | Will they |
| +------+ +-------->| poor |<------------| catch you?|
| | | |bastard!| +-----------+
| | | +----|---+ | NO
| | | V V
| | | +---------------+ +-----------+
| | | NO | Can you blame | |Destroy the|
| | +------| someone else? | | evidence! |
| | +------|--------+ +-----------+
| | V YES |
| | |
```

N O P R O B L E M !

955. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: markw@news
Message-ID: <4nd183$446@hacgate2.hac.com>
Source record: 22372

Stephanie Steele (kc7dba@primenet.com) wrote:
: Marshall wrote:
: >
: > Can someone recommend a good Satellite Tracking Program? I use windows
: > 95! Thanks in advance!

: I recommend LogSat and their URL is included below. Nothing else even
: comes close!

: http://206.103.128.4:80/logsat/

: --
: Stephanie Steele

I just checked out the LogSat URL. Very impressive, but it's $50-60
and looks like it will not support homebuilt dish tracking. It is
also a windows program and windows is not stable enough for me when
running real-time applications.

I'd recommend STS Orbit Plus (SOP9445.ZIP) which you can get by
ftp to oak.oakland.edu. It is under hamradio/satellite or something
like that. It is really impressive for FREEWARE (not shareware).
It will not do dish tracking but has excellent graphics. Printing
is cluged too.

My top recommendation would be SatTrack. It runs under Linux, and
not many people have it. Source code is provided and the sucker is
free. With the source code, you can interface it to just about
anything. It will autotune radios for dopler shift and point your
dish for you. I am currently trying to interface it with a custom
board running a 12' parabolic dish at Utah State University. You
can get to the SatTrack home page at
http://www.primenet.com/~bester/sattrack.html

Another one that is not bad, is shareware, and also available at
oakland is Winorb. It runs under windows, and won't track your
dish for you.

--
Markus Wilkinson
Hughes Space and Communications

Net: markw@sdds0.es.hac.com, mark@solkan.physics.usu.edu
Phone: 310/416-4647 (voice), 310/416-4073 (fax)

I used to think that it was terrible that life was so unfair. And then I
thought, 'What if life were fair?' Then all the terrible things that

happened to us would be because we deserved them. I take great comfort in the general hostility and unfairness of the universe.
Markus Cole, paraphrased

956. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: mbrinkho@falcon.inetnebr.com
Message-ID: <4nd4e3$i43@duck.inetnebr.com>
Source record: 22373

Marshall (MarshallK@agt.net) wrote:
: Can someone recommend a good Satellite Tracking Program? I use windows

I'll second the reccomendatio for Logsat. By far the best satellite
tracking program on the market for Win95.

--
Matt C. Brinkhoff, KB0RXC
mbrinkho@inetnebr.com
http://incolor.inetnebr.com/mbrinkho
Lincoln, Nebraska [EN10]

957. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: Milan <milank@merck.cz>
Message-ID: <01BB4298.6BB66B80@ta010.czech.net>
Source record: 22374

In article <4nbihg$i5p@news.agt.net>, MarshallK@agt.net (Marshall) =
wrote:
>Can someone recommend a good Satellite Tracking Program? I use windows
>95! Thanks in advance!
>
Hi,
try Winorbit or Satlog professional, both should be available at =
ftp.amsat.org. I am not sure with latest versions. You should also try =
Wisp (designed especially for PR communication). Those programms are not =
32-bit applications but I have no problem running it in Win95.

73! de Milan, OK1DXH

958. WWW Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <319a1dd3.4076965@news.innotts.co.uk>
Source record: 22375

Still going strong: 9000 visitors soon and rising. Don't
fail to visit:

http://www.innotts.co.uk/~asperges/

the G4NJH Radio Pages in the UK. All visitors warmly welcome.

---

959. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-15 00:00:00 UTC
From: sreymann@radar-sci.jpl.nasa.gov
Message-ID: <4ndj3d$5iu@ampersand.jpl.nasa.gov>
Source record: 22376

In article <4nd183$446@hacgate2.hac.com>, <markw@news> writes:

> I'd recommend STS Orbit Plus (SOP9445.ZIP) which you can get by
> ftp to oak.oakland.edu. It is under hamradio/satellite or something
> like that. It is really impressive for FREEWARE (not shareware).
> It will not do dish tracking but has excellent graphics. Printing
> is kluged too.

STS Orbit Plus is available from its author's BBS, RPV Astronomy BBS, at:
310-541-7299
Current version is SOP9615 (files SOP9615A.ZIP and SOP9615B.ZIP). 96 of
course is the year, and 15 is the week.
Dave's program is in use in many professional organizations. His documen-
tation is legendary.

960. Sat tracking thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-16 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4nfc6k$ek9@service2.uky.edu>
Source record: 22377

Organization: IT
X-Newsreader: WinVN 0.92.6

Just a comment on sat tracking. While there are very good graphic
trackers (InstantTrack, Winorb, STS-Plus), Predict (By KD2BD, John A.
Magliacane) is very simple to use, freeware (for noncomercial users)
and easy to get (AMSAT ftp archive). When I am planning the next
week of "viewing" (NOAA wxsats), Predict allows printing a schedule
and is very accurate. I am not putting any of the graphic programs
down, it is just difficult to display a graphic pass and to capture a
NOAA image at the same time. (I have considered adding a 2nd pc, like
an old PS2 30-286, to show orbital data "real time", but another
computer? my radio desk is crowded allready<g>). Even a Pentium
can not multitask fast enough to allow displaying orbital data and
receieve images at the same time. Of course I would like to be proven
wrong, so, if anyone has found a way to accomplish this,
please feel free to post a correction)
Just my $0.02 worth.
I have been using JVFAX 7.0 with the A&A wefax demod, I am experimenting
with FTV (Brian E Cauchi biane@dream.vol.mt
or http://www.geocities.com/SiliconValley/2504)

961. New Satellite Rig

Newsgroup: rec.radio.amateur.space
Date: 1996-05-17 00:00:00 UTC
From: rrehr@epix.net
Message-ID: <4ngkkk$c13@coconut.epix.net>
Source record: 22378

Does anyone have info on ICOM's newest Satellite Rig, the IC-821H?
It looks like its meant to be a replacement for the 820.
Thanks!

Roger Rehr WA3JYM

962. Re: NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-17 00:00:00 UTC
From: mts@usa1.com
Message-ID: <5117cc$42110.3c0@news2.usa1.com>
Source record: 22379

In article <4n0bqa$s04@watt.electriciti.com>, hehlers@powergrid.electriciti.com says...
>
>With regard to your recommendation on using archive.afit.af.mil for
>obtaining orbital elements. Is this site still functioning? I used to
>use it all the time with great success but it seems it has been months
>since I have been able to get a response from that site. Are there
>alternatives?
>
>--
>Howard O. Ehlers WA6CYE Retired Engineer: General Dynamics/Hughes
>San Diego (Rancho Bernardo) Phone: (619) 485-1185
>California 92128 E-Mail: hehlers@powergrid.electriciti.com
>
>
>
I have been using this site quite regularly, it is slow sometimes to
respond, but it is working well indeed.

963. Re: Preamps

Newsgroup: rec.radio.amateur.space
Date: 1996-05-17 00:00:00 UTC
From: Ed Garnett <ejg@acslink.net.au>
Message-ID: <319BCC36.6F256EBF@acslink.net.au>
Source record: 22380

Brett Carter wrote:
>
> Does anyone have a favorite brand of 10 meter
> preamp for use with the RS10 and RS12 sats?

Hi Brett,

I've answered this type of query in the past with a homebrew
suggestion...

I quite enjoy working through the RS series satellites and use a
homebrew preamp from the 1987 ARRL handbook that seems to work very
well. I am sure that most of the recent ARRL designs will also be
of good service, the one I built uses a MRF906/907 FET and is simple
enough to be built (easily) in an evening using 'dead-bug' construction.

Nowdays I use a Phillips device, a BF981 (simply because they are
cheaper and more readily available here in VK) using much the same
design.

You don't need fancy test gear, I tune mine up using the satellite as
a signal source... so all you need is a soldering iron and less than
a handful of parts.

73 Ted VK1BL

964. Preamps

Newsgroup: rec.radio.amateur.space
Date: 1996-05-18 00:00:00 UTC
From: Brett Carter <carter@inetworld.com>
Message-ID: <319D81A2.6AA@inetworld.com>
Source record: 22381

Does anyone have a favorite brand of 10 meter
preamp for use with the RS10 and RS12 sats?

965. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-18 00:00:00 UTC
From: bowman@montana.com
Message-ID: <4nknps$sda@maw.montana.com>
Source record: 22382

In article <4nbihg$i5p@news.agt.net>, MarshallK@agt.net (Marshall) says:
>
>Can someone recommend a good Satellite Tracking Program? I use windows
>95! Thanks in advance!

WinOrbit works for me. WISP doesn't seem to be stable under my 3.11
setup, and i suspect a video driver problem. WISP seems to have a lot
of features built in, and it may be more successful under '95.

imho, both are a bit of overkill as far as answering the question,
"when is rs-12 going to appear?", but the graphics are interesting.

966. ARLK035 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-18 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk035.1996@arrl.org>
Source record: 22383
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK035
ARLK035 Keplerian data

ZCZC SK35
QST de W1AW
Keplerian Bulletin 35 ARLK035
From ARRL Headquarters
Newington, CT May 18, 1996
To all radio amateurs

SB KEP ARL ARLK035
ARLK035 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
1 99977U 96140.46798995 .00003995 00000-0 89987-5 0 25
2 99977 39.0081 273.3005 0008171 270.3851 295.4207 15.96521956 16
Mir
1 16609U 86017A 96138.10448089 .00002990 00000-0 45626-4 0 05437
2 16609 51.6483 279.6253 0004259 335.1192 24.9579 15.58054636585163
AO-10
1 14129U 83058B 96137.38587381 -.00000170 00000-0 10000-3 0 04235
2 14129 26.2238 209.4388 5995148 15.8114 356.9034 2.05880429069213
RS-10/11
1 18129U 87054A 96138.13777100 .00001648 00000-0 17885-2 0 02171
2 18129 82.9271 171.4893 0010075 241.2816 118.7292 13.72369551445917
UO-11
1 14781U 84021B 96138.01407736 .00000102 00000-0 24956-4 0 09040
2 14781 97.7967 130.1282 0011531 184.1399 175.9713 14.69452267653071
RS-12/13
1 21089U 91007A 96137.72906104 .00000057 00000-0 44277-4 0 09037
2 21089 82.9231 212.6635 0029137 324.2199 35.7004 13.74069821264714
AO-13
1 19216U 88051B 96138.20608414 .00001464 00000-0 50641-3 0 2046
2 19216 57.2800 116.6545 7414070 39.6542 355.6279 2.09778836 29191
UO-14
1 20437U 90005B 96138.12142394 -.00000020 00000-0 91496-5 0 01914
2 20437 98.5441 221.7163 0010777 299.3189 60.6918 14.29920232329619
```

```
RS-15
1 23439U 94085A 96138.05579186 -.00000039 00000-0 10000-3 0 01455
2 23439 64.8168 73.4257 0162102 204.6575 154.6535 11.27524979057272
AO-16
1 20439U 90005D 96137.80051929 -.00000002 00000-0 16073-4 0 09996
2 20439 98.5586 223.5713 0011260 301.6328 58.3754 14.29974845329589
DO-17
1 20440U 90005E 96138.10573160 -.00000024 00000-0 76487-5 0 00045
2 20440 98.5614 224.4926 0010949 299.5376 60.4705 14.30116290329652
WO-18
1 20441U 90005F 96138.09491874 .00000006 00000-0 19364-4 0 09964
2 20441 98.5603 224.4223 0011741 298.7436 61.2573 14.30086219329659
LO-19
1 20442U 90005G 96138.09308715 -.00000014 00000-0 11611-4 0 00010
2 20442 98.5614 224.8996 0011879 297.5097 62.4845 14.30194321329676
FO-20
1 20480U 90013C 96138.04131318 .00000019 00000-0 11645-3 0 08916
2 20480 99.0258 168.8122 0540076 195.0702 163.3739 12.83233460293898
AO-21
1 21087U 91006A 96138.07265278 .00000093 00000-0 82657-4 0 07114
2 21087 82.9397 344.7432 0035109 296.4238 63.3316 13.74568347265730
UO-22
1 21575U 91050B 96138.20496030 .00000011 00000-0 18009-4 0 6874
2 21575 98.3533 205.5082 0008456 3.9912 356.1335 14.37023397253614
KO-23
1 22077U 92052B 96137.76277814 -.00000037 00000-0 10000-3 0 05827
2 22077 66.0787 255.2506 0012175 307.6076 52.3835 12.86297204176768
KO-25
1 22828U 93061F 96138.08696281 .00000040 00000-0 33439-4 0 04735
2 22828 98.5785 214.4107 0010216 312.9932 47.0393 14.28140680105673
IO-26
1 22826U 93061D 96138.09849328 .00000033 00000-0 30939-4 0 04819
2 22826 98.5815 214.3643 0009424 329.4489 30.6146 14.27803434137567
AO-27
1 22825U 93061C 96138.09981801 .00000010 00000-0 21740-4 0 04984
2 22825 98.5824 214.2081 0009051 329.3507 30.7145 14.27694848137553
PO-28
1 22829U 93061G 96137.75287292 .00000016 00000-0 24006-4 0 04684
2 22829 98.5783 214.1391 0009915 314.5709 45.4665 14.28120885137548

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
May 21, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

967. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-18 00:00:00 UTC
From: taboo@itnlinx.win-uk.net
Message-ID: <69@itnlinx.win-uk.net>
Source record: 22384

In article <4nknps$sda@maw.montana.com>, robert bowman (bowman@montana.com) writes:
>In article <4nbihg$i5p@news.agt.net>, MarshallK@agt.net (Marshall) says:
>>
>>Can someone recommend a good Satellite Tracking Program? I use windows
>>95! Thanks in advance!
>
>WinOrbit works for me. WISP doesn't seem to be stable under my 3.11
>setup, and i suspect a video driver problem. WISP seems to have a lot
>of features built in, and it may be more successful under '95.
>
>imho, both are a bit of overkill as far as answering the question,
>"when is rs-12 going to appear?", but the graphics are interesting.
>

Does anyone know of a tracking program that works out if the satellite is
in daylight? This would be of use for visual observation of satellites. I
have InstaTrack but this only shows if the sub-satellite point is in
daylight or not.

Ashley Booth taboo@itnlinx.win-uk.net G8DPH
"Far away is close at hand in images of elsewhere"

968. H A M F E S T !! [de W3MQF]

Newsgroup: rec.radio.amateur.space
Date: 1996-05-19 00:00:00 UTC
From: Samuel Geller <sgeller@mail.bcpl.lib.md.us>
Message-ID: <Pine.SOL.3.93.960519161232.16878F-100000@mail>
Source record: 22385

```
-----------------------------------------------------------------
| The Famous BRATS Maryland |
| |
| H A M F E S T and C O M P U T E R F E S T |
| |
| Sunday July 28, 1996 |
| |
| At the Maryland State Fairgrounds, Timonium, MD |
| (On York Road, just North of the Baltimore Beltway (695)) |
| |
| Air Conditioned Building LARGE Tailgating Area |
| |
| Plenty of Free Parking |
| Accessible to the Handicapped |
| For Information, or table reservations, call (410)467-4634 |
| OR brats@smart.net OR our home page: http://smart.net/~brats |
| |
| Talk-in on the BRATS Repeater System 147.030(+) and 224.960(-) |
-----------------------------------------------------------------
```

969. INTERNET ACCESS VIA AMATUER SATELLITE POSSIBLE ?-------forgive me if this has been asked before

Newsgroup: rec.radio.amateur.space
Date: 1996-05-19 00:00:00 UTC
From: daniel.roganti@tip.nl
Message-ID: <DrnFCL.AHG@tip.nl>
Source record: 22386

I'm curious about the possibility of accessing Internet via satellite when there's alot of digital communications around on the satellites. If so, what kind of data rates are avaiable using this medium ? I'm serious considering on trying this. I've heard of a BBS using a satllite so I thought Internet may be avaiable too.

please email any info,
thanks
Daniel
+_+
Name: Daniel Roganti Nick: Ragman
POTS: +31.030.287.0744 Email: daniel.roganti@tip.nl
Smail: Oud Wulvenlaan 35-2 , 3523 XS Utrecht , The Netherlands
WWW: http://www.tip.nl/users/daniel.roganti/
FTP: ftp://ftp.tip.nl
I-Phone: Server: iphone.wau.nl, Group: Utrecht==> (email first)
.............exploring cyberspace before it runs out of space.....
+_+

970. Re: NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <4nof9l$36t@news.injersey.com>
Source record: 22387

```
: >With regard to your recommendation on using archive.afit.af.mil for
: >obtaining orbital elements. Is this site still functioning? I used to
: >use it all the time with great success but it seems it has been months
: >since I have been able to get a response from that site. Are there
: >alternatives?

Links to elements available at VSO HP, below.

Join us at Eurosom 2, the Satellite Observers Meeting:
http://www.rzg.mpg.de/~bdp/eurosom.html

--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers Home Page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com or Jay.Respler@bytewise.org
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey
```

971. Re: New Satellite Rig

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Drp2LI.D4E@cix.compulink.co.uk>
Source record: 22388

news to me..!

972. Re: Sat tracking thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <31A0930E.7FA7@uiuc.edu>
Source record: 22389

Terry Fugate wrote:
> Just a comment on sat tracking. While there are very good graphic
> trackers (InstantTrack, Winorb, STS-Plus), Predict (By KD2BD, John A.
> Magliacane) is very simple to use, freeware (for noncomercial users)
> and easy to get (AMSAT ftp archive). When I am planning the next
> week of "viewing" (NOAA wxsats), Predict allows printing a schedule
> and is very accurate. I am not putting any of the graphic programs

WinOrbit is also free, and provides schedule ("ephemeris") printing in a variety of formats for a variety of events (AOS/LOS/TCA, fixed intervals, EQX, apogee/perigee, etc.), in addition to the real-time or pseudo-real-time graphic mode. Version 3.0 is in the works, with much improved formatting capabilities (you'll be able to choose the data to include in the printout.) Feedback on the types of schedule information desired by users is solicited.

73, Carl (K8CG)

973. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <31A09434.6146@uiuc.edu>
Source record: 22390

Mark Wilkinson wrote:
> Another one that is not bad, is shareware, and also available at
> oakland is Winorb. It runs under windows, and won't track your
> dish for you.

A hardware control interface (no TSRs) for WinOrbit is available for homebrewers at http://www.sat-net.com/winorbit. Source code included. This is a work-in-progress. Free. Rig control software is also available there and at amsat.

73
Carl, K8CG

974. Post-radio

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: edgF91@hamp.hampshire.edu
Message-ID: <31a0943e.0@news.hampshire.edu>
Source record: 22391

Anybody interested in POST-RADIO
should check out the UnholY UnioN web page

hamp.hampshire.edu/~edgF91/index.html

radio is for commercials
post-radio listens and talks back

975. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-20 00:00:00 UTC
From: rargyle@cc.weber.edu
Message-ID: <20MAY199617285404@cc.weber.edu>
Source record: 22392

In article <69@itnlinx.win-uk.net>,
taboo@itnlinx.win-uk.net (Ashley Booth) writes...
<snip>
>Does anyone know of a tracking program that works out if the satellite is
>in daylight? This would be of use for visual observation of satellites. I
>have InstaTrack but this only shows if the sub-satellite point is in
>daylight or not.
>
>Ashley Booth taboo@itnlinx.win-uk.net G8DPH
>"Far away is close at hand in images of elsewhere"

If any part of the satellite's footprint is in daylight, the satellite is in
daylight.

-- From too much love of living,
bob argyle From hope and fear set free,
rargyle@cc.weber.edu We thank with brief thanksgiving
http://137.190.32.131 Whatever gods may be
ftp://137.190.32.131 That no life lives for ever;
That dead men rise up never;
/_/\ /_/\ That even the weariest river
={ 0.0 }= =(0.0)= Winds somewhere safe to sea.
> ^ < > " <
|m/ \m| |m/ \m| from "The Garden of Proserpine,"
Tabbie & Willie Algernon Charles Swinburne.

976. Re: Sat tracking thoughts..

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: Brett Carter <carter@inetworld.com>
Message-ID: <31A16DC7.7A5@inetworld.com>
Source record: 22393

Had to throw in my 2 cents worth.

I use PC Track. Its dos based but works great for me.

I mostly use the printouts of AOS and LOS times, but
it is fun to watch the graphics too.

977. NORAD Two-Line Orbital Element Set: Space Shuttle (96142.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4nsnnl$bji@blackbird.afit.af.mil>
Source record: 22394

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 77
1 23870U 96032A 96142.25000000 .00000431 53623-5 48084-5 0 92
2 23870 39.0159 261.4536 0008623 280.5733 101.0451 15.96490262 290
1996032B
1 23871U 96032B 96141.68331990 .00042561 60798-5 10000-3 0 12
2 23871 39.0187 265.2177 0009154 257.9709 102.0409 15.96496435 197
1996032C
1 23872U 96032C 96142.30704249 .05081704 40724-1 91977-2 0 93
2 23872 39.0174 261.0577 0009614 286.5547 73.4237 16.04215417 303
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

978. NORAD Two-Line Orbital Element Sets (TLE813)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4nsnv6$bk4@blackbird.afit.af.mil>
Source record: 22395

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #813 -
Alouette 1
1 00424U 62049A 96142.15870016 .00000034 00000-0 28924-4 0 1977
2 00424 80.4533 310.4114 0023713 100.2469 260.1350 13.67868434678645
ATS 1
1 02608U 66110A 96135.98691917 -.00000382 00000-0 10000-3 0 9688
2 02608 14.6171 353.1899 0010169 73.2945 286.7620 1.00352238 24532
ATS 3
1 03029U 67111A 96141.34886863 -.00000121 00000-0 10000-3 0 4979
2 03029 14.9099 0.0982 0008068 270.7807 347.5697 1.00273089104488
Starlette
1 07646U 75010A 96138.89361779 -.00000164 00000-0 -15404-4 0 9703
2 07646 49.8262 268.2515 0205795 130.3840 231.5217 13.82190267 74777
LAGEOS
1 08820U 76039A 96139.79139339 .00000010 00000-0 10000-3 0 1947
2 08820 109.8489 15.9458 0043648 134.7734 225.6707 6.38664720211954
ETS-2
1 09852U 77014A 96110.29826175 -.00000091 00000-0 10000-3 0 705
2 09852 13.1653 33.6505 0003404 91.1507 268.8070 0.99994621 17054
GOES 2
1 10061U 77048A 96137.56365892 .00000058 00000-0 10000-3 0 6774
2 10061 12.3185 37.4654 0010232 135.7853 90.4473 1.00295902 14122
IUE
1 10637U 78012A 96139.54837103 -.00000249 00000-0 10000-3 0 2526
2 10637 35.7568 83.6198 1360652 55.9502 256.8750 1.00247043 19630
GPS BI-01
1 10684U 78020A 96139.00260980 -.00000064 00000-0 10000-3 0 4483
2 10684 64.9720 24.7836 0059305 162.8392 197.3867 1.98069370118815

```
GPS BI-02
1 10893U 78047A 96132.60240112 -.00000043 00000-0 10000-3 0 2438
2 10893 63.2182 262.1745 0231265 14.7258 345.9605 2.01627489132072
GOES 3
1 10953U 78062A 96141.40481243 -.00000137 00000-0 10000-3 0 6610
2 10953 11.3172 40.2767 0003039 338.2733 264.4489 1.00274083 18770
SeaSat 1
1 10967U 78064A 96140.91401783 -.00000087 00000-0 15678-4 0 4870
2 10967 107.9908 116.2431 0001529 243.6745 116.4241 14.38104296937382
GPS BI-03
1 11054U 78093A 96140.55130935 -.00000028 00000-0 10000-3 0 4078
2 11054 62.8667 260.9824 0047008 179.9823 180.0451 1.93505506128102
Nimbus 7
1 11080U 78098A 96141.58370899 .00000116 00000-0 14236-3 0 5872
2 11080 98.9467 5.1676 0009693 43.0891 317.1023 13.83696606887358
GPS BI-04
1 11141U 78112A 96140.30102509 -.00000065 00000-0 10000-3 0 433
2 11141 64.9881 27.1209 0049854 27.9290 332.3683 1.92894710 17328
GPS BI-05
1 11690U 80011A 96140.92908787 -.00000062 00000-0 10000-3 0 250
2 11690 65.3075 26.1989 0143735 189.8039 169.9158 2.00572343133632
GPS BI-06
1 11783U 80032A 96133.96390381 -.00000059 00000-0 10000-3 0 1434
2 11783 62.3254 254.8420 0227069 29.7669 331.4847 2.03456633118118
GOES 5
1 12472U 81049A 96136.82841322 -.00000000 00000-0 10000-3 0 9325
2 12472 8.1236 50.5187 0005966 39.6634 320.1953 1.00211938 12776
Cosmos 1383
1 13301U 82066A 96140.07146116 .00000038 00000-0 27346-4 0 4954
2 13301 82.9326 155.1510 0027001 323.6688 36.2623 13.68074470693396
LandSat 4
1 13367U 82072A 96140.18912955 .00000054 00000-0 21760-4 0 9167
2 13367 98.0774 191.9808 0005614 230.1019 129.9687 14.57179997736316
DMSP B5D2-1
1 13736U 82118A 96141.22592401 .00000049 00000-0 39067-4 0 89
2 13736 98.6249 330.0627 0009339 105.1171 255.1044 14.25785700697081
IRAS
1 13777U 83004A 96141.54509736 -.00000096 00000-0 -35895-4 0 3210
2 13777 98.9665 327.6316 0012266 170.8862 189.2527 13.99256839349507
Cosmos 1447
1 13916U 83021A 96140.24352684 -.00000003 00000-0 -18650-4 0 5915
2 13916 82.9460 212.4414 0036286 232.1051 127.6822 13.74338990659766
TDRS 1
1 13969U 83026B 96141.48220520 -.00000295 00000-0 10000-3 0 5909
2 13969 8.9493 43.9598 0003274 358.0528 320.1481 1.00407933 21108
GOES 6
1 14050U 83041A 96138.18878339 -.00000267 00000-0 10000-3 0 5121
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2 22739 99.0402 95.9572 0009288 307.2070 52.8247 14.10964106143066
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UFO F2
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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979. ARLK036 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk036.1996@arrl.org>
Source record: 22396
Cross-posted to: rec.radio.info,rec.radio.amateur.space

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SB KEP @ ARL $ARLK036
ARLK036 Keplerian data

ZCZC SK36
QST de W1AW
Keplerian Bulletin 36 ARLK036
From ARRL Headquarters
Newington, CT May 21, 1996
To all radio amateurs

SB KEP ARL ARLK036
ARLK036 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
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Spartan?
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RS-10/11
1 18129U 87054A 96142.14770647 .00000110 00000-0 10405-3 0 02294
2 18129 82.9274 168.5272 0010115 227.9013 132.1279 13.72366496446464
UO-11
1 14781U 84021B 96142.03161229 .00000109 00000-0 26252-4 0 09038
2 14781 97.7981 133.9666 0011621 171.5617 188.5787 14.69453449653666
```

```
RS-12/13
1 21089U 91007A 96142.17091796 .00000053 00000-0 40249-4 0 09035
2 21089 82.9232 209.3704 0028923 311.9186 47.9507 13.74069950265320
AO-13
1 19216U 88051B 96142.01947174 .00000050 00000-0 34893-3 0 2051
2 19216 57.2759 115.8835 7415629 40.0177 355.5528 2.09789683 29275
UO-14
1 20437U 90005B 96142.17991034 .00000005 00000-0 18971-4 0 01892
2 20437 98.5443 225.7000 0010594 286.8213 73.1810 14.29920742330192
RS-15
1 23439U 94085A 96142.13571341 -.00000039 00000-0 10000-3 0 01421
2 23439 64.8204 66.8283 0162170 203.8993 155.4338 11.27525015057731
AO-16
1 20439U 90005D 96141.78888043 -.00000045 00000-0 -66373-6 0 09991
2 20439 98.5582 227.4908 0010953 288.6994 71.3001 14.29974632330154
DO-17
1 20440U 90005E 96142.16366057 -.00000001 00000-0 16476-4 0 00036
2 20440 98.5613 228.4841 0010827 287.0519 72.9482 14.30116881330239
WO-18
1 20441U 90005F 96142.15293367 .00000003 00000-0 17950-4 0 09970
2 20441 98.5601 228.4128 0011556 285.9387 74.0523 14.30086602330231
LO-19
1 20442U 90005G 96142.08083613 -.00000014 00000-0 11474-4 0 00007
2 20442 98.5614 228.8229 0011693 285.0654 74.9235 14.30194533330245
FO-20
1 20480U 90013C 96142.09578585 -.00000026 00000-0 11789-4 0 08882
2 20480 99.0263 172.0977 0540542 185.8467 173.6146 12.83233131294412
AO-21
1 21087U 91006A 96142.07616258 .00000093 00000-0 82657-4 0 07184
2 21087 82.9392 341.7792 0034482 284.8220 74.9116 13.74568374266283
UO-22
1 21575U 91050B 96142.17378425 -.00000010 00000-0 10849-4 0 07080
2 21575 98.3522 209.3579 0008155 353.2793 6.8286 14.37023697254189
KO-23
1 22077U 92052B 96141.80579544 -.00000037 00000-0 10000-3 0 05811
2 22077 66.0785 246.7849 0012222 305.9543 54.0340 12.86297190177286
KO-25
1 22828U 93061F 96142.15049915 .00000074 00000-0 47210-4 0 04722
2 22828 98.5786 218.4049 0009915 300.0974 59.9224 14.28141539106255
IO-26
1 22826U 93061D 96142.16298949 .00000021 00000-0 26253-4 0 04821
2 22826 98.5815 218.3571 0009222 317.8684 42.1791 14.27803730138143
AO-27
1 22825U 93061C 96142.16462274 .00000016 00000-0 24133-4 0 04979
2 22825 98.5810 218.1972 0008673 317.8775 42.1741 14.27695302138138
PO-28
1 22829U 93061G 96142.16677378 .00000075 00000-0 47546-4 0 04705
2 22829 98.5780 218.4745 0010174 302.1300 57.8894 14.28122253138176
```

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
May 25, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

980. Re: Best Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DrrADJ.H7s@pe1chl.ampr.org>
Source record: 22397

In <69@itnlinx.win-uk.net> taboo@itnlinx.win-uk.net (Ashley Booth) writes:

>Does anyone know of a tracking program that works out if the satellite is
>in daylight? This would be of use for visual observation of satellites. I
>have InstaTrack but this only shows if the sub-satellite point is in
>daylight or not.

SatTrack does this (and much more).
See http://www.primenet.com/~bester/sattrack.html

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

981. Webersat 21-May-96 telemetry wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-05-21 00:00:00 UTC
From: rargyle@cc.weber.edu
Message-ID: <21MAY199616224583@cc.weber.edu>
Source record: 22398

Would anyone who captured telemetry from Webersat/OSCAR-18
between 19:28:31 and 20:29:34 please send it to me either
via AO-16, uuencode and e-mail, or anonymous upload to the
ftp site 137.190.32.131. I'm especially interested in any
gathered over Africa.
--
bob argyle kb7kcl
rargyle@cc.weber.edu
ftp://137.190.32.131
http://137.190.32.131

982. Sat with HT

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: acunha@unisys.com.br
Message-ID: <4nu613$35k@panther.unisys.com.br>
Source record: 22399

I have a Yaesu FT-530 HT, and wanna know if it's possible to receive
any signal from satellites, even communicate.
What kind of antenna I need? Thanks

983. Re: WEATHER PICS

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: Laurie Wing <laurie@clausent.demon.co.uk>
Message-ID: <640691918wnr@clausent.demon.co.uk>
Source record: 22400

Hello Piers,

A corollary to the moving picture approach suggested by other respondents is that you should be able to download satellite weather picture in the first place - which problem you may already have solved. Should you have not, however, a look through back numbers of Wireless World of about ten years ago might help. There was an article on setting up everything from antenna to PC, all of which was simple and inexpensive.

Incidentally, the Home Office responded to the article in a rather prune-faced way by pointing out that it was illegal to download such pictures as it violated the provisions of the UK's Wireless Telegraphy Act. I don't know if the Law has moved on since then.

--

| Laurie Wing EMail: lwing@clausent.demon.co.uk
Tel: +44 (0)1703 790953|

984. Re: 2m/70cm/antenna plans

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: Laurie Wing <laurie@clausent.demon.co.uk>
Message-ID: <823459303wnr@clausent.demon.co.uk>
Source record: 22401

Hi,

Have you tried ARRL's "Radio Amateur's Handbook" or "The Satellite
Experimenter's Handbook"?

--

| Laurie Wing EMail: lwing@clausent.demon.co.uk
Tel: +44 (0)1703 790953|

985. How to operate Mode K on RS-12/13

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: Anders Fongen <anders.fongen@saga.telemax.no>
Message-ID: <31A32CF6.77C8@saga.telemax.no>
Source record: 22402

Hello,

I've heard that there is only mode K (21MHz up, 28MHz down)
available on RS-12. The other modes are QRT.

I have been experimenting with mode A by using separate rigs and
antennas for down- an dup-link, so that I can listen to my own
signal and be sure that I don't make QRM for others.

How do I operate on mode K, where both links will be handled
by my HF tranceiver. Do I simply calculate the downlink frequency
and hope that this is correct? Anyone here with hints and experience?

73 de LA6UIA

Anders Fongen, EDB-consultant og college teacher
E-mail : anders.fongen@saga.telemax.no
Web home page: http://www.sn.no/~andersf/

986. Re: Sat with HT

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: Ronald Ross <rossr@tcs.com>
Message-ID: <4nvfg8$slt@gateway.tcsi.com>
Source record: 22403

acunha@unisys.com.br (Antonio R. Bruno da Cunha) wrote:
>
> I have a Yaesu FT-530 HT, and wanna know if it's possible to receive
> any signal from satellites, even communicate.
> What kind of antenna I need? Thanks
>

I have the same HT (FT-530), and have worked the MIR packet robot with
this and just a discone on my roof. I haven't tried much more than
that, but I read all the time of people using HT's with the SAT's.
RR ke6jab.

987. Re: Sat with HT

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960522165419.4476B-100000@spacelink>
Source record: 22404

Under ideal conditions, I used to attempt to work Oscar 21, which was a great satellite (now dead) using my Kenwood TH78a. Any HT was capable of hearing AO-21 and DOVE, but it was difficult to work the bird with a rubber duck antenna. There was a fellow in Detroit, who would sit by his car in the evening with his HT and a handheld YAGI, any regularly work AO-21 FM voice. AO-27 is supposed to be an easy bird to work, but the frequencies of uplink and downlink are a bit off the normally programmed ones on an HT. The other factor is that AO-27 is not always up and running when you are! I do wish the Russians would reactivate Oscar 21. By the way, I have worked MIR several times with my HT.
-DICK

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

988. Re: How to operate Mode K on RS-12/13

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: psoper@encore.com
Message-ID: <Drtu99.2v0@encore.com>
Source record: 22405

Anders Fongen <anders.fongen@saga.telemax.no> writes:

>I've heard that there is only mode K (21MHz up, 28MHz down)
>available on RS-12. The other modes are QRT.

Hello Anders,

RS-12 is running mode KT now. Many people are using the
2 meter band downlink instead of the 10m one. I've had QSOs
with several folks recently that used the 2m link. They say it
is working very, very well. And after getting all the poor
to OK signal reports from folks listening on 10m it was nice
to get an S9+20db from an OM the other night as he was
using a 22 element yagi for receiving :-)
But to answer your original question, operating on
mode K where you cannot hear your own downlink signal is
difficult. It takes me so much knob turning and button pushing,
checking and double checking the doppler charts, etc, that I
only average 2-3 contacts per pass when there is good activity.
With poor activity like late at night I make 0-1 contact per
pass. But it's fun anyway!
One key thing is to stick to the rule of tuning the
higher of the two frequencies, which for RS-12 means the
downlink. If the other guy is moving his transmit frequency
like he would for many other modes it is simply impossible to
succeed. I also think I'd go crazy having to tune the transmit
side with a single rig in split mode as opposed to the RIT :-)
I think the CW robot could be used to check tuning
accuracy with a single rig. Another reason for me to get my
last upgrade :-) (In the US, the advanced/extra class falls in
the middle of the RS-12 uplink range and I am a lowly advanced
class amateur).
Here is a summary of the RS-12 data in case you need it:

Satellite: RS-12 NASA Catalog Number: 21089
Analog Transponders:
Uplink Downlink
Mode K: 21.210 - 21.250 Mhz 29.410 MHz - 29.450 MHz
Mode T: 21.210 - 21.250 MHz 145.910 MHz - 145.950 MHz
Mode A: 145.910 - 145.950 Mhz 29.410 MHz - 29.450 MHz

Mode KT: 21 MHz uplink into 29 and 145 MHz downlinks
Mode KA: 21 MHz and 145 MHz uplinks into a common 29 MHz downlink

Beacons: 29.408 MHz, 29.454 MHz, 145.912 MHz, 145.958 MHz

Robot Upinks: 21.130 MHz, 145.830 MHz

Kindest Regards,
Pete
KS4XG

989. Re: WEATHER PICS

Newsgroup: rec.radio.amateur.space
Date: 1996-05-22 00:00:00 UTC
From: markw@news
Message-ID: <4nvjep$57v@hacgate2.hac.com>
Source record: 22406

Piers:

Someone at my company receintly asked me to find an amimation program
for them; what a coincidence. Anyway, I found one on
http://spacelink.msfc.nasa.gov

You have to traverse all their directories, but it is something like
Educational Materials
Software
IBM.PC
Animation
An the file is
Romeo.ZIP

It is a shareware package and will cost you $39.00 beyond the evaluation
period.

Good luck,
Mark

Mark Wilkinson (markw@news) wrote:
: Piers:

: through ARRL. Next, find out what animation shareware packages
: are available. I saw a couple several years ago. Find out what
: format the pictures need to be in and run with it from there.

: Figaredo Martin, Alberto Ignac (zz951281@polar.etsiig.uniovi.es) wrote:
: : In article <89351356wnr@sling.demon.co.uk>, Piers Rochford <piers@sling.demon.co.uk>
writes:
: : >
: : > Does anybody know of any way to recieve the moving (tv) pictures
: : > from the weather satalites. I do not know which satalite this is
: : > broadcast from but I do know that the CNN news network from the USA
: : > use this display for their weather forcasts.
: : >

--
Markus Wilkinson
Hughes Space and Communications

Net: markw@sdds0.es.hac.com, mark@solkan.physics.usu.edu
Phone: 310/416-4647 (voice), 310/416-4073 (fax)

I used to think that it was terrible that life was so unfair. And then I
thought, 'What if life were fair?' Then all the terrible things that
happened to us would be because we deserved them. I take great comfort in

the general hostility and unfairness of the universe.
Markus Cole, paraphrased

990. NORAD Two-Line Orbital Element Set: Space Shuttle (96143.91666667)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-23 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4o20ha$kod@blackbird.afit.af.mil>
Source record: 22407

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 77
1 23870U 96032A 96143.91666667 .00000330 53615-5 45472-5 0 146
2 23870 39.0135 250.3586 0008847 287.6149 328.9986 15.96615492 559
1996032B
1 23871U 96032B 96142.62142725 .00038403 59543-5 90241-4 0 48
2 23871 39.0160 258.9811 0006520 275.2121 84.7945 15.96610201 355
1996032C
1 23872U 96032C 96143.35927604 .33369273 58942-5 57057-2 0 166
2 23872 39.0322 253.9177 0008701 300.5494 59.9587 16.31848780 399
1996032D
1 23876U 96032D 96144.24718962 .00048023 62801-5 10941-3 0 43
2 23876 39.0153 248.1545 0007853 290.9965 69.0323 15.96996221 138
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

991. Re: NASA FTP site for Kep elements?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-23 00:00:00 UTC
From: brent@network.ucsd.edu
Message-ID: <4o23qnINNd9a@network.ucsd.edu>
Source record: 22408

In article <Dr3GEu.GE@pe1chl.ampr.org> pe1chl@wab-tis.rabobank.nl writes:
>In <4mjvgf$e1v@lori.albany.net> maloney@albany.net (Patrick J. Maloney) writes:
>
>>Is there a NASA FTP site (that is kept current during shuttle missions!) that
>>contains Keps?
>
>Do you require it to be a NASA site? Why not archive.afit.af.mil?

archive.afit.af.mil offers only a limited number of satellites. I do
know that for some of the satellites that I am particularly interested
in, the keps are not in the archive files.

You may try oig1.gsfc.nasa.gov This is a telnet site, not ftp, but you
can log in and then do an FTP connection back to yourself. (I know it's
weird...) The login is oig and the password is goddard1 Follow the
instructions after that.

Happy ftp'ing

Brent

992. Weather Sats...

Newsgroup: rec.radio.amateur.space
Date: 1996-05-23 00:00:00 UTC
From: py3crx@sp-gw.py2bjo.ampr.ORG
Message-ID: <2772@SP-gw.ampr.org>
Source record: 22409

Recently I saw some guys looking for a software that can do weather pictures animation. Well, depending on the accuracy you're looking for. I use the JVFAX7.1, a home-made 8 bit A/D interface, home-made down converter (1691MHz to 470MHz) and a modified Realistic PRO-59 Scanner. The antena is a 1.5 meter meshed TVRO Dish and with this set-up I use to receive Both GOES8 and METEOSAT5. As this software was written by a german guy, it has some special masks to METEOSAT5 and some automatic features such Digital Header decoding and can do some animation with false colors. Pretty good if you just want to see moving clouds(mainly at a 525 line TV sistem such PAL-M or NTSC).
At the same time, anybody have any information abt HRPT decoders, homebrewing...?

Thanks es regards.
Marcus - PY3CRX@SP-GW.PY2BJO.AMPR.ORG - Sao Paulo - Brasil.

993. Reference for patch antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-24 00:00:00 UTC
From: jimf@zoinks.corp.sgi.com
Message-ID: <4o55c4$edr@murrow.corp.sgi.com>
Source record: 22410
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

I'm interested in the design of patch antennas to evaluate them as a low profile alternative to crossed yagis, helicals etc for OSCAR work.

I recently talked to an AMSAT rep that talked about testing the 3D birds antennas by using them for just that, contacting FO20 or AO13 I think.

I have looked in my references and can only find passing mention to patch antennas and would like to know if someone can suggest a reference that goes into dome detal such as theory of operation and design parameters.

Jim
KF6AGJ

994. NORAD Two-Line Orbital Element Set: Space Shuttle (96145.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4o5c8m$1gq@blackbird.afit.af.mil>
Source record: 22411

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 77
1 23870U 96032A 96145.25000000 .00000309 53649-5 43818-5 0 198
2 23870 39.0097 241.4738 0009011 298.0792 75.2321 15.97105091 779
1996032B
1 23871U 96032B 96142.62142725 .00038403 59543-5 90241-4 0 48
2 23871 39.0160 258.9811 0006520 275.2121 84.7945 15.96610201 355
1996032C
1 23872U 96032C 96143.35927604 .33369273 58942-5 57057-2 0 166
2 23872 39.0322 253.9177 0008701 300.5494 59.9587 16.31848780 399
1996032D
1 23876U 96032D 96144.49727964 .00088972 84261-5 19943-3 0 55
2 23876 39.0139 246.4859 0007258 290.0584 69.9466 15.97014105 172
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

995. Inmarsat Rx Antenna system

Newsgroup: rec.radio.amateur.space
Date: 1996-05-24 00:00:00 UTC
From: tmercer@adam.com.au
Message-ID: <31a6358b.0@eden.adam.com.au>
Source record: 22412

Can anyone please help with the construction details of an Helixs
Antenna & LNA for 1550 mhz.
I have tried the Patch Antenna & MAR 6 described in the GPS newsgroup,
but with no success.

996. Re: Reference for patch antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-24 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2405962102370001@jake-4b.ip.realtime.net>
Source record: 22413
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

In article <4o55c4$edr@murrow.corp.sgi.com>, jimf@zoinks.corp.sgi.com (Jim Fellows) wrote:

> I'm interested in the design of patch antennas to evaluate them as a low profile
> alternative to crossed yagis, helicals etc for OSCAR work.
>
> I recently talked to an AMSAT rep that talked about testing the 3D birds
> antennas by using them for just that, contacting FO20 or AO13 I think.
>
> I have looked in my references and can only find passing mention to patch
> antennas and would like to know if someone can suggest a reference that goes
> into dome detal such as theory of operation and design parameters.
>
>
> Jim
> KF6AGJ

There is a review article in "IEEE Transactions on Antennas and Propagation" entitled "Microstrip Antenna Technology" by Carver and Mink.

Vol. AP-29, No. 1 January 1981

--
Ron W5RKN

997. TR-851A

Newsgroup: rec.radio.amateur.space
Date: 1996-05-24 00:00:00 UTC
From: earwax@indy.net
Message-ID: <earwax.32.0015DB52@indy.net>
Source record: 22414

Hello,

I'm posting this for a friend who doesn't have an account.

ForSale

Kenwood TR-851A, Tokyo HiPower 70 cm amp ,HL120U and MFJ-219 Antenna Analyzer.
Will ship COD! $800 or best offer!!

Bud Walker,W9QOX 812-466-5514

73 es etc...

Charlie, N9NVV

998. Is STS-77 active on ham bands???

Newsgroup: rec.radio.amateur.space
Date: 1996-05-25 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4o7st5$m40@vivaldi.telepac.pt>
Source record: 22217
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Hi

I know this mission has no SAREX.
But i say on OH2BUA Web Cluster a dx spot
from KC5FJR at 1548 UTC 25th May anouncing
STS77 on 144.550 MHz.

What does it mean?
Was voice? Or data?
Calling Who??? Hams?
Or Shanon on board Mir?
Or what???...

I apreciate any help.
Many thanks in advance.

From "Number 1 SAREX fan in Portugal"

73's F.Costa CT1EAT

999. ARLK037 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-25 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk037.1996@arrl.org>
Source record: 22218
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK037
ARLK037 Keplerian data

ZCZC SK37
QST de W1AW
Keplerian Bulletin 37 ARLK037
From ARRL Headquarters
Newington, CT May 25, 1996
To all radio amateurs

SB KEP ARL ARLK037
ARLK037 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
1 23870U 96032A 96145.70833333 .00000341 53708-5 43818-5 0 205
2 23870 39.0131 238.4223 0010258 304.4487 187.9645 15.97385560 840
Mir
1 16609U 86017A 96145.15982808 .00002277 00000-0 36293-4 0 05339
2 16609 51.6483 244.2529 0004738 0.4693 359.6304 15.58086144586262
AO-10
1 14129U 83058B 96145.15687890 -.00000049 00000-0 10000-3 0 4263
2 14129 26.1969 208.1437 6000154 17.9905 356.4787 2.05879917 69377
RS-10/11
1 18129U 87054A 96145.13693043 .00000012 00000-0 -37702-5 0 02260
2 18129 82.9271 166.3173 0010203 218.1459 141.8973 13.72366008446873
UO-11
1 14781U 84021B 96144.95964506 .00000109 00000-0 26150-4 0 08946
2 14781 97.7992 136.7649 0011832 162.0264 198.1381 14.69454123654092
RS-12/13
1 21089U 91007A 96145.15642852 .00000072 00000-0 60998-4 0 09013
2 21089 82.9232 207.1571 0028741 303.6045 56.2366 13.74070314265735
AO-13
1 19216U 88051B 96144.87944303 -.00000159 00000-0 32876-3 0 2081
2 19216 57.2681 115.3040 7416844 40.2644 355.5473 2.09793402 29333
UO-14
1 20437U 90005B 96145.25876163 .00000038 00000-0 31483-4 0 1843
2 20437 98.5441 228.7215 0010434 277.1533 82.8462 14.29921341330637
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RS-15
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AO-16
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2 20439 98.5580 230.7926 0010896 278.4274 81.5688 14.29975799330635
DO-17
1 20440U 90005E 96145.17212489 .00000009 00000-0 20248-4 0 09947
2 20440 98.5608 231.4419 0010594 276.5234 83.4745 14.30117270330665
WO-18
1 20441U 90005F 96145.23142719 .00000007 00000-0 19380-4 0 9878
2 20441 98.5603 231.4412 0011477 276.7661 83.2208 14.30087041330676
LO-19
1 20442U 90005G 96145.15909643 .00000044 00000-0 33986-4 0 09933
2 20442 98.5617 231.8527 0011653 275.8245 84.1609 14.30195439330684
FO-20
1 20480U 90013C 96145.05867153 .00000011 00000-0 94062-4 0 8791
2 20480 99.0259 174.4977 0540427 179.1289 181.0880 12.83233651294799
AO-21
1 21087U 91006A 96145.06060008 .00000093 00000-0 82657-4 0 07160
2 21087 82.9388 339.5699 0034117 276.3824 83.3447 13.74568279266690
UO-22
1 21575U 91050B 96145.16780739 .00000015 00000-0 19348-4 0 07073
2 21575 98.3519 212.2631 0008102 344.8239 15.2697 14.37024320254612
KO-23
1 22077U 92052B 96144.76030816 -.00000037 00000-0 10000-3 0 05970
2 22077 66.0785 240.5990 0012414 306.3082 53.6785 12.86297302177666
KO-25
1 22828U 93061F 96145.16312122 .00000067 00000-0 44489-4 0 04647
2 22828 98.5784 221.3646 0009812 291.1274 68.8859 14.28141953106688
IO-26
1 22826U 93061D 96145.17632165 .00000022 00000-0 26540-4 0 05008
2 22826 98.5817 221.3173 0009173 308.7275 51.3077 14.27804111138577
AO-27
1 22825U 93061C 96145.17818503 -.00000007 00000-0 14611-4 0 04930
2 22825 98.5804 221.1556 0008428 309.0158 51.0280 14.27695365138562
PO-28
1 22829U 93061G 96145.17943711 .00000031 00000-0 29841-4 0 04908
2 22829 98.5783 221.4354 0009961 293.6236 66.3887 14.28122292138601

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
May 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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1000. Re: Sat with HT

Newsgroup: rec.radio.amateur.space
Date: 1996-05-25 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4o6bk2$p5p@paperboy.ids.net>
Source record: 22415

In article <4nu613$35k@panther.unisys.com.br> Antonio R. Bruno da Cunha, acunha@unisys.com.br writes:
>I have a Yaesu FT-530 HT, and wanna know if it's possible to receive
>any signal from satellites, even communicate.
>What kind of antenna I need? Thanks

key feature is that you're using a 5 watt FM handheld which only communicates on 2 meters (I think).

So the only active satellites which are FM 2 meter-only birds are - DOVE, Mir, and the shuttle SAREX experiment.

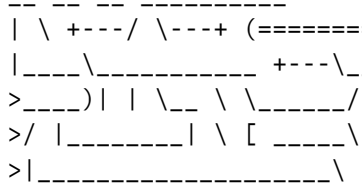
I have operated Mir using a handheld with a J-pole antenna, pretty good signal. But it helps that I was doing it at 3 am local time so I didn't have much competition.

DOVE is extremely easy to recieve on a handheld with any antenna better than a rubber duckie, and any inexpensive packet modem.

The shuttle can be easily _received_ on a handheld. But the problem with getting through is competition - if you think your puny handheld can compete with high power linear amplifiers driving motorized beam antennas then go for it -- but I doubt you'll get through.

Of course if you're using a handheld from the middle of nowhere without any competition and lucky enough to get an astronaut who's available ....

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

1001. NORAD Two-Line Orbital Element Sets (TLE815)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-25 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4o5vt9$247@blackbird.afit.af.mil>
Source record: 22416

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #815 -
Alouette 1
1 00424U 62049A 96142.15870016 .00000034 00000-0 28924-4 0 1977
2 00424 80.4533 310.4114 0023713 100.2469 260.1350 13.67868434678645
ATS 1
1 02608U 66110A 96135.98691917 -.00000382 00000-0 10000-3 0 9688
2 02608 14.6171 353.1899 0010169 73.2945 286.7620 1.00352238 24532
ATS 3
1 03029U 67111A 96145.27707001 -.00000115 00000-0 10000-3 0 4996
2 03029 14.9093 0.0364 0012110 288.9005 307.5965 1.00273174104524
Starlette
1 07646U 75010A 96143.23158948 -.00000165 00000-0 -17013-4 0 9719
2 07646 49.8256 251.1332 0205790 144.7213 216.7503 13.82190041 75376
LAGEOS
1 08820U 76039A 96144.17595009 .00000002 00000-0 10000-3 0 1957
2 08820 109.8495 17.4462 0043784 133.8182 226.6259 6.38664586212236
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96143.44408861 .00000071 00000-0 10000-3 0 6788
2 10061 12.3267 37.3975 0009835 137.8464 51.7211 1.00297853 14189
IUE
1 10637U 78012A 96144.70003861 .00000000 00000-0 10000-3 0 2531
2 10637 35.6409 83.6633 1354951 55.7417 316.3827 1.00249872 1725
GPS BI-01
1 10684U 78020A 96139.00260980 -.00000064 00000-0 10000-3 0 4483
2 10684 64.9720 24.7836 0059305 162.8392 197.3867 1.98069370118815

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GPS BI-02
1 10893U 78047A 96145.00152976 -.00000025 00000-0 10000-3 0 2458
2 10893 63.1727 261.7688 0231393 15.2153 345.4751 2.01627388132322
GOES 3
1 10953U 78062A 96145.29065583 -.00000130 00000-0 10000-3 0 6631
2 10953 11.3232 40.2335 0003074 335.3614 230.1605 1.00273888 18810
SeaSat 1
1 10967U 78064A 96145.22670737 -.00000008 00000-0 41824-4 0 4882
2 10967 107.9899 125.1696 0001433 248.3370 111.7618 14.38106079938000
GPS BI-03
1 11054U 78093A 96140.55130935 -.00000028 00000-0 10000-3 0 4078
2 11054 62.8667 260.9824 0047008 179.9823 180.0451 1.93505506128102
Nimbus 7
1 11080U 78098A 96143.53606010 -.00000144 00000-0 -92651-4 0 5888
2 11080 98.9473 7.0260 0009535 39.1064 321.0780 13.83695030887622
GPS BI-04
1 11141U 78112A 96140.30102509 -.00000065 00000-0 10000-3 0 433
2 11141 64.9881 27.1209 0049854 27.9290 332.3683 1.92894710 17328
GPS BI-05
1 11690U 80011A 96140.92908787 -.00000062 00000-0 10000-3 0 250
2 11690 65.3075 26.1989 0143735 189.8039 169.9158 2.00572343133632
GPS BI-06
1 11783U 80032A 96142.31948767 -.00000018 00000-0 10000-3 0 1446
2 11783 62.3155 254.5621 0226611 29.4805 331.7748 2.03456305118286
GOES 5
1 12472U 81049A 96136.82841322 -.00000000 00000-0 10000-3 0 9325
2 12472 8.1236 50.5187 0005966 39.6634 320.1953 1.00211938 12776
Cosmos 1383
1 13301U 82066A 96144.09395193 .00000040 00000-0 29751-4 0 4967
2 13301 82.9321 152.2010 0026687 312.5487 47.3407 13.68074738693948
LandSat 4
1 13367U 82072A 96143.21045498 .00000035 00000-0 17592-4 0 9171
2 13367 98.0772 194.9124 0005731 218.5618 141.5172 14.57180322736754
DMSP B5D2-1
1 13736U 82118A 96145.22599092 .00000040 00000-0 35111-4 0 117
2 13736 98.6246 333.9985 0009435 95.0713 265.1544 14.25786391697659
IRAS
1 13777U 83004A 96143.54726250 -.00000198 00000-0 -10667-3 0 3238
2 13777 98.9668 329.5916 0012339 166.0482 194.1022 13.99255401349782
Cosmos 1447
1 13916U 83021A 96145.26696203 .00000090 00000-0 79566-4 0 5928
2 13916 82.9454 208.7253 0036328 217.7650 142.0953 13.74340279660456
TDRS 1
1 13969U 83026B 96141.48220520 -.00000295 00000-0 10000-3 0 5909
2 13969 8.9493 43.9598 0003274 358.0528 320.1481 1.00407933 21108
GOES 6
1 14050U 83041A 96144.27804205 -.00000256 00000-0 10000-3 0 5149
2 14050 6.9715 53.8591 0003764 11.8260 199.9475 1.00260026105949
OSCAR 10
1 14129U 83058B 96143.21414780 -.00000033 00000-0 10000-3 0 4256
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LandSat 5
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2 14780 98.3342 201.5483 0002860 27.7106 332.4237 14.57052286650222
UoSat 2
1 14781U 84021B 96143.52967609 .00000067 00000-0 19192-4 0 8856
2 14781 97.7987 135.3983 0011832 166.5679 193.5843 14.69453423653881
GPS BI-09
1 15039U 84059A 96138.05172802 -.00000068 00000-0 10000-3 0 4125
2 15039 64.6437 21.5115 0082716 18.7351 341.5934 1.92302031 86839
Cosmos 1574
1 15055U 84062A 96142.88371321 .00000036 00000-0 21956-4 0 7928
2 15055 82.9531 265.3284 0029217 54.9267 305.4621 13.73634938597379
GPS BI-10
1 15271U 84097A 96144.03021044 -.00000062 00000-0 10000-3 0 1571
2 15271 62.0471 255.0741 0157183 357.8970 2.0735 2.00610943 84763
Cosmos 1602
1 15331U 84105A 96141.08348768 .00000115 00000-0 10630-4 0 4756
2 15331 82.5331 139.3654 0021845 44.0424 316.2528 14.84752138628800
NOAA 9
1 15427U 84123A 96144.79271261 .00000089 00000-0 70728-4 0 7067
2 15427 98.9517 209.7038 0015859 25.9851 334.2109 14.13782423590187
GPS BI-11
1 16129U 85093A 96144.47365303 .00000032 00000-0 10000-3 0 7244
2 16129 65.3192 24.9998 0158444 84.6425 277.1968 1.89368612 21459
Mir
1 16609U 86017A 96144.83913383 .00002138 00000-0 34480-4 0 5269
2 16609 51.6484 245.8614 0004669 358.6525 1.4403 15.58083636586210
SPOT 1
1 16613U 86019A 96145.26035902 .00000089 00000-0 62356-4 0 9413
2 16613 98.7331 213.8472 0001052 48.8465 311.2802 14.20013953216914
Cosmos 1766
1 16881U 86055A 96142.21519191 .00000265 00000-0 29005-4 0 3907
2 16881 82.5188 196.0227 0021361 66.0317 294.3131 14.83732021529843
EGP
1 16908U 86061A 96145.23927010 -.00000083 00000-0 10000-3 0 889
2 16908 50.0088 70.6243 0011160 313.3641 46.6263 12.44414592113423
NOAA 10
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2 16969 98.5236 142.6011 0014413 65.3585 294.9096 14.24983829503137
MOS-1
1 17527U 87018A 96143.21976203 -.00000043 00000-0 00000+0 0 4171
2 17527 98.9391 205.8043 0020495 37.5237 322.7351 14.00401255471357
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1 17561U 87022A 96145.31293559 -.00000146 00000-0 10000-3 0 9100
2 17561 3.0143 69.7285 0005326 359.4891 187.0544 1.00357391 17067
Kvant-1
1 17845U 87030A 96145.09569144 .00018267 00000-0 24414-3 0 6388
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2 18129 82.9271 167.5026 0010159 223.5698 136.4651 13.72366488446659
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1 18312U 87068A 96145.17516357 .00000031 00000-0 15009-4 0 4824
2 18312 82.5573 11.1336 0011330 294.1455 65.8520 13.84078403442857
Meteor 2-17
1 18820U 88005A 96145.19700091 .00000063 00000-0 42360-4 0 9439
2 18820 82.5411 66.1900 0017634 359.1289 0.9846 13.84756400420205
DMSP B5D2-4
1 18822U 88006A 96145.07085413 .00000008 00000-0 21711-4 0 2601
2 18822 98.3852 338.2814 0007240 75.2175 284.9804 14.23190622431145
Glonass 34
1 19163U 88043A 96144.18637234 .00000012 00000-0 10000-3 0 821
2 19163 65.2485 86.6825 0008898 159.1315 200.9071 2.13102190 61707
Glonass 36
1 19165U 88043C 96141.89699893 -.00000001 00000-0 10000-3 0 4875
2 19165 65.2309 86.7278 0001762 10.6234 349.3685 2.13101906 62277
METEOSAT 3
1 19215U 88051A 96138.61900332 -.00000147 00000-0 10000-3 0 2597
2 19215 3.2068 67.8901 0002004 132.0058 227.6328 0.96948497 16884
AO-13
1 19216U 88051B 96144.87944303 -.00000159 00000-0 32876-3 0 2081
2 19216 57.2681 115.3040 7416844 40.2644 355.5473 2.09793402 29333
OKEAN 1
1 19274U 88056A 96140.90729283 .00000200 00000-0 21954-4 0 909
2 19274 82.5110 298.0626 0018186 214.5284 145.4761 14.82481682425187
Meteor 3-2
1 19336U 88064A 96141.66162681 .00000051 00000-0 10000-3 0 4822
2 19336 82.5397 185.8982 0016973 308.8451 51.1155 13.16977635375858
Glonass 39
1 19503U 88085C 96141.45754648 -.00000049 00000-0 10000-3 0 3768
2 19503 65.5847 325.6576 0004713 164.5611 195.4604 2.13101692 59758
NOAA 11
1 19531U 88089A 96144.87589379 .00000026 00000-0 38980-4 0 5189
2 19531 99.1902 162.3606 0011357 315.5316 44.4941 14.13092717395015
TDRS 2
1 19548U 88091B 96142.01585943 -.00000194 00000-0 10000-3 0 2060
2 19548 2.4374 72.2141 0001117 74.0500 183.5983 1.00267063 15257
Glonass 40
1 19749U 89001A 96144.77996587 -.00000203 00000-0 10000-3 0 5985
2 19749 65.1896 86.1826 0007653 248.5133 111.4417 2.13099187 57477
Glonass 41
1 19750U 89001B 96140.14242200 -.00000018 00000-0 10000-3 0 4994
2 19750 65.2178 86.4095 0007760 226.7620 133.1428 2.13101749 57259
GPS BII-01
1 19802U 89013A 96143.21690554 .00000026 00000-0 10000-3 0 2306
2 19802 55.3196 111.6765 0019529 174.5084 185.4862 2.00575064 53194
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1 19822U 89016A 96143.04764016 .00003424 00000-0 19163-3 0 7261
2 19822 75.0634 139.0670 3745259 126.0931 274.7682 7.91550527164628
Meteor 2-18
1 19851U 89018A 96142.53893615 -.00000028 00000-0 -38555-4 0 4809
2 19851 82.5167 302.3222 0015622 53.5686 306.6912 13.84411156365148
MOP-1
1 19876U 89020B 96138.58991487 -.00000154 00000-0 10000-3 0 1984
2 19876 1.9279 71.2511 0020521 284.4361 74.7308 0.97110757 6323
TDRS 3
1 19883U 89021B 96143.49218018 -.00000269 00000-0 10000-3 0 2158
2 19883 0.0723 88.7559 0002371 19.4969 268.3573 1.00270326198863
GPS BII-02
1 20061U 89044A 96144.05766106 -.00000051 00000-0 10000-3 0 2207
2 20061 54.2316 287.4209 0154463 220.0371 138.8477 2.00561223 50961
Nadezhda 1
1 20103U 89050A 96144.88686396 .00000033 00000-0 18072-4 0 7802
2 20103 82.9576 126.6020 0038764 119.7864 240.7156 13.73866059345348
GPS BII-03
1 20185U 89064A 96143.90274287 .00000033 00000-0 10000-3 0 2594
2 20185 55.1165 112.1194 0037506 329.2137 30.5293 2.00549613 49520
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1 20217U 89070A 96144.20460251 .00000000 00000-0 10000-3 0 3741
2 20217 1.7118 74.8263 0003350 79.9335 280.1083 1.00268224 25272
INTERCOSMOS 24
1 20261U 89080A 96141.89609159 .00000222 00000-0 58675-4 0 4990
2 20261 82.5887 288.1401 1242664 103.7164 270.5094 12.47340876302501
GPS BII-04
1 20302U 89085A 96141.44004106 -.00000010 00000-0 10000-3 0 2301
2 20302 53.2543 227.3813 0024113 184.3054 175.7329 2.00565249 48271
Meteor 3-3
1 20305U 89086A 96144.04689846 .00000044 00000-0 10000-3 0 5662
2 20305 82.5406 141.9635 0008450 15.8992 344.2367 13.04415960314928
COBE
1 20322U 89089A 96142.07325278 -.00000295 00000-0 -16045-3 0 2135
2 20322 98.9475 157.7795 0009454 107.5621 252.6578 14.03455166333120
Kvant-2
1 20335U 89093A 96145.09569144 .00018267 00000-0 24414-3 0 5982
2 20335 51.6479 244.5801 0004711 6.3151 353.7965 15.58097734369375
GPS BII-05
1 20361U 89097A 96141.95107457 -.00000060 00000-0 10000-3 0 806
2 20361 55.9813 54.3543 0085270 131.6317 229.1163 2.00564823 37760
COSMOS 2054 (Altair-1)
1 20391U 89101A 96143.56294800 -.00000135 00000-0 00000+0 0 3567
2 20391 3.8108 63.7553 0003444 25.1610 338.0651 1.00274258 23747
SPOT 2
1 20436U 90005A 96145.25378292 -.00000044 00000-0 00000+0 0 766
2 20436 98.6990 219.3181 0001498 69.3520 290.7816 14.20038020328444
UO-14
1 20437U 90005B 96145.25876163 .00000038 00000-0 31483-4 0 1843
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2 20437 98.5441 228.7215 0010434 277.1533 82.8462 14.29921341330637
UO-15
1 20438U 90005C 96143.78090675 .00000008 00000-0 20119-4 0 9801
2 20438 98.5379 225.2534 0009629 287.4543 72.5586 14.29230822330295
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1 20439U 90005D 96143.25827574 .00000001 00000-0 17315-4 0 9829
2 20439 98.5582 228.9357 0010956 284.4367 75.5597 14.29975121330362
DO-17
1 20440U 90005E 96143.21312497 .00000006 00000-0 19286-4 0 9824
2 20440 98.5612 229.5163 0010832 283.8895 76.1092 14.30117045330386
WO-18
1 20441U 90005F 96145.23142719 .00000007 00000-0 19380-4 0 9878
2 20441 98.5603 231.4412 0011477 276.7661 83.2208 14.30087041330676
LO-19
1 20442U 90005G 96143.20020330 .00000029 00000-0 28144-4 0 9825
2 20442 98.5615 229.9248 0011764 281.9408 78.0461 14.30195036330403
GPS BII-06
1 20452U 90008A 96143.34462159 .00000039 00000-0 10000-3 0 1647
2 20452 54.0315 167.8248 0059753 93.0244 267.7090 2.00567596 46292
MOS-1B
1 20478U 90013A 96143.21909920 .00000088 00000-0 10000-3 0 9360
2 20478 99.1261 213.0005 0007014 322.7414 37.3259 13.93963151240935
DEBUT
1 20479U 90013B 96142.06186763 .00000040 00000-0 16164-3 0 9810
2 20479 99.0282 172.2726 0540222 185.3675 174.1474 12.83341554294426
FO-20
1 20480U 90013C 96145.05867153 .00000011 00000-0 94062-4 0 8791
2 20480 99.0259 174.4977 0540427 179.1289 181.0880 12.83233651294799
MOS-1B R/B
1 20491U 90013D 96145.26071239 .00000198 00000-0 43913-3 0 2448
2 20491 99.0697 238.8988 0470552 350.5743 8.6793 13.02966150298740
LACE
1 20496U 90015A 96144.96760812 .00000175 00000-0 13228-4 0 6517
2 20496 43.1051 341.6069 0011174 263.8394 96.1190 15.35628315350109
Nadezhda 2
1 20508U 90017A 96144.86725851 .00000023 00000-0 75214-5 0 7816
2 20508 82.9519 261.1067 0045939 73.3237 287.2954 13.73507736312554
OKEAN 2
1 20510U 90018A 96141.36327396 .00000175 00000-0 20736-4 0 4996
2 20510 82.5225 251.6547 0020816 50.2410 310.0630 14.78600282335566
GPS BII-07
1 20533U 90025A 96142.75168029 -.00000051 00000-0 10000-3 0 2140
2 20533 54.6309 288.2190 0051567 77.1504 283.3958 2.00551597 45056
PegSat
1 20546U 90028A 96143.88976252 .00005561 00000-0 10205-3 0 9297
2 20546 94.1083 337.9864 0062844 102.1973 258.6369 15.47135520341090
HST
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2 23560 98.5467 217.6685 0000997 75.6114 284.5181 14.32250886 56853
Spektr
1 23579U 95024A 96145.09569144 .00018267 00000-0 24414-3 0 3502
2 23579 51.6479 244.5801 0004711 6.3151 353.7965 15.58097734 57686
GOES 9
1 23581U 95025A 96143.23905175 .00000083 00000-0 00000+0 0 1908
2 23581 0.1585 79.0489 0001269 267.8736 203.7868 1.00272712 3654
Helios 1A
1 23605U 95033A 96143.92201514 .00000071 00000-0 22573-4 0 2188
2 23605 98.1209 79.9923 0001631 58.0184 302.1177 14.63838747 46858
UPM SAT 1
1 23606U 95033B 96142.38023484 .00000116 00000-0 29121-4 0 1675
2 23606 98.1005 79.4464 0006686 277.1432 82.9012 14.67245320 46789
CERISE
1 23607U 95033C 96142.84871250 .00000075 00000-0 22037-4 0 907
2 23607 98.1027 79.7949 0005203 277.1765 82.8848 14.66943018 46872
TDRS 6
1 23613U 95035B 96144.42815208 .00000069 00000-0 10000-3 0 1723
2 23613 0.6322 83.3332 0000677 112.1516 30.2088 1.00011270 3139
Glonass 74
1 23620U 95037A 96143.63708091 .00000017 00000-0 00000+0 0 1397
2 23620 64.8269 204.8328 0018495 170.5192 189.5922 2.13102864 6468
Glonass 75
1 23621U 95037B 96142.40644243 .00000021 00000-0 00000+0 0 1429
2 23621 64.8432 204.8748 0018327 181.5751 178.4987 2.13102166 6434
Glonass 76
1 23622U 95037C 96143.40325225 .00000018 00000-0 00000+0 0 1423
2 23622 64.8312 204.8475 0036791 167.2982 192.8722 2.13102614 6458
Prognoz-M2
1 23632U 95039A 96146.42795100 -.00001703 00000-0 00000+0 0 572
2 23632 70.4480 249.9310 8440180 321.3570 25.9540 0.26355800 795
SICH-1
1 23657U 95046A 96144.20903507 .00000129 00000-0 16219-4 0 803
2 23657 82.5344 223.5463 0028787 127.8724 232.5097 14.73474183 39157
RADARSAT
1 23710U 95059A 96143.17033706 -.00000044 00000-0 00000+0 0 1384
2 23710 98.5893 150.2224 0000194 169.6483 190.4794 14.29995206 28522
Glonass 77
1 23734U 95068A 96141.17457975 .00000028 00000-0 00000+0 0 1130
2 23734 64.8281 204.8334 0018932 319.5588 40.3834 2.13102003 3373
Glonass 78
1 23735U 95068B 96141.39047684 .00000027 00000-0 00000+0 0 1080
2 23735 64.8240 204.8155 0007885 219.6869 140.3356 2.13125161 3377
Glonass 79
1 23736U 95068C 96142.34760289 .00000021 00000-0 00000+0 0 959
2 23736 64.8140 204.7983 0008339 203.3094 156.7322 2.13102217 3393
XTE
1 23757U 95074A 96142.53468718 .00000568 00000-0 18570-4 0 538
```

```
2 23757 22.9831 233.1644 0013661 103.8027 256.3982 14.97650089 21469
1996010D
1 23797U 96010D 96144.40609780 .00018530 00000-0 76840-3 0 785
2 23797 48.3152 257.0769 7343597 22.9201 357.5825 2.23978288 2111
Soyuz TM-23
1 23798U 96011A 96143.94119666 .00001805 00000-0 30153-4 0 857
2 23798 51.6485 250.3676 0004620 356.7875 3.3433 15.58077300 14267
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96144.24760900 .00000226 00000-0 10603-2 0 563
2 23824 47.7918 258.6074 7256434 22.0001 357.4499 2.21648744 2062
GPS BIIA-25
1 23833U 96019A 96144.96735948 -.00000073 00000-0 00000+0 0 293
2 23833 54.7014 349.0519 0039439 146.9683 213.3083 2.00563931 1198
Priroda
1 23848U 96023A 96143.94119666 .00001805 00000-0 30153-4 0 384
2 23848 51.6485 250.3676 0004620 356.7875 3.3433 15.58077300 4598
MSX
1 23851U 96024A 96144.98202499 -.00000047 00000-0 00000+0 0 214
2 23851 99.3770 123.7054 0008288 213.3326 146.7308 13.97739567 4116
1996024B
1 23852U 96024B 96144.94909794 .00088755 15245-5 33203-3 0 345
2 23852 96.5781 122.5850 0451068 184.9108 174.7542 15.10669497 4435
Cosmos 2332
1 23853U 96025A 96143.17828132 .00006343 -10599-5 13612-3 0 182
2 23853 82.9604 54.7374 0867752 32.4766 332.6858 13.89949751 3841
1996025B
1 23854U 96025B 96145.24458244 .00010836 -10051-5 22024-3 0 357
2 23854 82.9642 53.1193 0869434 25.8461 338.3570 13.91072315 4125
SAX
1 23857U 96027A 96122.11011787 -.00005789 00000-0 -63513-3 0 55
2 23857 3.9549 105.6524 0014291 0.0060 0.0057 14.91517646 133
1996027B
1 23858U 96027B 96122.09777531 -.00015454 00000-0 -80394-3 0 44
2 23858 3.9943 108.5471 0090105 75.4905 285.5250 15.13696967 131
1996024C
1 23859U 96024C 96142.49706210 -.00000217 00000-0 -12020-3 0 136
2 23859 99.3738 121.1258 0088365 39.7127 321.0459 13.96298426 2788
Progress M-31
1 23860U 96028A 96145.09569144 .00018267 00000-0 24414-3 0 316
2 23860 51.6479 244.5801 0004711 6.3151 353.7965 15.58097734 2948
1996030A
1 23864U 96030A 96140.52765426 -.00000137 00000-0 00000+0 0 91
2 23864 0.6456 82.3043 2514540 174.4568 74.7520 1.40869458 68
1996031A
1 23868U 96031A 96143.61733187 .00004690 00000-0 56679-4 0 172
2 23868 97.0867 334.4967 0002982 52.7761 307.3695 15.61220489 877
1996031B
```

```
1 23869U 96031B 96143.08842334 .00021197 21869-5 10000-3 0 88
2 23869 97.0790 334.0090 0042816 147.8004 212.6255 15.82175137 795
STS 77
1 23870U 96032A 96145.25000000 .00000309 53649-5 43818-5 0 198
2 23870 39.0097 241.4738 0009011 298.0792 75.2321 15.97105091 779
1996032B
1 23871U 96032B 96142.62142725 .00038403 59543-5 90241-4 0 48
2 23871 39.0160 258.9811 0006520 275.2121 84.7945 15.96610201 355
1996032C
1 23872U 96032C 96143.35927604 .33369273 58942-5 57057-2 0 166
2 23872 39.0322 253.9177 0008701 300.5494 59.9587 16.31848780 399
1996032D
1 23876U 96032D 96144.49727964 .00088972 84261-5 19943-3 0 55
2 23876 39.0139 246.4859 0007258 290.0584 69.9466 15.97014105 172
1996033A
1 23877U 96033A 96145.10409393 -.00000201 00000-0 00000+0 0 20
2 23877 22.9719 75.6506 6796043 358.8775 0.1035 2.09849252 06
1996033B
1 23878U 96033B 96145.17435827 .00000389 00000-0 00000+0 0 14
2 23878 25.8286 64.8604 0841876 191.7699 166.1838 13.82062146 01
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1002. watkins-Johnson

Newsgroup: rec.radio.amateur.space
Date: 1996-05-26 00:00:00 UTC
From: angel vilaseca <100604.1242@CompuServe.COM>
Message-ID: <4o91g2$1lt$1@mhafn.production.compuserve.com>
Source record: 22219
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space,sci.electronics.equipment,sci.electronics.repair

Looking for data about the following travelling wave tube:
Watkins-Johnson WJ-3104
This must be a 18 GHz model

Also looking for data about another TWT made for the US Navy:
M 9162
NSN 5960-00-491-7356

1003. REJECTED: Ham-Space Digest V96 #156

Newsgroup: rec.radio.amateur.space
Date: 1996-05-26 00:00:00 UTC
From: MAILER-DAEMON@IMGGW1.ceo.dg.COM
Message-ID: <9605261343.AK00034@imggw1.us.dg.com>
Source record: 22220

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@ucsd.edu
To: Ham-Space@ucsd.edu
Subject: Ham-Space Digest V96 #156
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Sun, 26 May 96 Volume 96 : Issue 156

Today's Topics:
ARLK037 Keplerian data

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 25 May 1996 15:03:19 -0400
From: w1aw@arrl.org
Subject: ARLK037 Keplerian data

SB KEP @ ARL $ARLK037
ARLK037 Keplerian data

ZCZC SK37
QST de W1AW
Keplerian Bulletin 37 ARLK037

Date: (null)
From: (null)

SB KEP ARL ARLK037
ARLK037 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
1 23870U 96032A 96145.70833333 .00000341 53708-5 43818-5 0 205
2 23870 39.0131 238.4223 0010258 304.4487 187.9645 15.97385560 840
Mir
1 16609U 86017A 96145.15982808 .00002277 00000-0 36293-4 0 05339
2 16609 51.6483 244.2529 0004738 0.4693 359.6304 15.58086144586262
AO-10
1 14129U 83058B 96145.15687890 -.00000049 00000-0 10000-3 0 4263
2 14129 26.1969 208.1437 6000154 17.9905 356.4787 2.05879917 69377
RS-10/11
1 18129U 87054A 96145.13693043 .00000012 00000-0 -37702-5 0 02260
2 18129 82.9271 166.3173 0010203 218.1459 141.8973 13.72366008446873
UO-11
1 14781U 84021B 96144.95964506 .00000109 00000-0 26150-4 0 08946
2 14781 97.7992 136.7649 0011832 162.0264 198.1381 14.69454123654092
RS-12/13
1 21089U 91007A 96145.15642852 .00000072 00000-0 60998-4 0 09013
2 21089 82.9232 207.1571 0028741 303.6045 56.2366 13.74070314265735
AO-13
1 19216U 88051B 96144.87944303 -.00000159 00000-0 32876-3 0 2081
2 19216 57.2681 115.3040 7416844 40.2644 355.5473 2.09793402 29333
UO-14
1 20437U 90005B 96145.25876163 .00000038 00000-0 31483-4 0 1843
2 20437 98.5441 228.7215 0010434 277.1533 82.8462 14.29921341330637
RS-15
1 23439U 94085A 96145.24000110 -.00000039 00000-0 10000-3 0 1359
2 23439 64.8222 61.8085 0162005 203.3796 155.9700 11.27525120 58083
AO-16
1 20439U 90005D 96145.14749826 .00000045 00000-0 34514-4 0 09932
2 20439 98.5580 230.7926 0010896 278.4274 81.5688 14.29975799330635
DO-17
1 20440U 90005E 96145.17212489 .00000009 00000-0 20248-4 0 09947
2 20440 98.5608 231.4419 0010594 276.5234 83.4745 14.30117270330665
WO-18
1 20441U 90005F 96145.23142719 .00000007 00000-0 19380-4 0 9878
2 20441 98.5603 231.4412 0011477 276.7661 83.2208 14.30087041330676
LO-19
1 20442U 90005G 96145.15909643 .00000044 00000-0 33986-4 0 09933
2 20442 98.5617 231.8527 0011653 275.8245 84.1609 14.30195439330684
FO-20
1 20480U 90013C 96145.05867153 .00000011 00000-0 94062-4 0 8791
2 20480 99.0259 174.4977 0540427 179.1289 181.0880 12.83233651294799
AO-21
1 21087U 91006A 96145.06060008 .00000093 00000-0 82657-4 0 07160

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2 21087 82.9388 339.5699 0034117 276.3824 83.3447 13.74568279266690
UO-22
1 21575U 91050B 96145.16780739 .00000015 00000-0 19348-4 0 07073
2 21575 98.3519 212.2631 0008102 344.8239 15.2697 14.37024320254612
KO-23
1 22077U 92052B 96144.76030816 -.00000037 00000-0 10000-3 0 05970
2 22077 66.0785 240.5990 0012414 306.3082 53.6785 12.86297302177666
KO-25
1 22828U 93061F 96145.16312122 .00000067 00000-0 44489-4 0 04647
2 22828 98.5784 221.3646 0009812 291.1274 68.8859 14.28141953106688
IO-26
1 22826U 93061D 96145.17632165 .00000022 00000-0 26540-4 0 05008
2 22826 98.5817 221.3173 0009173 308.7275 51.3077 14.27804111138577
AO-27
1 22825U 93061C 96145.17818503 -.00000007 00000-0 14611-4 0 04930
2 22825 98.5804 221.1556 0008428 309.0158 51.0280 14.27695365138562
PO-28
1 22829U 93061G 96145.17943711 .00000031 00000-0 29841-4 0 04908
2 22829 98.5783 221.4354 0009961 293.6236 66.3887 14.28122292138601

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
May 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #156
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1004. MIR & SHANNON

Newsgroup: rec.radio.amateur.space
Date: 1996-05-26 00:00:00 UTC
From: walterv@nando.net
Message-ID: <4o9s99$slf@castle.nando.net>
Source record: 22221

Has anyone heard or contacted MIR and our astronaut, Shannon, on
board.? I have listened and called using the position defined by the
latest Keps and have heard nothing.
--
Walter Van Gieson AB4DQ Raleigh, NC

1005. A new "kid"on the block....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-26 00:00:00 UTC
From: p.illmayer@sno.mts.dec.com
Message-ID: <4oap5g$t67@funlwb2.stl.dec.com>
Source record: 22222

Hello ALL

Well in the hope of finding out more about satelite communications, I've posted this message to the group hoping someone can set me straight.

I intend in getting into satelite "stuff" very soon but I'm just trying to get a grasp on what I need. I intend purchasing a ft736 but this looks like it is only a small portion of the $$$ required to get the show going.

I have a KPC9612 tnc and mfj1278 at the moment. I gather I can use the KPC9612 for 9600 comms (full duplex ??) and the mfj1278 for 1200 comms with MIR ??. I was also advised that I need a 1200 baud psk modem to work additional sats..

Will the combination of kpc9612/mfj1278/psk 1200 baud tnc get me "most"places ?? If not, well what do I need ??

I also got a copy of insta-trak on the weekend, it's a BRILLIANT piece of software and I just couldn't drag myself away from the screen over the weekend (while doing a Uni assignment). I understand that it works well with a "Kansas City Tracker" card. Do they get around "2nd hand" or do I have to cough up for a new one. I'd be happy to bring in one from the US.. Also, the Kenpro rotator is supposed to be the unit to buy. The Yaesu one's have not been electrically approved for Australia.

Well that brings me onto the best part, Antennas.. So what do I do here ??. Do I homebrew them or buy them. I don't have heaps of fancy test gear to build one but I have a great workshop to physically build them. Are there good designs out there for satelite antennas ??

Dumb questions maybe but ya gotta start somewhere !!!!!

Thanks for any assistance..

Pete..vk2yx
p.illmayer@sno.mts.dec.com

1006. Re: A new "kid"on the block....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-27 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Ds2HM8.GAC@cix.compulink.co.uk>
Source record: 22223

I intend purchasing a ft736....

I'd wait until you see the new Icom 821h, replacing the 820h..

....then the 736 & 820 & kenwood 790 will all drop in price..

1007. Re: A new "kid"on the block....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-27 00:00:00 UTC
From: Brett Carter <carter@inetworld.com>
Message-ID: <31AA2079.1031@inetworld.com>
Source record: 22224

Hows the price compare to the yaesu?

1008. TVRO KEPLERIAN DATA info ?????

Newsgroup: rec.radio.amateur.space
Date: 1996-05-27 00:00:00 UTC
From: mdim@intranet.GR
Message-ID: <199605270928.MAA06426@helios.intranet.GR>
Source record: 22225

Dear Amateur

I would like to ask you if there is a site somewhere in www. or internet
to get keplerian data for tvro sat. for Europe like
Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc.....
I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
locate these european tvro sats in their contents (catalog number).

I am also a subscriber to" satellite times" and "AMSAT Journal" but I have not
seen anything in these magazines about those sats.

Thank you in advance

73 SV1CVY Michael

Electrical Engineer
R & D Dept.
Intracom SA
Telecommunication Industry
Email mdim@intranet.gr

1009. Sat ants 144 & 440; what polarization?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-27 00:00:00 UTC
From: "Peter Markham"
Message-ID: <4odflm$pm5@doc.zippo.com>
Source record: 22226

I will be installing a 144mhz and a 440 mhz crossed yagi for satellite work. To start with, it will be difficult to incorporate polarization switching. What is the suggested choice, for fixed polarization, if I intend to work both digital and analog birds? Why?

TIA,
Pete/wa4hei

1010. Re: TVRO KEPLERIAN DATA info ?????

Newsgroup: rec.radio.amateur.space
Date: 1996-05-28 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <31AB2868.4D6B@uiuc.edu>
Source record: 22227

Mixalis Dimitrakakis wrote:
>
> Dear Amateur
>
> I would like to ask you if there is a site somewhere in www. or internet
> to get keplerian data for tvro sat. for Europe like
> Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc.....
> I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
> locate these european tvro sats in their contents (catalog number).
> 73 SV1CVY Michael

Michael. You can generate your own keps for these sats, if you know
the longitude. Set the following:
Mean Motion 1.002738 (this is the only critical value)
Eccentricity 0 (or ,001 if the program blows up with zero)
Inclination 0
Argument of Perigee 0
Mean Anomaly 0
Epoch - any convenient time, like midnight: 96150.000
RA of Node - compute RA of sat longitude at chosen epoch.

WinOrbit provides a menu choice to automate the process. Other tracking
programs may do likewise. (WinOrbit, Satellite window, Edit, Special
Menu:"Make Geosynchronous", then enter the longitude. Conversion to
Right Ascension is done for you).

73!

Carl, K8CG

1011. Re: MIR & SHANNON

Newsgroup: rec.radio.amateur.space
Date: 1996-05-28 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4ofjms$1vi@newsbf02.news.aol.com>
Source record: 22228

YL & myself heard her working folks in friendswood, TX. last sunday, May 19 abt 3 in the afternoon (edt) on the standard 145.550Mhz freq. Also have heard her getting news(Dole's resigning from Congress et al) from NASA HQ in Washington on the 143.625 downlink freq which has been used alot since an activation of a ground station in VA. and Calif.

According to this mornings' News Conference from MIR via NASASelect, she's been busy "making hot tea" for her space-walking commrades!!!

I also heard that yuri and yuri may stay one month longer aboard the spacecraft.....
George
N2LZH
AMSAT #27737

1012. receive qsl

Newsgroup: rec.radio.amateur.space
Date: 1996-05-28 00:00:00 UTC
From: Vladimir.PANITAR@gate71.be
Message-ID: <4oflg2$68u@donald.interpac.be>
Source record: 22229

very thanks for ur qsl card i send to you my qsl via the bureau 73
vladi.

1013. NORAD Two-Line Orbital Element Set: Space Shuttle (96148.91666667)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-28 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4oft9a$emh@blackbird.afit.af.mil>
Source record: 22230

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 77
1 23870U 96032A 96148.91666667 .00000360 53839-5 43352-5 0 316
2 23870 39.0142 217.0445 0008375 334.9798 274.8212 15.97807296 1359
1996032B
1 23871U 96032B 96142.62142725 .00038403 59543-5 90241-4 0 48
2 23871 39.0160 258.9811 0006520 275.2121 84.7945 15.96610201 355
1996032C
1 23872U 96032C 96143.35927604 .33369273 58942-5 57057-2 0 166
2 23872 39.0322 253.9177 0008701 300.5494 59.9587 16.31848780 399
1996032D
1 23876U 96032D 96147.62314561 .00008541 54136-5 22199-4 0 81
2 23876 39.0155 225.6640 0006769 313.0086 47.0186 15.97283528 663
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1014. ARLK038 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-05-28 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk038.1996@arrl.org>
Source record: 22231
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK038
ARLK038 Keplerian data

ZCZC SK38
QST de W1AW
Keplerian Bulletin 38 ARLK038
From ARRL Headquarters
Newington, CT May 28, 1996
To all radio amateurs

SB KEP ARL ARLK038
ARLK038 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-77
1 23870U 96032A 96149.59027778 .00000421 53854-5 44320-5 0 349
2 23870 39.0139 212.5559 0008139 333.8713 196.5671 15.97946139 1465
Mir
1 16609U 86017A 96148.11018622 .00003199 00000-0 48270-4 0 05648
2 16609 51.6502 229.4616 0004935 12.1091 348.0020 15.58109316586665
HST
1 20580U 90037B 96148.10142998 .00000340 00000-0 18437-4 0 08753
2 20580 28.4699 354.0812 0005964 313.4180 46.5908 14.91060076135434
AO-10
1 14129U 83058B 96146.12823962 -.00000065 00000-0 10000-3 0 04272
2 14129 26.1931 207.9775 6001544 18.2491 356.4172 2.05880352069391
RS-10/11
1 18129U 87054A 96149.58431342 -.00000018 00000-0 -35960-4 0 2153
2 18129 82.9268 163.0300 0010454 203.9597 156.1072 13.72365571447489
UO-11
1 14781U 84021B 96148.02386301 .00000105 00000-0 25618-4 0 09113
2 14781 97.7994 139.6922 0011929 152.3286 207.8555 14.69454892654547
RS-12/13
1 21089U 91007A 96148.14194065 .00000025 00000-0 11167-4 0 08957
2 21089 82.9234 204.9439 0028430 294.8758 64.9440 13.74070099266147
AO-13
1 19216U 88051B 96149.16939987 .00001404 00000-0 23580-3 0 2096
2 19216 57.2646 114.4350 7418407 40.6467 355.5084 2.09790495 29429
```

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UO-14
1 20437U 90005B 96148.12769120 .00000036 00000-0 30940-4 0 02033
2 20437 98.5440 231.5364 0010261 268.1008 91.8994 14.29921760331049
RS-15
1 23439U 94085A 96147.98951322 -.00000039 00000-0 10000-3 0 01509
2 23439 64.8224 57.3635 0161881 202.8905 156.4742 11.27525162058395
AO-16
1 20439U 90005D 96148.15626059 .00000031 00000-0 28810-4 0 09867
2 20439 98.5582 233.7509 0010635 268.7482 91.2483 14.29976089331063
DO-17
1 20440U 90005E 96148.11062445 .00000035 00000-0 30532-4 0 09866
2 20440 98.5605 234.3314 0010521 267.1471 92.8516 14.30117931331088
WO-18
1 20441U 90005F 96148.10002404 .00000036 00000-0 30909-4 0 00056
2 20441 98.5609 234.2644 0011390 268.4634 91.5261 14.30087511331081
LO-19
1 20442U 90005G 96148.09743561 .00000003 00000-0 17876-4 0 09883
2 20442 98.5619 234.7444 0011549 265.6375 94.3456 14.30195568331105
FO-20
1 20480U 90013C 96148.09952884 -.00000029 00000-0 47458-5 0 08983
2 20480 99.0261 176.9619 0540555 172.2346 188.7559 12.83233263295182
AO-21
1 21087U 91006A 96148.04503760 .00000093 00000-0 82657-4 0 07180
2 21087 82.9381 337.3603 0034043 268.5742 91.1513 13.74568428267108
UO-22
1 21575U 91050B 96148.16183183 .00000001 00000-0 14751-4 0 06961
2 21575 98.3519 215.1691 0007902 336.4242 23.6592 14.37024375255043
KO-23
1 22077U 92052B 96147.71482031 -.00000037 00000-0 10000-3 0 05945
2 22077 66.0783 234.4128 0012426 304.6399 55.3446 12.86297288178043
KO-25
1 22828U 93061F 96148.10568211 .00000045 00000-0 35453-4 0 04564
2 22828 98.5781 224.2543 0009784 282.7857 77.2228 14.28142233107108
IO-26
1 22826U 93061D 96148.11957733 -.00000029 00000-0 59081-5 0 04897
2 22826 98.5819 224.2091 0008828 298.9958 61.0310 14.27803816138999
AO-27
1 22825U 93061C 96148.12166355 -.00000010 00000-0 13743-4 0 04804
2 22825 98.5809 224.0471 0008326 300.0912 59.9446 14.27695587138984
PO-28
1 22829U 93061G 96148.12203757 .00000015 00000-0 23545-4 0 04845
2 22829 98.5781 224.3254 0009866 285.2410 74.7679 14.28122675139029

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
June 1, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1015. Re: Sat ants 144 & 440; what polarization?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Message-ID: <31AC6831.72E0@virginia.edu>
Source record: 22232

Peter, Markham wrote:
>
> I will be installing a 144mhz and a 440 mhz crossed yagi for satellite
> work. To start with, it will be difficult to incorporate polarization
> switching. What is the suggested choice, for fixed polarization, if I
> intend to work both digital and analog birds? Why?
>
> TIA,
> Pete/wa4hei

Pete,
If you can only choose one, then hands down it's right hand
polarization. Left hand has some limited use when squint angles are
way off on AO-13, and sometimes on FO-20, but right hand is the
"dominant" mode. P3D will be right hand polarized....Go right hand.

1016. How to determine pol. of X-yagi?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: joachimp@stud.unit.no
Message-ID: <4ohs7t$hkr@due.unit.no>
Source record: 22233

Using crossed yagis (not staggered) phased with a 1/4 wavelength stub,
how do I determine which polarisation I get? I have been trying to
figure it out for myself, but I can't agree with myself. The ARRL
antenna handbook wasn't much help, I'm afraid..

--
==
Joachim "Cobra Ball" Pihl _/ Jeg er det levende beviset paa at
Hans Osnes v. 4 _/ statistikken lyver! Hvis 50% av
7030 Trondheim _/ befolkningen er kvinner og det
joachimp@stud.unit.no _/ saaledes burde finnes en kvinne til
_/ hver mann, hvorfor faar jeg da aldri
LC2DAT \ LA1K _/ dyppa'n? A. And
==
Critical Error: Unable to locate coffee - Operator Halted

1017. Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: Carl Estey <carl.estey@HBC.Honeywell.com>
Message-ID: <31AC8B9E.F8C@HBC.Honeywell.com>
Source record: 22234

Dear Fellow Amateur Radio Operator:

I have just received the following advanced copy of the July 1996 QST editorial written by K1ZZ from Tod Olson, K0TO, and it focuses on an issue near and dear to many of us - specifically, the potential loss or sharing of our VHF and UHF frequencies with commercial services.

Please do three things TODAY -
1. Read the editorial.
2. Write letters to those listed in the editorial. Be rational and not emotional. Tell them sharing is not in the public interest.
3. Pass the editorial on to as many other concerned folks as you can.

Experience shows that what works best is MANY, MANY filled mail bags to governement officals. Post cards work well too - but the objective is to get a large volume of mail to these folks real quick and make sure they shift
their interests to someone elses frequencies and not OURS!

By your help ... and letter writing right now, we can help protect our frequencies and make sure we have the capabilities in the future to continue
to serve the public good! Write TODAY!

73, Carl Estey WA0CQG

==========Beginning of editorial==========

Write Now!

Get out a pen and paper, or boot up your computer. There's work to be done! Your help is needed to defend two meters and 70 cm. Yes, that's right -- the two most popular and crowded amateur VHF/UHF bands! But don't panic, and don't "go ballistic."

Here's what's happening, and what you can do about it. The United States is preparing for the 1997 ITU World Radiocommunication Conference, WRC-97. In the past, the public has been able to participate in the preparations for such conferences by responding to FCC Notices of Inquiry.
In March, the FCC announced a streamlining of its International Bureau's preparatory processes for WRCs. Under the new scheme, the NOIs have been eliminated in favor of increased emphasis on WRC Advisory Committees.

For WRC-97, a series of Informal Working Groups (IWGs) of the Advisory Committee has been created to address specific agenda items. The output of each IWG will go directly to a joint FCC-NTIA-Department of

State
Steering Committee of the Advisory Committee. There, draft proposals as
received from the IWGs will be reviewed and forwarded to the FCC for
possible
release as preliminary U.S. proposals for public comment.

In announcing the streamlined WRC preparatory process, the FCC tried
to reassure those who might be concerned about reduced opportunities for
public participation: "Interested parties should note that input to the
Advisory Committee may be sent at any time directly to the Chair of the
WRC-97 Advisory Committee; the Chairs of the Advisory Committee's
Informal
Working Groups; Cecily C. Holiday, the FCC's federal officer of the
WRC-97
Advisory Committee, or to Damon C. Ladson, the alternate federal
officer."

Hold that thought while we shift gears to the substance of the
issue.

One of the WRC-97 agenda items includes consideration of possible
additional frequency allocations for the mobile-satellite service.
So-called
"little LEOs," low-earth orbit satellites below 1 GHz, already have
allocations. Their proponents claim these are inadequate and are trying
for
more. The needs of little LEOs are being addressed in IWG-2A, chaired by
Warren Richards of the Department of State. The ARRL technical relations
staff participates in IWG-2A to represent Amateur Radio interests.

At the May 7 IWG-2A meeting, an industry representative proposed a
list
of "candidate bands" for little LEOs. The list includes a number of bands
that would negatively impact existing services, and does not include
others
that would be technically more feasible but to which strong objection
from
incumbents could be expected -- the point being that some political,
rather
than purely technical, judgment already has influenced the list.

Incredibly, 144-148 and 420-450 MHz were included on the list! This
is
the first time in memory that another service has been proposed for the
two-meter amateur band. We must make sure it is also the last time.

We do not need to explain to ARRL members the extensive use that is
made of these bands by amateurs. The two bands provide the backbone of
our
local public service communications effort. Voice and data, mobile and
fixed, even television -- the list of present amateur uses is a long one,
and of future uses is even longer. Both are already used for satellite

services and for moonbounce and extended-range terrestrial operations requiring extremely sensitive receivers and high levels of effective radiated power.

Apparently we did need to explain all this to the little LEO industry representatives, so we did just that -- both at the meeting and in a followup letter on May 15. We also explained that we had to regard the matter as extremely serious. No one with the slightest background inradiocommunication could possibly believe that a mobile-satellite service could be introduced into either band without disrupting existing and future amateur operations. Therefore, we said, if we did not receive assurance that they would be taken off the list of candidate bands by the deadline for this issue of QST, we would have no choice but to bring the matter to the attention of the entire membership.

The response we received was unsatisfactory. In effect, we were told the little LEO industry would consider our views but that until their spectrum needs are satisfied, all bands must remain under consideration.

So, this is a call to action. We must get across to the industry and government participants in IWG-2A that the 144-148 MHz and 420-450 MHz bands cannot be considered as candidates for mobile-satellite services. We need to drive the point home so forcefully, with so many grassroots responses, that no one is ever tempted to try this again.

Which brings us back to that invitation for "interested parties" to send input "at any time." There's no time like the present! Here are the key addresses, including those of the mobile-satellite industry folks who seem to have started the ruckus:

Cecily C. Holiday, International Bureau, FCC, Washington, DC 20554; choliday@fcc.gov; FAX (202) 418-0748.

Warren G. Richards, Chair, IWG-2A, Department of State, CIP 2529, Washington, DC 20520; richardswg@ms6820wpoa.us-state.gov; FAX (202) 647-7407.

Tracey Weisler, FCC Rep., IWG-2A, International Bureau, FCC, Washington, DC 20554; tweisler@fcc.gov; FAX (202) 418-2824.

Mary Kay Williams, Final Analysis, Inc., 7500 Greenway Center, Ste. 1240, Greenbelt, MD 20770; FAX (301) 474-3228.

Leslie Taylor, President, LTA, 6800 Carlynn Court, Bethesda, MD 20817; ltaylor@lta.com; FAX (301) 229-3148.

Do comment. But be civil. Don't abuse people who are
simply doing their jobs. We have to get across that casting
covetous eyes on amateur bands is counterproductive, and
contrary to the public interest. To accomplish this we
need a lot of comments, including yours. But remember that
the objective is to educate and persuade, not to intimidate. We
don't need to. The facts are on our side.

To monitor the FCC's ongoing WRC-97 preparations, visit
its WRC-97 home page at: http://www.fcc.gov/ib/wrc97/.
Write now. Right now! -- David Sumner, K1ZZ

==========end of editorial==========

--
Carl Estey, Amateur Radio Station WA0CQG
Honeywell Inc., Homes and Building Control, MN10-2518, 1885 Douglas Dr.,
Golden Valley, MN 55422 (612) 954-6922
E-Mail: carl.estey@HBC.Honeywell.com or wa0cqg@wa0cqg-uhf.ampr.org
(TCP/IP)

1018. REJECTED: Ham-Space Digest V96 #158

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: MAILER-DAEMON@IMGGW1.ceo.dg.COM
Message-ID: <9605291432.BB00029@imggw1.us.dg.com>
Source record: 22235

----- Mail rejected by CEO. -----
No User Waiting Mail not sent to:gary rogers@dgc.ceo

----- Unsent message follows -----
From: ham-space@UCSD.EDU
To: Ham-Space@UCSD.EDU
Subject: Ham-Space Digest V96 #158
X-Ceo_Options: Document

<Original text message attached as document>

CEO document contents:

Ham-Space Digest Wed, 29 May 96 Volume 96 : Issue 158

Today's Topics:
A new "kid"on the block.... (2 msgs)
MIR & SHANNON
NORAD Two-Line Orbital Element Set: Space Shuttle (96148.91666667)
receive qsl
TVRO KEPLERIAN DATA info ????? (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 27 May 1996 14:01:20 GMT
From: oddjob@cix.compulink.co.uk ("Stephen Walters")
Subject: A new "kid"on the block....

I intend purchasing a ft736....

I'd wait until you see the new Icom 821h, replacing the 820h..

....then the 736 & 820 & kenwood 790 will all drop in price..

Date: Mon, 27 May 1996 14:36:57 -0700
From: Brett Carter <carter@inetworld.com>
Subject: A new "kid"on the block....

Hows the price compare to the yaesu?

Date: 28 May 1996 15:21:00 -0400
From: gsteve490@aol.com (GSteve490)
Subject: MIR & SHANNON

YL & myself heard her working folks in friendswood, TX. last sunday, May 19 abt 3 in the afternoon (edt) on the standard 145.550Mhz freq. Also have heard her getting news(Dole's resigning from Congress et al) from NASA HQ in Washington on the 143.625 downlink freq which has been used alot since an activation of a ground station in VA. and Calif.

According to this mornings' News Conference from MIR via NASASelect, she's been busy "making hot tea" for her space-walking commrades!!!

I also heard that yuri and yuri may stay one month longer aboard the spacecraft.....
George
N2LZH
AMSAT #27737

Date: 28 May 1996 22:04:26 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96148.91666667)

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 77
1 23870U 96032A 96148.91666667 .00000360 53839-5 43352-5 0 316
2 23870 39.0142 217.0445 0008375 334.9798 274.8212 15.97807296 1359
1996032B
1 23871U 96032B 96142.62142725 .00038403 59543-5 90241-4 0 48
2 23871 39.0160 258.9811 0006520 275.2121 84.7945 15.96610201 355
1996032C
1 23872U 96032C 96143.35927604 .33369273 58942-5 57057-2 0 166
2 23872 39.0322 253.9177 0008701 300.5494 59.9587 16.31848780 399
1996032D
1 23876U 96032D 96147.62314561 .00008541 54136-5 22199-4 0 81

2 23876 39.0155 225.6640 0006769 313.0086 47.0186 15.97283528 663
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: Tue, 28 May 1996 19:49:10 GMT
From: Vladimir.PANITAR@gate71.be (Vladimir PANITAR)
Subject: receive qsl

very thanks for ur qsl card i send to you my qsl via the bureau 73
vladi.

Date: Tue, 28 May 1996 11:23:04 -0500
From: Carl Gregory <cgregory@uiuc.edu>
Subject: TVRO KEPLERIAN DATA info ?????

Mixalis Dimitrakakis wrote:
>
> Dear Amateur
>
> I would like to ask you if there is a site somewhere in www. or internet
> to get keplerian data for tvro sat. for Europe like
> Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc.....
> I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
> locate these european tvro sats in their contents (catalog number).
> 73 SV1CVY Michael

Michael. You can generate your own keps for these sats, if you know
the longitude. Set the following:
Mean Motion 1.002738 (this is the only critical value)
Eccentricity 0 (or ,001 if the program blows up with zero)
Inclination 0
Argument of Perigee 0
Mean Anomaly 0
Epoch - any convenient time, like midnight: 96150.000
RA of Node - compute RA of sat longitude at chosen epoch.

WinOrbit provides a menu choice to automate the process. Other tracking
programs may do likewise. (WinOrbit, Satellite window, Edit, Special
Menu:"Make Geosynchronous", then enter the longitude. Conversion to
Right Ascension is done for you).

73!

Carl, K8CG

Date: 27 May 96 09:24:52 GMT
From: mdim@intranet.GR (Mixalis Dimitrakakis)

Subject: TVRO KEPLERIAN DATA info ?????

Dear Amateur

I would like to ask you if there is a site somewhere in www. or internet
to get keplerian data for tvro sat. for Europe like
Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc.....
I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
locate these european tvro sats in their contents (catalog number).

I am also a subscriber to" satellite times" and "AMSAT Journal" but I have not
seen anything in these magazines about those sats.

Thank you in advance

73 SV1CVY Michael

Electrical Engineer
R & D Dept.
Intracom SA
Telecommunication Industry
Email mdim@intranet.gr

End of Ham-Space Digest V96 #158
****

1019. Re: TVRO KEPLERIAN DATA info ?????

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds6L3G.MIw@pe1chl.ampr.org>
Source record: 22236

In <199605270928.MAA06426@helios.intranet.GR> mdim@intranet.GR (Mixalis Dimitrakakis) writes:

> Dear Amateur

> I would like to ask you if there is a site somewhere in www. or internet
> to get keplerian data for tvro sat. for Europe like
> Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc........
> I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
> locate these european tvro sats in their contents (catalog number).

You can find them on TS Kelso's site, look in this newsgroup for details.
(he regularly posts Shuttle and Amsat keps here, but more is available
by FTP)

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1020. Re: A new "kid"on the block....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds6L9L.MKM@pe1chl.ampr.org>
Source record: 22237

In <Ds2HM8.GAC@cix.compulink.co.uk> oddjob@cix.compulink.co.uk ("Stephen Walters") writes:

>I intend purchasing a ft736....

>I'd wait until you see the new Icom 821h, replacing the 820h..

>.....then the 736 & 820 & kenwood 790 will all drop in price..

Really? Will the 821 be so competitive?
(I have not yet seen anything about it in the local amateur radio magazine)

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1021. Re: Sat ants 144 & 440; what polarization?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds6LJ1.MMH@pe1chl.ampr.org>
Source record: 22238

In <4odflm$pm5@doc.zippo.com> Peter Markham writes:

> I will be installing a 144mhz and a 440 mhz crossed yagi for satellite
>work. To start with, it will be difficult to incorporate polarization
>switching. What is the suggested choice, for fixed polarization, if I
>intend to work both digital and analog birds? Why?

When you don't have the antennas yet, look at the Maspro set (WHS32 I think)
which has polarization switching built in.

I have operated a pair of crossed yagi's for some years and had them
fixed at RHC, but sometimes performance was very poor, especially on 2M.
That may have been because of polarization mismatch at that time.
(owners of switchable systems often report that the optimal sense
varies, e.g. between the first and second half of the pass)

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen rob@knoware.nl | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

1022. Re: Ham-Space Digest V96 #158

Newsgroup: rec.radio.amateur.space
Date: 1996-05-29 00:00:00 UTC
From: py3crx@sp-gw.py2bjo.ampr.ORG
Message-ID: <9561@SP-gw.ampr.org>
Source record: 22239

Ref. 2Line data for TV-sats, I got here in the same Ham-Space one address
vy. interesting: try(telnet) oig1.gsfc.nasa.gov.
The user is OIG and the password is Goddard1.
As the guy that posted such info said(I don't remember who, sorry), its
acessible tru telnet and its possible to "read" several TLE files as text
files.
At the file geo.tle you find both TVRO and other stationary birds since
the sixties (they still there in the sky, anywere...)
Good luck - Marcus - PY3CRX@SP-GW.PY2BJO.AMPRORG - Sao Paulo - Brasil.

1023. Re: MIR & SHANNON

Newsgroup: rec.radio.amateur.space
Date: 1996-05-30 00:00:00 UTC
From: Dave Grant <dmgrant@nas.com>
Message-ID: <01bb4df6.d2568640$32d0b6c6@default>
Source record: 22240

I saw in "SpaceNews" that in mid-April the configuration settings on the bbs tnc were lost. It was estimated that the bbs (r0mir and r0mir-1) would be back up in a couple of weeks. I checked again today and still find r0mir to be down. I have not seen anything written up about it since that origninal report. I suggest checking the SpaceNews, and MIR reports on packet. I wish us all luck. I can report that during April I heard Shannon contacting stations on voice on 145.55. It was on a weekend night, about 2200 to 0100 hours Pacific time.

> walterv@nando.net (Walter Van Gieson) wrote in article
<4o9s99$slf@castle.nando.net>...
> Has anyone heard or contacted MIR and our astronaut, Shannon, on
> board.? I have listened and called using the position defined by the
> latest Keps and have heard nothing.
> --
> Walter Van Gieson AB4DQ Raleigh, NC
>
>

1024. Re: watkins-Johnson

Newsgroup: rec.radio.amateur.space
Date: 1996-05-30 00:00:00 UTC
From: bender@doemain
Message-ID: <4ojhnp$kd1@engnews1.Eng.Sun.COM>
Source record: 22241
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space,sci.electronics.equipment,sci.electronics.repair

angel vilaseca (100604.1242@CompuServe.COM) wrote:
: Looking for data about the following travelling wave tube:
: Watkins-Johnson WJ-3104
: This must be a 18 GHz model

Have you tried Watkins-Johnson? They have an office in Scotts Valley, CA,
area code 408.

mike

--

Factual quotes from Michael Savage:
(EOF)

1025. Re: TVRO KEPLERIAN DATA info ?????

Newsgroup: rec.radio.amateur.space
Date: 1996-05-30 00:00:00 UTC
From: ken.thompson@Symbios.COM
Message-ID: <ken.thompson.1290.000954CA@Symbios.COM>
Source record: 22242

>> Dear Amateur

>> I would like to ask you if there is a site somewhere in www. or internet
>> to get keplerian data for tvro sat. for Europe like
>> Astra A, Astra B,C,D,E, eutelsat 2F1,2F2,Intelsat 601 etc........
>> I receive kep.data from ARRL through the ham-space@ucsd.edu but I can not
>> locate these european tvro sats in their contents (catalog number).

>You can find them on TS Kelso's site, look in this newsgroup for details.
>(he regularly posts Shuttle and Amsat keps here, but more is available
>by FTP)

http://oigsysop.atsc.allied.com/tle/geo.htm
and
http://www.grove.net/~tkelso/NORAD/elements/tvro.txt

both are good.

1026. Re: A new "kid"on the block....

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Ds9ICw.IIs@cix.compulink.co.uk>
Source record: 22243

>Really? Will the 821 be so competitive?
>(I have not yet seen anything about it in the local amateur radio
>magazine)

Well, everyone has heaps of unsold stock.

Wait till the kenwoode 470 comes out....

1027. Re: Reference for patch antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: rtw@fuwutai.att.com
Message-ID: <4omtem$48a@nntpa.cb.att.com>
Source record: 22244
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

In article <4o55c4$edr@murrow.corp.sgi.com>, jimf@zoinks.corp.sgi.com says...
>
>I'm interested in the design of patch antennas to evaluate them as a low
profile
>alternative to crossed yagis, helicals etc for OSCAR work.
>
>I recently talked to an AMSAT rep that talked about testing the 3D birds
>antennas by using them for just that, contacting FO20 or AO13 I think.
>
>I have looked in my references and can only find passing mention to patch
>antennas and would like to know if someone can suggest a reference that goes
>into dome detal such as theory of operation and design parameters.
>
>
>Jim
>KF6AGJ
>

Check out the "Antenna Engineering Handbook" by Jasik and Johnson. One thing you want to pay attention to with any of these omnidirectional circular polarized antennas is how the CP holds up versus elevation angle.

Rob WB8WQA

1028. COMPUTER SHOW / HAMFEST - June 16, 1996 (Ohio)

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: n8jms@cars.org
Message-ID: <n8jms-3105961035440001@news.en.com>
Source record: 22245
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.swap,rec.ham-radio.swap,cle.biz,cle.forsale,cle.general,cle.internet

What:
HAMFEST - COMPUTER SHOW - ELECTRONICS FLEA MARKET

When:
June 16, 1996

Time:
8AM - 1PM

Where:
Nordonia High School, Macedonia, Ohio (Just south of Cleveland)

Join the Cuyahoga Amateur Radio Society at its 5th annual Hamfest!

This years Grand Prize:
- An Icom 2350H Dual Band Mobile!

And don't miss out on these door prizes:
- An Icom 2GXAT 2m Handheld!
- A 28.8K External Modem!
- A Handheld Scanner!

Tickets are $3.00 in advance. ($4.00 at the door.)

Inside Vendor Spaces are $11.00 each and include one admission ticket.
Additional spaces are available for $8.00. (Inside vendor setup will be on
Saturday night 6pm-9pm and Sunday morning at 6am.)

Outdoor Vendor Spaces are $4.00 each.

For reservations or info, call Rich James, N8FIL at 1-800-404-2282, visit
our WWW site at "http://www.cars.org" or send e-mail to: hamfest@cars.org

73 de N8JMS

1029. Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: bpaul@qualcomm.com
Message-ID: <bpaul-3105961031190001@wpaul-toy.qualcomm.com>
Source record: 22246

I hope to get into satellite communications soon, so I'm fantisizing the antennas at this point. After reading the ARRL antenna book, I am attracted to the idea of helical antennas for satellite work. My questions are:

From what I hear and read on the net, it seems crossed yagis are more popular than helicals, Why?

It seems that most work is done with right hand circular polarization, so wouldn't a helical be a good choice?

Thanks
-BP

Bill Paul KF6BBL San Diego,CA bpaul@qualcomm.com
Disclaimer:
The above post is the opinion of Bill Paul, not Qualcomm Inc.

1030. Re: How to determine pol. of X-yagi?

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds9uDo.4MH@pe1chl.ampr.org>
Source record: 22247

In <4ohs7t$hkr@due.unit.no> joachimp@stud.unit.no (Joachim Alexander Pihl) writes:

>Using crossed yagis (not staggered) phased with a 1/4 wavelength stub,
>how do I determine which polarisation I get? I have been trying to
>figure it out for myself, but I can't agree with myself. The ARRL
>antenna handbook wasn't much help, I'm afraid..

This is tricky business...
It is explained in The satellite Experimenter's Handbook by Martin
Davidoff (recommended for any satellite experimenter, published by ARRL),
but that also includes the following quote after a 3-page explanation
with pictures:

"The analytic procedures outlined for determining the polarization sense
of a crossed Yagi or similar array may leave your brain feeling like
it's been spin modulated. Don't worry; you're in good company - the
telecommunications engineers setting up the first satellite transatlantic
TV broadcast via TELSTAR, for example, built a link with RHCP at one end
and LHCP at the other!"
It further describes how you can build a small helix to verify what
you have concluded after a lot of figuring and twisting :-)

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1031. Re: Your methods on rs-12

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: burch@netline.net
Message-ID: <4onfem$p6k@tesla.netline.net>
Source record: 22248

Bill.White@f7.n3821.z1.fidonet.org (Bill White) wrote:

>Hello all,
> I am preparing a club lecture on the EZSATS, and I would be
>interested in the radios, antennas, software,etc. that you use
>to work rs-12 (also rs-10 and rs-15).
> I am working RS-12 from Arkansas. I have 13 states confirmed
>since 31 Dec '95. I've had some good luck with an HW-8 qrp xmtr
>(2.5 watts DC input).
> Also if you need Ark on RS-12, I'll be glad to help.
> Thanks in advance------------Bill N5XYN
>--
What equipment is needed to operate on these sats. What bands to they
support? I am very interested in getting more information on these
satellites.

Burch Akin
KE4ZQV

1032. Re: REJECTED: Ham-Space Digest V96 #158

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds9tz4.4Kn@pe1chl.ampr.org>
Source record: 22249

In <9605291432.BB00029@imggw1.us.dg.com> MAILER-DAEMON@IMGGW1.ceo.dg.COM writes:

> ----- Mail rejected by CEO. -----
>No User Waiting Mail not sent to:gary rogers@dgc.ceo

> ----- Unsent message follows -----

Isn't there someone out there who knows how to remove that user from
the mailing list? Or how to educate the "ucsd usenet gateway" not to
bounce error messages to the news group?

Is is getting annoying to have those bounced digests (sometimes including
copies of earlier bounced digests) on the newsgroup. When it really
gets out of hand it could end in a dangerous chain reaction.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

1033. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Ds9usD.4o8@pe1chl.ampr.org>
Source record: 22250

In <31AC8B9E.F8C@HBC.Honeywell.com> Carl Estey <carl.estey@HBC.Honeywell.com> writes:

[2m and 70cm band on list for possible LEO allocation]

>So, this is a call to action. We must get across to the industry and
>government participants in IWG-2A that the 144-148 MHz and 420-450 MHz
>bands cannot be considered as candidates for mobile-satellite services.

You should know that other regions have only the 144-146 and 430-440
segments allocated to amateur radio. And the latter is not even fully
available in some European countries, and there is a constant threat
of 2MHz segments being scraped off it in many other countries. So, in
a way, you can only consider yourself lucky.

The adjacent bands (that are inside the USA allocation) are very heavily
populated with commercial services over here. They do not seem to
be likely candidates for satellite operation. When those LEO services
are to be operating worldwide, the 144-148 and 420-450 bands do not seem
to be suitable candidates.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1034. United Space Alliance Web Site

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: "USA Communications"
Message-ID: <4onltf$f4q@cisu2.jsc.nasa.gov>
Source record: 22251

United Space Alliance, headquartered in Houston, is a
Rockwell/Lockheed Martin joint venture formed to conduct the Space
Flight Operations Contract for NASA. USA performs Space Shuttle launch
and landing activities at the Kennedy Space Center in Florida and
flight operations in Houston.

Our Web address is:

http://www.unitedspacealliance.com

1035. WindTrax Balloon Flight!

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: mai@iquest.net
Message-ID: <DsAIFF.16H@iquest.net>
Source record: 22252

WINDTRAX VII FLIGHT IS SATURDAY!!!

June 1, 1996 at approximately 1200 UTC (start checking about 6am Indiana time),

Launch site: 2.5miles east of Whiteland, Indiana (south of Indy about 10 miles)

Prelaunch Freqs: Check-ins: 3.871MHz, & 146.835/R locals
Nets begin at 1130UTC

Balloon Type: Kaymont 1200 Gr.

Parachute Size: 5 foot diameter custom made by KB9BSV

Flight packages;
Crossband repeater (by Paul /W9DUU)
2m rcvr to 6m & 70cm xmtrs, with voice ID & nicad pwr pack, dual half wave antennas
GPS/Packet(By Chuck/WB9IHS)
Garmin rcvr, Paccom controlled (HandiPacket) & down-linked on TEKK 446MHz xmtr.
Self contained, nicad & lithum powered, 1/4 wave xmtr antenna, Ball Corp stripline rcvr.
Stripline antenna on top of box. Audio beeper for ground retrival of packages.
ATV(by Terry/KT9V)
Two (2) B&W CCD cams, WB8ELK color video graphics downlinked on Wyman ATV xmtr
with 1/4 wave antenna. Self contained, lithum powered. CCD cams are mounted one
shooting horz., and one up, solid state switching controlled.

Flight Package Freqs;
Crossband rptr; Dn 52.525 & 444.85 MHz (VP) 50 & 100mW output Up @ 144.3MHz (VP)

GPS/PAcket: Dn 446.0 MHZ @1200 Baud packet (VP) 250mW output.

ATV: Dn 439.25 MHz (VP) 1.5 WATTS OUT!!!

All amateurs are welcome to participate, checkin, monitor feeds, etc. Pix will be posted on the following WEBSITE:

www.surf-ici.com/marc Stop by and get a birds eye view from 95,000 feet up!

For details on the WindTrax Group and the WindTrax program, contact Chuck Crist/WB9IHS via email, mai@iquest.net

1036. * Menace a nos bandes *

Newsgroup: rec.radio.amateur.space
Date: 1996-05-31 00:00:00 UTC
From: belsan@odyssee.net
Message-ID: <4omvus$9m5@pegasus.odyssee.net>
Source record: 22253
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.policy,rec.radio.amateur.space

visees sont celles qui sont les plus fortement congestionnees et utilisees. D'autres bandes qui auraient ete aussi bonnes au point de vue technique, et qui n'auraient pas nui a quiconque, ne sont pas comprises dans la liste. Il semble avoir un but politique ou personnel quelconque derriere ca, mais qu'importe la raison, ces propositions ne devront jamais devenir realite. C'est la premiere fois, de memoire, qu'un autre service serait propose pour la bande de 144 MHz. Faisons en sorte que ce soit la derniere.

Les deux bandes amateur visees consitituent les pierres angulaires de nos activites de service au public. Bien plus souvent qu'autrement, ce sont ces bandes qui servent le plus sur un site d'un sinistre ou d'une urgence quelconque, ou lors des activites de communications pour les evenement communautaires. La phonie, les donnees numeriques, mobile, fixe, meme la television, et la liste se prolonge, autant dans l'immediat que dans l'avenir. Quelle logique y a-t-il dans ces choix??

Meme apres que l'ARRL ait explique ces enjeux aupres des representants de l'industrie, on ne recut pas plus d'assurances que nos bandes seraient retirees. Meme qu'il fut repete que jusqu'a ce que leurs besoins soient satisfaits, toutes les bandes resteront sur la liste. Ceci n'est pas satisfaisant pour nous.

Alors, on vous appelle pour votre assistance pour defendre NOS bandes. Nous devons faire pression aupres des autorites americaines et canadiennes pour que ces propositions meurent dans l'oeuf. Nous devons faire valoir notre position avec une telle force, avec un tellement grand nombre de reponses que plus personne ne sera tente de recommencer une telle betise. Il ne faut pas attendre WRC-97 pour combattre cette menace, IL FAUT COMMENCER MAINTENANT.

Voici une liste d'adresses des gens impliques dans cette affaire, y compris celles des gens de l'industrie satellite (commercial) qui ont pris partie dans cette menace:

Cecily C. Holiday, International Bureau, FCC, Washington, DC 20554,
E-MAIL: choliday@fcc.gov FAX: 202-418-0748

Warren G. Richards, President, IWG-2A, Dept. of State, CIP 2529,
Washington, DC, 20520
E-MAIL: richardswg@ms6820wpoa.us-state.gov FAX: 202-647-7407

Tracey Weisler, Representant FCC, IWG-2A, International Bureau, FCC,
Washington, DC, 20554
E-MAIL: tweisler@fcc.gov FAX: 202-418-2824

Mary Kay Williams, Final Analysis Inc, 7500 Greenway Center, Suite 1240, Greenbelt, MD, 20770 FAX 301-474-3228

Il y aurait aussi Industrie Canada, qui pourrait etre interesse. Ou votre depute federal. Envoyez-leur vos commentaires,

en autant qu'ils sont polis. Si vous etes capables de faire vos arguments d'une facon intelligente et sans recourir aux insultes et aux menaces, c'est d'autant plus efficace pour attirer l'attention. L'objectif, c'est d'eduquer et de persuader, et non d'intimider, car les faits sont de notre cote.

Les preparatifs pour WRC-97 peuvent etre consultes sur le site WWW de la conference: http://www.fcc.gov/ib/wrc97/

Ecrivez maintenant. C'est important.

[d'apres une serie de bulletins paquet de l'ARRL, et un editorial publie dans QST, Juillet 1996]

73, Michel VE2TRV @ VE2FKB.#MTL.PQ.CAN.NOAM

Francois Va2bbf@ve2cev

1037. Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-01 00:00:00 UTC
From: tskloss@acs.tamu.edu
Message-ID: <tskloss-0106961204070001@ppp1b-03.rns.tamu.edu>
Source record: 22254

Despite the VHF/UHF discussion which has taken prevalence on the rec.amateur.* newsgroups, has anyone been following the maiden Ariane 5 launch? I read that it was scheduled to lift off Thursday (5/30/96), or is it one week later?

Just curious. I understand that P3D is supposed to ride one of these sometime soon. How is its development going?

-tim skloss kc5dna tskloss@acs.tamu.edu

1038. KO-23 New User

Newsgroup: rec.radio.amateur.space
Date: 1996-06-01 00:00:00 UTC
From: efrom@lancnews.infi.net
Message-ID: <4oq0vl$bue@nw101.infi.net>
Source record: 22255

I'm trying to work KO-23 and K0-25. My setup is two Crushcraft
vertical beams with
claimed 10 dbi gain, (4 elements 2 meters and 6 elements on 440). SSB
preamp, 100'
RG8U, downconverter into an FT-990. Kenwood 251A up using RG8X. .
PK-96 using
Wisp. I have trees. I can hear KO-23 and the PK-96 DCD light flickers.
But I get no data
either through Wisp or my packet program (Packratt for Windows). Is
the signal just too
weak and I really need CP antennas pointed with a satellite rotor? Or
should I at least be
able to copy data? Or could it be the trees?. Wisp seems to be working
well.
I thank you, my Mother thanks you, for any help.

1039. Netscaped

Newsgroup: rec.radio.amateur.space
Date: 1996-06-01 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <31b031c4.1766203@news.innotts.co.uk>
Source record: 22256

These Pages have now been "Netscaped" for
your added delight, but can still be used by any WWW
browser:

http://innotts.co.uk/~asperges/

Updated for June 96: 10,300 visitors this year so far and still
counting....

73 de Jeremy G4NJH

1040. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-01 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.SOL.3.93.960601141238.1537D-100000@spork.callamer.com>
Source record: 22257

Hi Bill....crossed yagis are a good choice simply because they can be reversed in circularity with a simple relay. Helical can not. If you confine your work to higher elevations where the circularity almost can be guaranteed to be right hand, helical work just fine! Cliff W6HDO/K7RR

On Fri, 31 May 1996, Bill Paul wrote:

> I hope to get into satellite communications soon, so I'm fantisizing the
> antennas at this point. After reading the ARRL antenna book, I am
> attracted to the idea of helical antennas for satellite work. My questions
> are:
>
> From what I hear and read on the net, it seems crossed yagis are more
> popular than helicals, Why?
>
> It seems that most work is done with right hand circular polarization, so
> wouldn't a helical be a good choice?
>
> Thanks
> -BP
>
> --
> Bill Paul KF6BBL San Diego,CA bpaul@qualcomm.com
> Disclaimer:
> The above post is the opinion of Bill Paul, not Qualcomm Inc.
> --
>
>

1041. Anything new on the YEASU FT746R?????

Newsgroup: rec.radio.amateur.space
Date: 1996-06-02 00:00:00 UTC
From: mfp@aros.net
Message-ID: <4oquqq$1nv@news.aros.net>
Source record: 22258

Heard some rumors...anyone heard anything else?????

1042. Re: MIR & SHANNON

Newsgroup: rec.radio.amateur.space
Date: 1996-06-02 00:00:00 UTC
From: mikekb9lwu@aol.com
Message-ID: <4orpb5$q4k@newsbf02.news.aol.com>
Source record: 22259

Yes I have head shannon on 145.550 last week in the early am around
0830CST
the rst was s-5-s7 she is working stations....
73's
Mike

1043. SAVE THE 144 & 440 HAM BANDS!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-02 00:00:00 UTC
From: David Mclean <dmclean@dfw.net>
Message-ID: <31B1B252.3B9D@dfw.net>
Source record: 22260
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

--
David Mclean
From The Land of The Hams
KC5NNV is Clear!

[Dfw-Hams]
http://www.dfw.net/~dmclean

*****ARRL NEW ENGLAND DIVISION SPECIAL BULLETIN 96-9A*****

QST to all Amateurs

May, 1996

Strafford, VT

NEW ENGLAND DIVISION DIRECTOR NEW ENGLAND DIVISION VICE DIRECTOR
Bill Burden WB1BRE Warren Rothberg WB1HBB
wb1bre@arrl.org wb1hbb@arrl.org

********** 2 Meter AND 70 cm BANDS THREATENED **********

THIS IS NO JOKE!! ARRL HAS LEARNED THAT IN PREPARATION FOR THE
WORLD RADIO CONFERENCE IN 1997, REPRESENTATIVES OF THE LOW-EARTH-ORBIT
(LEO) INDUSTRY PROPOSED A LIST OF CANDIDATE FREQUENCY BANDS FOR
REALLOCATION TO, AND EXCLUSIVE USE OF THE MOBILE SATELLITE SERVICE. THIS
LIST INCLUDES 144- 148 MHZ (THE CURRENT AMATEUR 2 M BAND) AND 420-450 MHZ (THE
CURRENT AMATEUR 70 CM BAND)!
IF THIS EFFORT WERE TO BE SUCCESSFUL, IT WOULD MEAN THE END OF
AMATEUR OPERATIONS ON THESE TWO MOST HEAVILY UTILIZED AMATEUR VHF/UHF
BANDS!

I have included the text of Dave Sumner's upcoming editorial for
July QST in this bulletin. ARRL, as the principal representative of
Amateur Radio in Washington, is actively pursuing this issue as this
bulletin is being written. Dave's call to action is serious!! We could lose these bands if
we do not take action now!!
Club presidents and newsletter editors: please make this
information available to your membership as soon as possible.

Follows the text of Dave Sumner's July QST editorial:

WRITE NOW!!!!

Get out a pen and paper, or boot up your computer. There's work to be done! Your help is needed to defend two meters and 70 cm. Yes, that's right -- the two most popular and crowded amateur VHF/UHF bands! But don't panic, and don't "go ballistic."
Here's what's happening, and what you can do about it.
The United States is preparing for the 1997 ITU World Radiocommunication Conference, WRC-97. In the past, the public has been able to participate in the preparations for such conferences by responding to FCC Notices of Inquiry. In March, the FCC announced a streamlining of its International Bureau's preparatory processes for WRCs. Under the new scheme, the NOIs have been eliminated in favor of increased emphasis on WRC Advisory Committees.
For WRC-97, a series of Informal Working Groups (IWGs) of the Advisory Committee has been created to address specific agenda items. The output of each IWG will go directly to a joint FCC-NTIA-Department of State Steering Committee of the Advisory Committee. There, draft proposals as received from the IWGs will be reviewed and forwarded to the FCC for possible release as preliminary U.S. proposals for public comment.
In announcing the streamlined WRC preparatory process, the FCC tried to reassure those who might be concerned about reduced opportunities for public participation: "Interested parties should note that input to the Advisory Committee may be sent at any time directly to the Chair of the WRC-97 Advisory Committee; the Chairs of the Advisory Committee's Informal Working Groups; Cecily C. Holiday, the FCC's federal officer of the WRC-97 Advisory Committee,on C. Ladson, the alternate federal officer."
Hold that thought while we shift gears to the substance of the issue.
One of the WRC-97 agenda items includes consideration of possible additional frequency allocations for the mobile- satellite service. So-called "little LEOs," low-earth orbit satellites below 1 GHz, already have allocations. Their proponents claim these are inadequate and are trying for more. The needs of little LEOs are being addressed in IWG-2A, chaired by Warren Richards of the Department of State. The ARRL technical relations staff participates in IWG-2A to represent Amateur Radio interests.
At the May 7 IWG-2A meeting, an industry representative proposed a list of "candidate bands" for little LEOs. The list includes a number of bands that would negatively impact existing services, and does not include others that would be technically
more feasible but to which strong objection from incumbents could be expected -- the point being
that some political, rather than purely technical, judgment already has influenced the list.
Incredibly, 144-148 and 420-450 MHz were included on the list! This is the first time in memory that another service has been proposed for

the two-meter amateur band. We must make sure it is also the last time. We do not need to explain to ARRL members the extensive use that is made of these bands by amateurs. The two bands provide the backbone of our local public service communications effort. Voice and data, mobile and fixed, even television -- the list of present amateur uses is a long one, and of future uses is even longer. Both are already used for satellite services and for moonbounce and extended-range terrestrial operations requiring extremely sensitive receivers and high levels of effective radiated power.

Apparently we did need to explain all this to the little LEO industry representatives, so we did just that -- both at the meeting and iup letter on May 15. We also explained that we had to regard the matter as extremely serious. No one with the slightest background in radiocommunication could possibly believe that a mobile- satellite service could be introduced into either band without disrupting existing and future amateur operations. Therefore, we said, if we did not receive assurance that they would be taken off the list of candidate bands by the deadline for this issue of QST, we would have no choice but to bring the matter to the attention of the entire membership.

The response we received was unsatisfactory. In effect, we were told the little LEO industry would consider our views but that until their spectrum needs are satisfied, all bands must remain under consideration.

So, this is a call to action. We must get across to the industry and government participants in IWG-2A that the 144- 148 MHz and 420-450 MHz bands cannot be considered as candidates for mobile-satellite services. We need to drive the point home so forcefully, with so many grassroots responses, that no one is ever tempted to try this again.

Which brings us back to that invitation for "interested parties" to send input "at any time." There's no time like the present! Here are the key addresses, including those of the mobile-satellite industry folks who seem to have started the ruckus:

Cecily C. Holiday, International Bureau, FCC, Washington, DC 20554; choliday@fcc.gov; FAX (202) 418-0748.
Warren G. Richards, Chair, IWG-2A, Department of State, CIP 2529, Washington, DC 20520; richardswg@ms6820wpoa.us-state.gov; FAX (202) 647-7407.
Tracey Weisler, FCC Rep., IWG-2A, International Bureau, FCC, Washington, DC 20554; tweisler@fcc.gov; FAX (202) 418-2824.
Mary Kay Williams, Final Analysis, Inc., 7500 Greenway Center, Ste. 1240, Greenbelt, MD 20770; FAX (301) 474-3228.
Leslie Taylor, LTA, 6800 Carlynn Court, Bethesda, MD 20817; ltaylor@lta.com; FAX (301) 229-3148.

Do comment. But be civil. Don't abuse people who are simply doing their jobs. We have to get across that casting covetous eyes on amateur bands is counterproductive, and contrary to the public interest. To accomplish this we need a lot of comments, including yours. But remember that the objective is to educate and persuade, not to intimidate. We don't need to. The facts are on our side.

To monitor the FCC's ongoing WRC-97 preparations, visit its WRC-97
home page at: http://www.fcc.gov/ib/wrc97/.
Write now. Right now! -- David Sumner, K1ZZ

Distribution:

To: INTERNET:ARRL-NEDIV-LIST@NETCOM.COM INTERNET:BARC-LIST@NETCOM.COM
INTERNET:EMA-ARRL@NETCOM.COM INTERNET:FIELDORG-L@NETCOM.COM
INTERNET:W1AW-LIST@NETCOM.COM

E-mail from: Don KA0JLF & Cris N0XZB, 29-May-1996

!^NavFont01F0007RGHHd77C611

1044. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-02 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DsE1Cw.1n0@pe1chl.ampr.org>
Source record: 22261

In <tskloss-0106961204070001@ppp1b-03.rns.tamu.edu> tskloss@acs.tamu.edu (Tim Skloss) writes:

>Despite the VHF/UHF discussion which has taken prevalence on the
>rec.amateur.* newsgroups, has anyone been following the maiden Ariane 5
>launch? I read that it was scheduled to lift off Thursday (5/30/96), or
>is it one week later?

>Just curious. I understand that P3D is supposed to ride one of these
>sometime soon. How is its development going?

I have not closely followed it, but the last date I heard was June 4th.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

1045. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4otrnt$8ql@blackbird.afit.af.mil>
Source record: 22262

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1046. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: dh1saj@aol.com
Message-ID: <4oubkj$m10@newsbf02.news.aol.com>
Source record: 22263

tskloss@acs.tamu.edu (Tim Skloss) wrote:

>Thema: Ariane 5 launch?
>
>Despite the VHF/UHF discussion which has taken prevalence on the
>rec.amateur.* newsgroups, has anyone been following the maiden Ariane 5
>launch? I read that it was scheduled to lift off Thursday (5/30/96), or
>is it one week later?
>
>Just curious. I understand that P3D is supposed to ride one of these
>sometime soon. How is its development going?
>

Actual schedule for first Ariane 5 liftoff is TUE, 04.June. 1996. But who knows what finally happens.....
P3D is to ride on SECOND flight of Ariane 5 - OR on any Ariane 4 flight BEFORE July 1997, if it cannot go with Ariane 5 Flight 2 due to any reason.
It is a signed contract that P3D will have a lift in any case, latest mid 1997.
However, supposed flight with A-5 No.2 will not be earlier than Sep. 96.

Joe

1047. NASA select broadcast on european satellites?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: Erik Finskas OH2LAK <finskase@ee.port.ac.uk>
Message-ID: <31B30D10.4EC5@ee.port.ac.uk>
Source record: 22264

I've heard that NASA select transmissions from shuttle launches/missions
are broadcasted via tv-satellites in US. Do anyone know is there such
transmissions in
european tv-satellites??

Erik
--
Erik Finskas M1AAJ & OH2LAK
Email Finskase@ee.port.ac.uk
Lakki@clinet.fi
University of Portsmouth, UK
Department of Electric and Electronic Engineering

1048. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4ove7p$8mk@tilde.csc.ti.com>
Source record: 22265

In article <Ds9usD.4o8@pe1chl.ampr.org>, rob@pe1chl.ampr.org (Rob Janssen) says:
>
>In <31AC8B9E.F8C@HBC.Honeywell.com> Carl Estey <carl.estey@HBC.Honeywell.com> writes:
>
>[2m and 70cm band on list for possible LEO allocation]
>
>
>You should know that other regions have only the 144-146 and 430-440
>segments allocated to amateur radio. And the latter is not even fully
>available in some European countries, and there is a constant threat
>of 2MHz segments being scraped off it in many other countries. So, in
>a way, you can only consider yourself lucky.
>
~~~~~~
Rob, those countries that allow other than Amateur Radio useage
of any WARC allocations are not complying with the terms of the
agreement. This is another issue, although related and also
important.

Ken Durham K5MBV mbv2ti.com
~~~~~~

1049. Re: KO-23 New User

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DsFw9p.593@pe1chl.ampr.org>
Source record: 22266

In <4oq0vl$bue@nw101.infi.net> efrom@lancnews.infi.net (Erik) writes:

>I'm trying to work KO-23 and K0-25. My setup is two Crushcraft
>vertical beams with
>claimed 10 dbi gain, (4 elements 2 meters and 6 elements on 440). SSB
>preamp, 100'
>RG8U, downconverter into an FT-990. Kenwood 251A up using RG8X. .
>PK-96 using
>Wisp. I have trees. I can hear KO-23 and the PK-96 DCD light flickers.
>But I get no data
>either through Wisp or my packet program (Packratt for Windows). Is
>the signal just too
>weak and I really need CP antennas pointed with a satellite rotor? Or
>should I at least be
>able to copy data? Or could it be the trees?. Wisp seems to be working
>well.
>I thank you, my Mother thanks you, for any help.

The antennas are smallish, but it should be possible to do something.
Elevation control is of course required, or else the antennas should
be elevated about half the -3dB angle.
You should have a strong signal. S-meter reading is probably bogus
with a converter inline, but I would say it should be S-7 or above.
Also the connection of the TNC to the transceivers should be OK for
9600 baud. Verify this by connecting the local node or bbs, or another
user. You should be able to transfer files in both directions (at
PACLEN 256) without difficulty.

When my system was still working I used 2*15 el crossed yagi on 70cm
and had a steady signal most of the time.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1050. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: Larry Ledlow <LLEDLOW@mailgw.sanders.lockheed.com>
Message-ID: <31B39E6D.7A29@mailgw.sanders.lockheed.com>
Source record: 22267

Bill Paul wrote:
>
> From what I hear and read on the net, it seems crossed yagis are more
> popular than helicals, Why?
>

You can't change polarization on a helical like you can crossed
yagis. If you're working in the sidelobes of a circular-polarized
downlink, they may have opposite polarization! OSCAR 10 was a
real pain sometimes without a polarity switch, because the antenna
was not always pointed geocentrically.

73

NA5E

--

Larry L. Ledlow, Jr. lledlow@mailgw.sanders.lockheed.com
Principal Systems Engineer 1-603-885-3287 voice
SSD Communications Systems 1-603-885-7149 fax
Sanders - A Lockheed Martin Co. "Make it so!"

1051. NORAD Two-Line Orbital Element Sets (TLE818)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4ovq90$cbt@blackbird.afit.af.mil>
Source record: 22268

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #818 -
Alouette 1
1 00424U 62049A 96154.88586327 .00000034 00000-0 28924-4 0 2004
2 00424 80.4508 297.8476 0024432 66.7184 293.6528 13.67869076680380
ATS 1
1 02608U 66110A 96147.94477780 -.00000352 00000-0 10000-3 0 9695
2 02608 14.6153 353.0624 0010169 73.6366 286.4527 1.00346266 24658
ATS 3
1 03029U 67111A 96147.33922672 -.00000112 00000-0 10000-3 0 5019
2 03029 14.9129 0.0393 0010161 277.7387 343.1377 1.00273141104548
Starlette
1 07646U 75010A 96151.83518440 -.00000100 00000-0 33360-4 0 9734
2 07646 49.8242 217.1865 0205503 173.1014 187.2791 13.82191079 76566
LAGEOS
1 08820U 76039A 96152.31869510 .00000025 00000-0 10000-3 0 1970
2 08820 109.8529 20.2371 0043694 132.5510 227.9050 6.38664758212757
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96150.41626382 .00000070 00000-0 10000-3 0 6805
2 10061 12.3364 37.3178 0009978 138.2168 47.9291 1.00255647 14254
IUE
1 10637U 78012A 96146.70019288 -.00000205 00000-0 10000-3 0 2542
2 10637 35.7682 83.5064 1361412 56.1394 317.7933 1.00245172 19715
GPS BI-01
1 10684U 78020A 96153.64401905 -.00000027 00000-0 10000-3 0 4505
2 10684 64.9728 24.3509 0058961 162.7269 197.5227 1.98069497119100

```
GPS BI-02
1 10893U 78047A 96154.42483722 -.00000001 00000-0 10000-3 0 2465
2 10893 63.1684 261.4658 0231607 15.3159 345.3978 2.01627615132517
GOES 3
1 10953U 78062A 96148.42160838 -.00000127 00000-0 10000-3 0 6656
2 10953 11.3271 40.1986 0002997 333.4477 282.3538 1.00273726 18841
SeaSat 1
1 10967U 78064A 96153.57384603 -.00000084 00000-0 16834-4 0 4903
2 10967 107.9918 142.4390 0001385 251.1536 108.9451 14.38106602939205
GPS BI-03
1 11054U 78093A 96154.50435150 .00000000 00000-0 10000-3 0 4096
2 11054 62.8655 260.5723 0046609 180.7912 179.2205 1.93505133128370
Nimbus 7
1 11080U 78098A 96152.14086780 -.00000143 00000-0 -91562-4 0 5903
2 11080 98.9459 15.2147 0009592 17.1823 342.9658 13.83693501888812
GPS BI-04
1 11141U 78112A 96153.78002399 -.00000029 00000-0 10000-3 0 468
2 11141 64.9933 26.7516 0050104 28.4144 331.9378 1.92894662 17586
GPS BI-05
1 11690U 80011A 96152.89498771 -.00000026 00000-0 10000-3 0 289
2 11690 65.3097 25.8410 0143966 189.4383 170.3576 2.00572524133872
GPS BI-06
1 11783U 80032A 96154.60706207 .00000008 00000-0 10000-3 0 1462
2 11783 62.3072 254.1480 0226875 29.6184 331.6806 2.03456791118538
GOES 5
1 12472U 81049A 96144.81125862 .00000022 00000-0 10000-3 0 9331
2 12472 8.1373 50.4407 0006179 40.3912 319.5296 1.00213733 12853
Cosmos 1383
1 13301U 82066A 96152.87030270 .00000005 00000-0 -10972-4 0 4983
2 13301 82.9316 145.7651 0026284 287.9122 71.9164 13.68074482695147
LandSat 4
1 13367U 82072A 96154.19709778 .00000268 00000-0 69145-4 0 9256
2 13367 98.0738 205.5682 0006863 179.7985 180.3218 14.57178382738359
DMSP B5D2-1
1 13736U 82118A 96154.55947179 .00000025 00000-0 28740-4 0 186
2 13736 98.6245 343.1821 0009774 69.9015 290.3215 14.25787735698986
IRAS
1 13777U 83004A 96155.05973758 -.00000261 00000-0 -14982-3 0 3341
2 13777 98.9671 340.8610 0013178 135.5822 224.6400 13.99249214351398
Cosmos 1447
1 13916U 83021A 96153.63936221 .00000002 00000-0 -13560-4 0 5943
2 13916 82.9457 202.5348 0036976 193.2905 166.7280 13.74339870661605
TDRS 1
1 13969U 83026B 96141.48220520 -.00000295 00000-0 10000-3 0 5909
2 13969 8.9493 43.9598 0003274 358.0528 320.1481 1.00407933 21108
GOES 6
1 14050U 83041A 96149.37920499 -.00000248 00000-0 10000-3 0 5162
2 14050 6.9799 53.8114 0003770 18.1049 234.9261 1.00258511105998
OSCAR 10
1 14129U 83058B 96146.12823962 -.00000065 00000-0 10000-3 0 4272
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2 14129 26.1931 207.9775 6001544 18.2491 356.4172 2.05880352 69391
LandSat 5
1 14780U 84021A 96153.21945536 .00000002 00000-0 10784-4 0 4759
2 14780 98.3323 211.0291 0002486 3.4693 356.6522 14.57052906651607
UoSat 2
1 14781U 84021B 96152.04139210 .00000059 00000-0 17707-4 0 8875
2 14781 97.7994 143.5306 0012163 140.1089 220.1014 14.69455293655134
GPS BI-09
1 15039U 84059A 96151.05221340 -.00000032 00000-0 10000-3 0 4156
2 15039 64.6443 21.1484 0082930 19.2644 341.1138 1.92302548 87083
Cosmos 1574
1 15055U 84062A 96155.26657603 .00000012 00000-0 -37987-5 0 7954
2 15055 82.9543 256.1964 0028960 22.0995 338.1400 13.73635002599073
GPS BI-10
1 15271U 84097A 96154.49809018 .00000007 00000-0 10000-3 0 1621
2 15271 62.0071 254.7352 0151703 358.8216 1.1924 2.00612815 84972
Cosmos 1602
1 15331U 84105A 96154.22507502 .00000126 00000-0 11981-4 0 4784
2 15331 82.5324 127.0513 0020737 2.8031 357.3298 14.84754458630759
NOAA 9
1 15427U 84123A 96154.84225934 .00000046 00000-0 47889-4 0 7177
2 15427 98.9511 219.7606 0015300 358.6124 1.5002 14.13783878591602
GPS BI-11
1 16129U 85093A 96148.69820375 -.00000048 00000-0 10000-3 0 7256
2 16129 65.3178 24.8701 0157256 84.4317 277.4163 1.89368035 21530
Mir
1 16609U 86017A 96154.84461659 .00001737 00000-0 29215-4 0 5360
2 16609 51.6493 195.6986 0005529 37.9186 322.2165 15.58131115587711
SPOT 1
1 16613U 86019A 96152.23602976 .00000089 00000-0 62356-4 0 9431
2 16613 98.7301 220.7303 0001556 22.9761 337.1485 14.20018159217909
Cosmos 1766
1 16881U 86055A 96155.16349208 .00000178 00000-0 18495-4 0 3932
2 16881 82.5200 183.8936 0021102 26.9806 333.2501 14.83735464531762
EGP
1 16908U 86061A 96153.91313804 -.00000083 00000-0 10000-3 0 906
2 16908 50.0104 43.9627 0011439 335.2655 24.7623 12.44414332114507
NOAA 10
1 16969U 86073A 96154.87602628 .00000063 00000-0 45084-4 0 6439
2 16969 98.5240 152.3541 0014329 38.5888 321.6316 14.24985707504560
MOS-1
1 17527U 87018A 96154.22266144 -.00000043 00000-0 00000+0 0 4204
2 17527 98.9406 216.5615 0020851 7.3384 352.8076 14.00399193472897
GOES 7
1 17561U 87022A 96152.26413749 -.00000156 00000-0 10000-3 0 9209
2 17561 3.0292 69.6058 0005495 2.6720 175.4238 1.00357044 17138
Kvant-1
1 17845U 87030A 96155.03702524 .00012680 00000-0 17131-3 0 6464
2 17845 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298521917
DMSP B5D2-3
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1 18123U 87053A 96154.53274088 -.00000001 00000-0 22114-4 0 4586
2 18123 98.7717 345.0749 0013568 300.2814 59.7017 14.15443107462426
RS-10/11
1 18129U 87054A 96154.10460323 .00000040 00000-0 26903-4 0 2192
2 18129 82.9263 159.6880 0010789 189.9953 170.0988 13.72366117448106
Meteor 2-16
1 18312U 87068A 96153.63320226 .00000053 00000-0 34766-4 0 4849
2 18312 82.5566 4.4247 0010850 266.9229 93.0685 13.84079108444026
Meteor 2-17
1 18820U 88005A 96154.22893003 .00000049 00000-0 30602-4 0 9518
2 18820 82.5419 59.0075 0016596 334.8402 25.1952 13.84757010421453
DMSP B5D2-4
1 18822U 88006A 96155.05412402 .00000017 00000-0 25573-4 0 2680
2 18822 98.3847 347.7898 0007179 50.1392 310.0415 14.23191569432567
Glonass 34
1 19163U 88043A 96153.10229422 -.00000005 00000-0 10000-3 0 833
2 19163 65.2529 86.3815 0008625 158.6428 201.3715 2.13102194 61893
Glonass 36
1 19165U 88043C 96155.03633590 .00000001 00000-0 10000-3 0 4899
2 19165 65.2333 86.2822 0001233 18.7032 341.2817 2.13101790 62552
METEOSAT 3
1 19215U 88051A 96147.90227339 -.00000072 00000-0 10000-3 0 2618
2 19215 3.2258 67.8383 0001994 129.3183 230.3886 0.96947597 16974
AO-13
1 19216U 88051B 96152.98251453 .00000385 00000-0 35542-3 0 2116
2 19216 57.2623 113.6656 7419498 40.9719 355.4109 2.09803600 29507
OKEAN 1
1 19274U 88056A 96153.46158041 .00000101 00000-0 95313-5 0 936
2 19274 82.5119 286.3088 0019121 170.9823 189.1739 14.82484345427048
Meteor 3-2
1 19336U 88064A 96152.60151806 .00000051 00000-0 10000-3 0 4858
2 19336 82.5388 178.1581 0016280 282.4718 77.4542 13.16977485377296
Glonass 39
1 19503U 88085C 96153.65837495 -.00000027 00000-0 10000-3 0 3794
2 19503 65.5851 325.2454 0004728 158.0899 201.9325 2.13101740 60014
NOAA 11
1 19531U 88089A 96154.78870169 .00000026 00000-0 39292-4 0 5299
2 19531 99.1896 172.5322 0010885 286.3841 73.6136 14.13093695396419
TDRS 2
1 19548U 88091B 96148.87823587 -.00000182 00000-0 10000-3 0 2088
2 19548 2.4558 72.2503 0000826 48.7272 165.9697 1.00265711 15325
Glonass 40
1 19749U 89001A 96152.75738750 -.00000007 00000-0 10000-3 0 5991
2 19749 65.2007 85.9135 0007771 260.4541 99.4440 2.13101616 57505
Glonass 41
1 19750U 89001B 96154.68955798 -.00000000 00000-0 10000-3 0 5038
2 19750 65.2236 85.9188 0007697 229.2332 130.6889 2.13101733 57568
GPS BII-01
1 19802U 89013A 96154.18515979 .00000018 00000-0 10000-3 0 2379
2 19802 55.3232 111.2396 0021128 153.0527 207.0147 2.00576482 53410
```

```
Akebono
1 19822U 89016A 96155.05269208 .00003864 00000-0 21788-3 0 7330
2 19822 75.0630 132.1099 3744406 117.0487 285.9088 7.91637185165577
Meteor 2-18
1 19851U 89018A 96146.87534430 .00000025 00000-0 86447-5 0 4817
2 19851 82.5186 298.8655 0015605 42.0747 318.1612 13.84411439365745
MOP-1
1 19876U 89020B 96147.85768171 -.00000048 00000-0 10000-3 0 1999
2 19876 1.9461 71.1947 0020532 284.9932 74.2426 0.97109087 6419
TDRS 3
1 19883U 89021B 96152.46716902 -.00000262 00000-0 10000-3 0 2175
2 19883 0.0274 17.3010 0002541 101.1592 257.9607 1.00268326198953
GPS BII-02
1 20061U 89044A 96151.53635083 -.00000048 00000-0 10000-3 0 2225
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2 20302 53.2502 226.8404 0021583 184.5310 175.5511 2.00565452 48537
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GOES 8
1 23051U 94022A 96152.19650985 -.00000250 00000-0 00000+0 0 5357
2 23051 0.0166 256.7866 0003177 230.0982 118.2300 1.00276407 15196
MSTI 2
1 23101U 94028A 96154.21794768 .00002959 00000-0 47371-4 0 3196
2 23101 97.0832 347.8869 0012075 25.9136 334.2718 15.53860287116971
STRV-1A
1 23125U 94034B 96154.61767290 .00000920 00000-0 26304-3 0 2796
2 23125 7.0894 246.3948 7253794 48.2499 354.0209 2.32000696 15784
STRV-1B
1 23126U 94034C 96146.08521728 .00000587 00000-0 10000-3 0 2495
2 23126 7.0920 250.2957 7262167 41.3032 355.0340 2.31669629 15626
Nadezhda 4
1 23179U 94041A 96152.23948741 .00000042 00000-0 27393-4 0 1931
2 23179 82.9439 249.1459 0036125 168.5533 191.6456 13.75681200 94469
Glonass 65
1 23203U 94050A 96154.25603353 .00000080 00000-0 00000+0 0 2912
2 23203 64.7739 204.6180 0006752 158.9440 201.1757 2.13102313 14082
Glonass 66
1 23204U 94050B 96154.02047573 .00000082 00000-0 00000+0 0 3175
2 23204 64.7612 204.6498 0015040 342.2884 17.7513 2.13102708 14073
Glonass 67
1 23205U 94050C 96153.43389359 .00000085 00000-0 00000+0 0 2926
2 23205 64.7672 204.6598 0002781 284.8222 75.2393 2.13102648 14063
DMSP B5D2-7
1 23233U 94057A 96154.70277416 .00000083 00000-0 68183-4 0 7974
2 23233 98.8277 213.6834 0011628 218.7764 141.2571 14.12709309 90787
OKEAN 1-7
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1 23317U 94066A 96154.23662415 .00000143 00000-0 18244-4 0 1572
2 23317 82.5432 72.7844 0027042 125.6988 234.6743 14.74021823 88331
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1 23327U 94069A 96152.62244299 -.00000100 00000-0 00000+0 0 1618
2 23327 0.1061 191.5376 0004521 275.9123 82.3606 1.00274979 5830
RESURS 1-3
1 23342U 94074A 96155.05555696 .00000047 00000-0 15829-4 0 4989
2 23342 97.9679 212.4500 0001774 63.2481 296.8907 14.69838971 84739
Glonass 68
1 23396U 94076A 96153.74661939 -.00000005 00000-0 00000+0 0 2648
2 23396 65.0720 84.8036 0029086 193.5021 166.4104 2.13102719 11910
Glonass 69
1 23397U 94076B 96154.39182693 -.00000003 00000-0 00000+0 0 2600
2 23397 65.0641 84.7907 0013982 319.1493 40.7373 2.13102236 11923
Glonass 70
1 23398U 94076C 96154.27555898 -.00000003 00000-0 00000+0 0 2777
2 23398 65.0538 84.7711 0004420 294.9487 64.9931 2.13102251 11938
LUCH (Altair-2)
1 23426U 94082A 96155.01671713 -.00000269 00000-0 00000+0 0 3230
2 23426 1.4716 268.0974 0003655 170.8763 273.3452 1.00261176 5369
RS-15
1 23439U 94085A 96154.19808778 -.00000039 00000-0 10000-3 0 1371
2 23439 64.8212 47.3241 0161964 201.7428 157.6567 11.27525203 59096
NOAA 14
1 23455U 94089A 96154.82461772 .00000043 00000-0 48121-4 0 6232
2 23455 98.9441 100.3456 0008640 287.9110 72.1125 14.11590814 73429
Glonass 71
1 23511U 95009A 96154.70405435 -.00000032 00000-0 00000+0 0 1917
2 23511 64.6716 324.6762 0005466 204.0830 155.8873 2.13103604 9660
Glonass 72
1 23512U 95009B 96153.41501472 -.00000028 00000-0 00000+0 0 2054
2 23512 64.6580 324.7300 0005517 334.8599 25.1137 2.13101985 9639
Glonass 73
1 23513U 95009C 96154.17662361 -.00000031 00000-0 00000+0 0 2160
2 23513 64.6682 324.7174 0012330 195.4314 164.5314 2.13103136 9656
GMS 5
1 23522U 95011B 96134.54990383 -.00000305 00000-0 10000-3 0 1225
2 23522 0.4001 332.1090 0002081 155.5536 81.5508 1.00260683 4108
DMSP B5D2-8
1 23533U 95015A 96154.91741022 .00000001 00000-0 24304-4 0 5339
2 23533 98.8416 157.5661 0008366 92.3503 267.8629 14.12740005 61618
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1 23547U 95017C 96153.66030823 .00000124 00000-0 52046-4 0 1108
2 23547 69.9785 206.0991 0014248 208.1820 151.8544 14.45532972 61427
OFEQ 3
1 23549U 95018A 96155.06718765 .00016810 00000-0 42640-3 0 2552
2 23549 143.3649 141.9914 0225672 18.9950 341.9088 15.15271384 64224
GFZ-1
1 23558U 86017JE 96152.26723372 .00001682 00000-0 24752-4 0 1308
2 23558 51.6490 198.7352 0006082 155.0196 205.1090 15.62157682587367
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1 23579U 95024A 96152.79222887 .00001134 00000-0 21379-4 0 3555
2 23579 51.6482 205.9928 0005183 31.2760 328.8441 15.58123571 58882
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1 23581U 95025A 96154.58343890 .00000084 00000-0 00000+0 0 1954
2 23581 0.1794 83.5116 0000970 251.8113 350.6883 1.00277110 3761
Helios 1A
1 23605U 95033A 96154.72198527 .00000049 00000-0 18438-4 0 2222
2 23605 98.1209 90.6359 0001499 57.8761 302.2567 14.63841158 48431
UPM SAT 1
1 23606U 95033B 96154.86004593 .00000106 00000-0 27351-4 0 1718
2 23606 98.1010 91.7850 0006316 230.9602 129.1041 14.67248944 48612
CERISE
1 23607U 95033C 96146.87308943 .00000061 00000-0 19565-4 0 916
2 23607 98.1028 83.7715 0005109 262.1353 97.9271 14.66943885 47466
TDRS 6
1 23613U 95035B 96152.52800041 .00000031 00000-0 10000-3 0 1732
2 23613 0.6307 83.3966 0001769 240.0378 298.9228 1.00023030 3210
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1 23620U 95037A 96154.43002941 .00000079 00000-0 00000+0 0 1431
2 23620 64.8263 204.4712 0018426 172.0612 188.0615 2.13102903 6695
Glonass 75
1 23621U 95037B 96153.19942446 .00000086 00000-0 00000+0 0 1457
2 23621 64.8391 204.5160 0018391 182.5813 177.5040 2.13102270 6665
Glonass 76
1 23622U 95037C 96152.31918199 .00000087 00000-0 00000+0 0 1461
2 23622 64.8280 204.5455 0036986 167.1779 193.0080 2.13102619 6642
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2 23632 70.7480 249.6500 8423404 321.6830 329.1020 0.26377800 806
SICH-1
1 23657U 95046A 96152.22223288 .00000064 00000-0 62704-5 0 826
2 23657 82.5346 216.1720 0029239 102.3831 258.0648 14.73475207 40338
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1 23710U 95059A 96154.01568787 -.00000044 00000-0 00000+0 0 1426
2 23710 98.5688 160.9152 0001026 87.8622 272.0744 14.29972402 30071
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1 23734U 95068A 96154.31386767 .00000080 00000-0 00000+0 0 1194
2 23734 64.8242 204.3934 0019013 319.7888 40.1684 2.13101988 3650
Glonass 78
1 23735U 95068B 96154.52833178 .00000078 00000-0 00000+0 0 1121
2 23735 64.8279 204.3796 0008073 221.5659 138.4696 2.13125434 3653
Glonass 79
1 23736U 95068C 96153.14059131 .00000087 00000-0 00000+0 0 981
2 23736 64.8128 204.4409 0008304 206.3228 153.7289 2.13102083 3629
XTE
1 23757U 95074A 96147.19831024 .00000492 00000-0 12148-4 0 541
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2 23797 48.1983 255.5706 7344306 24.3540 357.3065 2.24197991 2227
Soyuz TM-23
1 23798U 96011A 96155.03702524 .00012680 00000-0 17131-3 0 922
2 23798 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 15997
Polar
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2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96154.17284543 .00000155 00000-0 74132-3 0 637
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GPS BIIA-25
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2 23833 54.6994 348.6641 0038224 146.6892 213.5907 2.00564366 1386
Priroda
1 23848U 96023A 96155.03702524 .00012680 00000-0 17131-3 0 459
2 23848 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 6320
MSX
1 23851U 96024A 96155.00370935 -.00000047 00000-0 00000+0 0 276
2 23851 99.3790 133.9495 0008422 191.0603 169.0302 13.97728410 5512
Progress M-31
1 23860U 96028A 96155.03702524 .00012680 00000-0 17131-3 0 379
2 23860 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 4490
Palapa C2
1 23864U 96030A 96154.28548245 -.00000360 00000-0 00000+0 0 253
2 23864 0.0115 353.4796 0001260 72.8554 51.4746 1.00272374 181
MSTI 3
1 23868U 96031A 96155.26013306 .00001372 00000-0 29743-4 0 244
2 23868 97.1222 345.9531 0010338 227.2654 132.7740 15.46120086 2677
1996031B
1 23869U 96031B 96155.03758312 .00042778 26331-5 18859-3 0 175
2 23869 97.0759 346.3312 0041694 104.9773 255.6009 15.83347250 2685
Galaxy 9
1 23877U 96033A 96154.44520243 .00000050 00000-0 00000+0 0 149
2 23877 0.0805 110.4745 0099807 322.0238 219.9494 0.98798602 116
1996033B
1 23878U 96033B 96154.70561766 .00002281 00000-0 78026-4 0 72
2 23878 25.8377 11.5391 0842606 282.1958 68.5532 13.82090280 1332
1996033C
1 23879U 96033C 96147.94546719 -.00000233 00000-0 00000+0 0 47
2 23879 22.9993 75.0137 6783719 359.9969 359.9347 2.11149809 60
Gorizont 32
1 23880U 96034A 96154.99159197 .00000093 00000-0 00000+0 0 169
2 23880 1.4668 283.4585 0014992 333.2267 44.9324 1.00264571 95
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1 23881U 96034B 96149.37506907 .12519477 12777-4 84098-4 0 213
2 23881 51.6253 265.1638 0010849 276.2132 83.7707 16.52789070 548
1996034C
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1 23882U 96034C 96146.93642506 .15866946 12578-4 59433-3 0 42
2 23882 51.6150 278.9349 0004235 339.3430 27.3955 16.44057387 145
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1 23883U 96034D 96146.87683040 -.00000012 00000-0 00000+0 0 15
2 23883 1.5168 283.8971 0015308 338.7356 21.4435 0.98006920 00
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1 23886U 96034E 96152.42872110 -.00000351 00000-0 16441-4 0 33
2 23886 47.3530 281.7663 7315846 1.6074 359.6066 2.22619772 144
1996034F
1 23887U 96034F 96152.43907157 -.00000064 00000-0 10000-3 0 41
2 23887 47.4201 281.8057 7295807 1.5854 359.6465 2.22241018 145
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1052. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: bytomatic@aol.com
Message-ID: <4p0prl$k79@newsbf02.news.aol.com>
Source record: 22269

Msg #595 From: W3MM
Date: 31-May 1614Z
Subj: state dept hostility
Copy of message. From: WF3H To: ALL Date: 31-May-1996 1614Z

One of the people heading up the effort to reallocate our freqs is Warren Richards of the state dept. I called him today (202 647 0049) to express my concern and to get more info. This guy was very very hostile, saying the ARRL is spreading "bullshit". He accused hams of trying to intimidate him (we wouldnt do that, would we?), and said "do you know how many GODDAMN emails I have from you people? (email richardswg@ms6820wpoa.us-state.gov). He also said he wasnt interested in our opinions, and that the freqswill continue to be considered for reallocation.

And another message...

From: bytomatic@aol.com
To: richardswg@ms6820wpoa.us-state.gov
Subject: Forget About Amateur Frequencies!

It is my opinion that you are a fool for advocating the reallocation of the two meter and seventy centimeter amateur bands to serve the interests of the LEO comsat industry. These frequencies are heavily populated by licenced radio amateurs throughout the world and will not be given up without a fight.

You sure as hell will not see me givace of the earth says so AND my last piece of transmitting equipment is wrenched from my cold, dead, powder burned hands.

Philip Collier,
KG2DH

1053. Dove -17

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4p1337$khd@news.mhv.net>
Source record: 22270

What is the status of Dove-17? I recently monitored a pass and received nothing from her.

Thanks,

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1054. Ariane 5 Fails

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: greenberg@courier8.aero.org
Message-ID: <greenberg-040696090813@greenberg-t.aero.org>
Source record: 22271

The following news was found on the Florida Today (Space Today) web site at
http://www.flatoday.com/space/today/

Mission Briefing: June 4, 1996

Update for 9:15 a.m. EDT: BOARD TO PROBE ARIANE 5 FAILURE

An inquiry board is forming to investigate the explosion of the Ariane 5
rocket
shortly after its maiden launch from Korou, French Guiana this morning.
Launch
took place about 8:35 a.m. EDT.

The rocket appeared to pitch to the left 34 seconds into flight. It
exploded
seconds later at an altitude of 4,000 meters. No injuries were reported on
the
ground. Launch officials said debris fell into a protected area.

No immediate reason was given for the explosion which deals a crushing blow
to
the European Space Agency's attempt to take command of the international
commercial launch market. The Ariane 5 was 10 times as powerful than the
Ariane
4 rocket it was expected to replace. It was carrying a half-billion dollar
package
of four Cluster satellites to study the Earth's relationship with the Sun.

73s Steve, WA6TAF

1055. What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: joachimp@stud.unit.no
Message-ID: <4p1lkr$aoh@due.unit.no>
Source record: 22272

Just wondering what Amsat is thinking of doing now that Ariane 501
failed? (It blew up just after take off today). Will it go on a Ariane 4
launch, and in case when, or will Amsat risk launching it with an
unproven launch vehicle?
--
==========
Joachim "Cobra Ball" Pihl _/ Jeg er det levende beviset p&#65533; at
Hans Osnes v. 4 _/ statistikken lyver! Hvis 50% av
7030 Trondheim _/ befolkningen er kvinner og det
joachimp@stud.unit.no _/ s&#65533;ledes burde finnes en kvinne til
_/ hver mann, hvorfor f&#65533;r jeg da aldri
LC2DAT \ LA1K _/ dyppa'n? A. And
==========
Critical Error: Unable to locate coffee - Operator Halted

1056. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4p1p9k$ih@news.jf.intel.com>
Source record: 22273

In article <31B39E6D.7A29@mailgw.sanders.lockheed.com>,
Larry Ledlow <LLEDLOW@mailgw.sanders.lockheed.com> wrote:
>Bill Paul wrote:

>> From what I hear and read on the net, it seems crossed yagis are more
>> popular than helicals, Why?

>You can't change polarization on a helical like you can crossed
>yagis. If you're working in the sidelobes of a circular-polarized
>downlink, they may have opposite polarization!

I took the polarity relay off of my KLM2M14C because it was too unreliable
and I almost never had a reason to use LHC. I also suspect these relays
insert a significant loss, particularly at UHF. I have heard the polarity
change on 435 with the FO-20 satellite is important but I haven't checked
that yet.
I suspect that most hams don't use helix antennas because most hams these
days buy their antennas and nobody sells a helix.
I have a Cushcraft AO-18 435 Mhz crossed yagi that seems to have so many
sidelobes and a generally lousy pattern that I'm thinking of building
a RHC helix instead. But I probably need to test the Cushcraft some more
out in the open instead of all these trees and hills.

73

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1057. AO-27 New Sked????

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4p1tp1$45f@newsbf02.news.aol.com>
Source record: 22274

I Have received 2nd hand info that AO27/Eyesat is on a new operating
Mode - something on the order of only 5 minutes QRV
after entering daylight. Can anyone edify this "rumor"?

Tnx
george
n2lzh
amsat-na # 27737

1058. Returned mail: Service unavailable

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: MAILER-DAEMON@ns.iunet.IT
Message-ID: <199606041917.AA16802@ns.iunet.it>
Source record: 22275

```
----- Transcript of session follows -----
While talking to wgdos.studio5.it:
>>> DATA
<<< 554 Transazione fallita; supero tempo
421 wgdos.studio5.it (TCP)... Deferred: Connection reset by peer during result wait with
wgdos.studio5.it
554 <ik1wvq@studio5.it>... Service unavailable: No such file or directory

----- Unsent message follows -----
Received: from ab.infocomm.it ([192.106.9.2]) by ns.iunet.it with SMTP id AA16714
(5.65c8/IDA-1.4.4 for <ik1wvq@studio5.it>); Tue, 4 Jun 1996 19:17:05 GMT
Received: from [132.239.254.201] by ab.infocomm.it id ab220.wrk; Tue, 4 Jun 1996 21:26:12
-1
Received: by mail.ucsd.edu; id IAA25057
sendmail 8.6.12/UCSD-2.2-sun
Tue, 4 Jun 1996 08:51:47 -0700 for ham-space-list
Errors-To: owner-ham-space@ucsd.edu
Sender: owner-ham-space@ucsd.edu
Precedence: List
Received: by mail.ucsd.edu; id IAA25001
sendmail 8.6.12/UCSD-2.2-sun
Tue, 4 Jun 1996 08:51:37 -0700 for ham-space-ddist
Message-Id: <199606041551.IAA25001@ mail.ucsd.edu>
Date: Tue, 4 Jun 96 08:51:29 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #165
To: Ham-Space@ucsd.edu
```

<<< Questo messaggio la parte 3 di un precedente messaggio >>>

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2 22657 55.2215 348.5555 0073611 220.2344 139.2341 2.00573468 18629
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1 22698U 93041A 96152.41207444 .00000002 00000-0 -47673-5 0 4926
2 22698 89.5400 272.2620 0093311 22.0176 338.4934 14.21372279152045
GPS BIIA-21
1 22700U 93042A 96148.10222652 -.00000006 00000-0 10000-3 0 5589
2 22700 54.2072 229.1884 0049357 357.8243 2.2135 2.00556345 21328
NOAA 13
1 22739U 93050A 96154.87715400 -.00000060 00000-0 -79568-5 0 761
2 22739 99.0416 110.0166 0009143 262.9438 97.0697 14.10963872145032
GPS BIIA-22
1 22779U 93054A 96152.68040697 -.00000046 00000-0 10000-3 0 6139
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2 22779 54.3726 287.9724 0015602 262.4170 97.3894 2.00570955 20174
Meteor 2-21
1 22782U 93055A 96152.56332443 .00000040 00000-0 22570-4 0 4872
2 22782 82.5498 0.3203 0023505 27.3936 332.8463 13.83055272138830
UFO F2
1 22787U 93056A 96151.41869676 -.00000065 00000-0 00000+0 0 6446
2 22787 4.1492 326.5041 0005096 53.3467 91.2947 1.00266249 8658
SPOT 3
1 22823U 93061A 96152.27021632 -.00000044 00000-0 00000+0 0 5525
2 22823 98.6996 226.2937 0001327 76.7477 283.3848 14.20040752138832
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1 22824U 93061B 96151.79012673 -.00000061 00000-0 -70745-5 0 4749
2 22824 98.5796 227.0770 0005721 288.3132 71.7426 14.27104394139455
AO-27
1 22825U 93061C 96151.76597042 -.00000005 00000-0 15635-4 0 4771
2 22825 98.5811 227.6267 0008220 288.9876 71.0413 14.27695885139504
IO-26
1 22826U 93061D 96154.21632063 -.00000024 00000-0 80308-5 0 4768
2 22826 98.5819 230.1982 0008682 281.0932 78.9272 14.27804416139865
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1 22827U 93061E 96146.77807050 .00000048 00000-0 36748-4 0 5361
2 22827 98.5807 222.7978 0008911 289.9583 70.0637 14.27938113138813
ITAMSAT
1 22828U 93061F 96151.74885444 -.00000020 00000-0 96242-5 0 4544
2 22828 98.5778 227.8324 0009533 271.2140 88.7950 14.28141835107623
PO-28
1 22829U 93061G 96154.21742595 .00000026 00000-0 28052-4 0 4693
2 22829 98.5783 230.3157 0009339 263.4612 96.5503 14.28122815139896
KO-25
1 22830U 93061H 96152.24730263 -.00000056 00000-0 -55550-5 0 4874
2 22830 98.4715 217.4519 0010479 239.6905 120.3241 14.28108619139618
GPS BIIA-23
1 22877U 93068A 96148.24565283 -.00000062 00000-0 10000-3 0 4296
2 22877 55.6617 49.9922 0036785 312.5359 47.1808 2.00553703 18978
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1 22912U 93073B 96149.66637153 -.00000081 00000-0 10000-3 0 4702
2 22912 0.1408 311.0038 0000736 61.3458 103.6778 1.00271975 7663
HST Array
1 22920U 90037C 96152.99823620 .00003302 00000-0 21760-3 0 4729
2 22920 28.4717 241.2002 0003837 322.3843 37.6481 15.04586811136988
Meteor 3-6
1 22969U 94003A 96153.87192718 .00000051 00000-0 10000-3 0 2589
2 22969 82.5577 271.2935 0014384 278.0056 81.9432 13.16736734113037
TUBSAT-B
1 22970U 94003B 96146.89494044 .00000051 00000-0 10000-3 0 2481
2 22970 82.5527 276.1136 0015731 296.8117 63.1394 13.16827538112125
GPS BIIA-24
1 23027U 94016A 96153.80370923 -.00000054 00000-0 10000-3 0 3583
2 23027 55.0786 350.4811 0063665 196.1972 163.5000 2.00554937 16399
Glonass 62
```

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1 23043U 94021A 96154.05875579 -.00000030 00000-0 00000+0 0 3615
2 23043 64.6520 324.4302 0005407 174.4849 185.5161 2.13103055 16686
Glonass 63
1 23044U 94021B 96153.94125709 -.00000030 00000-0 00000+0 0 3278
2 23044 64.6537 324.4263 0029413 201.1717 158.7074 2.13103391 16684
Glonass 64
1 23045U 94021C 96152.71058249 -.00000026 00000-0 00000+0 0 3351
2 23045 64.6424 324.4823 0011487 34.2899 325.7817 2.13102106 16651
GOES 8
1 23051U 94022A 96152.19650985 -.00000250 00000-0 00000+0 0 5357
2 23051 0.0166 256.7866 0003177 230.0982 118.2300 1.00276407 15196
MSTI 2
1 23101U 94028A 96154.21794768 .00002959 00000-0 47371-4 0 3196
2 23101 97.0832 347.8869 0012075 25.9136 334.2718 15.53860287116971
STRV-1A
1 23125U 94034B 96154.61767290 .00000920 00000-0 26304-3 0 2796
2 23125 7.0894 246.3948 7253794 48.2499 354.0209 2.32000696 15784
STRV-1B
1 23126U 94034C 96146.08521728 .00000587 00000-0 10000-3 0 2495
2 23126 7.0920 250.2957 7262167 41.3032 355.0340 2.31669629 15626
Nadezhda 4
1 23179U 94041A 96152.23948741 .00000042 00000-0 27393-4 0 1931
2 23179 82.9439 249.1459 0036125 168.5533 191.6456 13.75681200 94469
Glonass 65
1 23203U 94050A 96154.25603353 .00000080 00000-0 00000+0 0 2912
2 23203 64.7739 204.6180 0006752 158.9440 201.1757 2.13102313 14082
Glonass 66
1 23204U 94050B 96154.02047573 .00000082 00000-0 00000+0 0 3175
2 23204 64.7612 204.6498 0015040 342.2884 17.7513 2.13102708 14073
Glonass 67
1 23205U 94050C 96153.43389359 .00000085 00000-0 00000+0 0 2926
2 23205 64.7672 204.6598 0002781 284.8222 75.2393 2.13102648 14063
DMSP B5D2-7
1 23233U 94057A 96154.70277416 .00000083 00000-0 68183-4 0 7974
2 23233 98.8277 213.6834 0011628 218.7764 141.2571 14.12709309 90787
OKEAN 1-7
1 23317U 94066A 96154.23662415 .00000143 00000-0 18244-4 0 1572
2 23317 82.5432 72.7844 0027042 125.6988 234.6743 14.74021823 88331
ELEKTRO
1 23327U 94069A 96152.62244299 -.00000100 00000-0 00000+0 0 1618
2 23327 0.1061 191.5376 0004521 275.9123 82.3606 1.00274979 5830
RESURS 1-3
1 23342U 94074A 96155.05555696 .00000047 00000-0 15829-4 0 4989
2 23342 97.9679 212.4500 0001774 63.2481 296.8907 14.69838971 84739
Glonass 68
1 23396U 94076A 96153.74661939 -.00000005 00000-0 00000+0 0 2648
2 23396 65.0720 84.8036 0029086 193.5021 166.4104 2.13102719 11910
Glonass 69
1 23397U 94076B 96154.39182693 -.00000003 00000-0 00000+0 0 2600
2 23397 65.0641 84.7907 0013982 319.1493 40.7373 2.13102236 11923
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Glonass 70
1 23398U 94076C 96154.27555898 -.00000003 00000-0 00000+0 0 2777
2 23398 65.0538 84.7711 0004420 294.9487 64.9931 2.13102251 11938
LUCH (Altair-2)
1 23426U 94082A 96155.01671713 -.00000269 00000-0 00000+0 0 3230
2 23426 1.4716 268.0974 0003655 170.8763 273.3452 1.00261176 5369
RS-15
1 23439U 94085A 96154.19808778 -.00000039 00000-0 10000-3 0 1371
2 23439 64.8212 47.3241 0161964 201.7428 157.6567 11.27525203 59096
NOAA 14
1 23455U 94089A 96154.82461772 .00000043 00000-0 48121-4 0 6232
2 23455 98.9441 100.3456 0008640 287.9110 72.1125 14.11590814 73429
Glonass 71
1 23511U 95009A 96154.70405435 -.00000032 00000-0 00000+0 0 1917
2 23511 64.6716 324.6762 0005466 204.0830 155.8873 2.13103604 9660
Glonass 72
1 23512U 95009B 96153.41501472 -.00000028 00000-0 00000+0 0 2054
2 23512 64.6580 324.7300 0005517 334.8599 25.1137 2.13101985 9639
Glonass 73
1 23513U 95009C 96154.17662361 -.00000031 00000-0 00000+0 0 2160
2 23513 64.6682 324.7174 0012330 195.4314 164.5314 2.13103136 9656
GMS 5
1 23522U 95011B 96134.54990383 -.00000305 00000-0 10000-3 0 1225
2 23522 0.4001 332.1090 0002081 155.5536 81.5508 1.00260683 4108
DMSP B5D2-8
1 23533U 95015A 96154.91741022 .00000001 00000-0 24304-4 0 5339
2 23533 98.8416 157.5661 0008366 92.3503 267.8629 14.12740005 61618
Microlab 1
1 23547U 95017C 96153.66030823 .00000124 00000-0 52046-4 0 1108
2 23547 69.9785 206.0991 0014248 208.1820 151.8544 14.45532972 61427
OFEQ 3
1 23549U 95018A 96155.06718765 .00016810 00000-0 42640-3 0 2552
2 23549 143.3649 141.9914 0225672 18.9950 341.9088 15.15271384 64224
GFZ-1
1 23558U 86017JE 96152.26723372 .00001682 00000-0 24752-4 0 1308
2 23558 51.6490 198.7352 0006082 155.0196 205.1090 15.62157682587367
ERS-2
1 23560U 95021A 96154.88935555 .00002859 00000-0 10760-2 0 2236
2 23560 98.5470 229.1681 0000792 43.9357 316.1869 14.32262105 58529
Spektr
1 23579U 95024A 96152.79222887 .00001134 00000-0 21379-4 0 3555
2 23579 51.6482 205.9928 0005183 31.2760 328.8441 15.58123571 58882
GOES 9
1 23581U 95025A 96154.58343890 .00000084 00000-0 00000+0 0 1954
2 23581 0.1794 83.5116 0000970 251.8113 350.6883 1.00277110 3761
Helios 1A
1 23605U 95033A 96154.72198527 .00000049 00000-0 18438-4 0 2222
2 23605 98.1209 90.6359 0001499 57.8761 302.2567 14.63841158 48431
UPM SAT 1
1 23606U 95033B 96154.86004593 .00000106 00000-0 27351-4 0 1718
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2 23606 98.1010 91.7850 0006316 230.9602 129.1041 14.67248944 48612
CERISE
1 23607U 95033C 96146.87308943 .00000061 00000-0 19565-4 0 916
2 23607 98.1028 83.7715 0005109 262.1353 97.9271 14.66943885 47466
TDRS 6
1 23613U 95035B 96152.52800041 .00000031 00000-0 10000-3 0 1732
2 23613 0.6307 83.3966 0001769 240.0378 298.9228 1.00023030 3210
Glonass 74
1 23620U 95037A 96154.43002941 .00000079 00000-0 00000+0 0 1431
2 23620 64.8263 204.4712 0018426 172.0612 188.0615 2.13102903 6695
Glonass 75
1 23621U 95037B 96153.19942446 .00000086 00000-0 00000+0 0 1457
2 23621 64.8391 204.5160 0018391 182.5813 177.5040 2.13102270 6665
Glonass 76
1 23622U 95037C 96152.31918199 .00000087 00000-0 00000+0 0 1461
2 23622 64.8280 204.5455 0036986 167.1779 193.0080 2.13102619 6642
Prognoz-M2
1 23632U 95039A 96153.42795100 -.00001143 00000-0 00000+0 0 590
2 23632 70.7480 249.6500 8423404 321.6830 329.1020 0.26377800 806
SICH-1
1 23657U 95046A 96152.22223288 .00000064 00000-0 62704-5 0 826
2 23657 82.5346 216.1720 0029239 102.3831 258.0648 14.73475207 40338
RADARSAT
1 23710U 95059A 96154.01568787 -.00000044 00000-0 00000+0 0 1426
2 23710 98.5688 160.9152 0001026 87.8622 272.0744 14.29972402 30071
Glonass 77
1 23734U 95068A 96154.31386767 .00000080 00000-0 00000+0 0 1194
2 23734 64.8242 204.3934 0019013 319.7888 40.1684 2.13101988 3650
Glonass 78
1 23735U 95068B 96154.52833178 .00000078 00000-0 00000+0 0 1121
2 23735 64.8279 204.3796 0008073 221.5659 138.4696 2.13125434 3653
Glonass 79
1 23736U 95068C 96153.14059131 .00000087 00000-0 00000+0 0 981
2 23736 64.8128 204.4409 0008304 206.3228 153.7289 2.13102083 3629
XTE
1 23757U 95074A 96147.19831024 .00000492 00000-0 12148-4 0 541
2 23757 22.9830 201.4320 0013776 158.8312 201.2746 14.97651219 22162
1996010D
1 23797U 96010D 96149.76090293 .00022008 -14907-6 73280-3 0 858
2 23797 48.1983 255.5706 7344306 24.3540 357.3065 2.24197991 2227
Soyuz TM-23
1 23798U 96011A 96155.03702524 .00012680 00000-0 17131-3 0 922
2 23798 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 15997
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96154.17284543 .00000155 00000-0 74132-3 0 637
2 23824 47.7692 256.0509 7261360 24.4348 357.1778 2.21651564 2285
GPS BIIA-25
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1 23833U 96019A 96154.44032781 -.00000058 00000-0 00000+0 0 329
2 23833 54.6994 348.6641 0038224 146.6892 213.5907 2.00564366 1386
Priroda
1 23848U 96023A 96155.03702524 .00012680 00000-0 17131-3 0 459
2 23848 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 6320
MSX
1 23851U 96024A 96155.00370935 -.00000047 00000-0 00000+0 0 276
2 23851 99.3790 133.9495 0008422 191.0603 169.0302 13.97728410 5512
Progress M-31
1 23860U 96028A 96155.03702524 .00012680 00000-0 17131-3 0 379
2 23860 51.6466 194.7352 0005253 36.5109 323.6176 15.58143298 4490
Palapa C2
1 23864U 96030A 96154.28548245 -.00000360 00000-0 00000+0 0 253
2 23864 0.0115 353.4796 0001260 72.8554 51.4746 1.00272374 181
MSTI 3
1 23868U 96031A 96155.26013306 .00001372 00000-0 29743-4 0 244
2 23868 97.1222 345.9531 0010338 227.2654 132.7740 15.46120086 2677
1996031B
1 23869U 96031B 96155.03758312 .00042778 26331-5 18859-3 0 175
2 23869 97.0759 346.3312 0041694 104.9773 255.6009 15.83347250 2685
Galaxy 9
1 23877U 96033A 96154.44520243 .00000050 00000-0 00000+0 0 149
2 23877 0.0805 110.4745 0099807 322.0238 219.9494 0.98798602 116
1996033B
1 23878U 96033B 96154.70561766 .00002281 00000-0 78026-4 0 72
2 23878 25.8377 11.5391 0842606 282.1958 68.5532 13.82090280 1332
1996033C
1 23879U 96033C 96147.94546719 -.00000233 00000-0 00000+0 0 47
2 23879 22.9993 75.0137 6783719 359.9969 359.9347 2.11149809 60
Gorizont 32
1 23880U 96034A 96154.99159197 .00000093 00000-0 00000+0 0 169
2 23880 1.4668 283.4585 0014992 333.2267 44.9324 1.00264571 95
1996034B
1 23881U 96034B 96149.37506907 .12519477 12777-4 84098-4 0 213
2 23881 51.6253 265.1638 0010849 276.2132 83.7707 16.52789070 548
1996034C
1 23882U 96034C 96146.93642506 .15866946 12578-4 59433-3 0 42
2 23882 51.6150 278.9349 0004235 339.3430 27.3955 16.44057387 145
1996034D
1 23883U 96034D 96146.87683040 -.00000012 00000-0 00000+0 0 15
2 23883 1.5168 283.8971 0015308 338.7356 21.4435 0.98006920 00
1996034E
1 23886U 96034E 96152.42872110 -.00000351 00000-0 16441-4 0 33
2 23886 47.3530 281.7663 7315846 1.6074 359.6066 2.22619772 144
1996034F
1 23887U 96034F 96152.43907157 -.00000064 00000-0 10000-3 0 41
2 23887 47.4201 281.8057 7295807 1.5854 359.6465 2.22241018 145
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

Date: 4 Jun 1996 03:50:13 -0400
From: bytomatic@aol.com (Bytomatic)
Subject: Our VHF/UHF frequencies at risk - again!

Msg #595 From: W3MM
Date: 31-May 1614Z
Subj: state dept hostility
Copy of message. From: WF3H To: ALL Date: 31-May-1996 1614Z

One of the people heading up the effort to reallocate our freqs is Warren

<<< Continua nel prossimo messaggio >>>

1059. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: mfp@aros.net
Message-ID: <4p1h0a$o5e@news.aros.net>
Source record: 22276

In article <4ove7p$8mk@tilde.csc.ti.com>, mbv@ti.com says...
>
>In article <Ds9usD.4o8@pe1chl.ampr.org>, rob@pe1chl.ampr.org (Rob Janssen)
says:
>>
>>In <31AC8B9E.F8C@HBC.Honeywell.com> Carl Estey
<carl.estey@HBC.Honeywell.com> writes:
>>
>>

RELAX Folks....

Would an Industry really place MONEY MAKING mobile sat LEO's on bands already accessed by millions of Amateurs world-wide???? Come on folks..it just won't happen....you honestly think that even if the IMPOSSIBLE, cease and desist order from our FCC on using the 2mtr and 70cm bands, that everyone will just quit....I'd say the LEO's would most like get unintentionnal and intentional interference from a million land based radios, world-wide?

Just because a company wants to experiment using certain frequencies using leo's and new modes of modulation and digital services, doesn't mean that they are going to use that full spectrum exclusively.....

Just relax guys...we won't loose anything here...besides, the US and Canada hams arn't the only one's using these freqs...this LEO freq allocation request will have to battle every Country, not just No. America, since LEO's receive and transmit farther then most Country boundaries...

1060. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: jimf@zoinks.corp.sgi.com
Message-ID: <4p26pn$h57@murrow.corp.sgi.com>
Source record: 22277

```
|> In article <31B39E6D.7A29@mailgw.sanders.lockheed.com>,
|> Larry Ledlow <LLEDLOW@mailgw.sanders.lockheed.com> wrote:
|> >Bill Paul wrote:
|>
|> >> From what I hear and read on the net, it seems crossed yagis are more
|> >> popular than helicals, Why?
|>
|> >You can't change polarization on a helical like you can crossed
|> >yagis. If you're working in the sidelobes of a circular-polarized
|> >downlink, they may have opposite polarization!
|>
```

In addition to what is stated above, which is of some questionable usefulness, is the matter of gain. Now I know that forward gain is not the only factor with an antenna, but for sat comm it is an important one.

From what I have read (no personal measurements) the gain equations for helical antennas commonly seen are optimistic. The Antenna Handbook as well as the Satellite Experimenters Handbook both mention this I believe. I am going from memory, but I believe that I have seen a "rule of thumb" that a helical needs to be one-third to one-half again as long in wavelengths as a crossed yagi (no offset) system to produce the same forward gain.

I am planning on doing some experimentaion, but need the time and range to do so. I'd really like to see some more "real world measurements" published, since the texts I've seen state this is lacking.

Jim
KF6AGJ

1061. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: donheskett@aol.com
Message-ID: <4p2iup$bee@newsbf02.news.aol.com>
Source record: 22278

The first Ariane 5 was blown up by ground command, today, when it began to veer rather badly.

-- Don Heskett

1062. ARLK039 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-04 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk039.1996@arrl.org>
Source record: 22279
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK039
ARLK039 Keplerian data

ZCZC SK39
QST de W1AW
Keplerian Bulletin 39 ARLK039
From ARRL Headquarters
Newington, CT June 4, 1996
To all radio amateurs

SB KEP ARL ARLK039
ARLK039 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 99978U 96172.64753500 .00004574 00000-0 90566-5 0 12
2 99978 39.0107 9.7607 0009801 335.0250 228.9835 15.98792223 15
Mir
1 16609U 86017A 96156.12735421 .00001249 00000-0 22874-4 0 05456
2 16609 51.6469 189.2643 0005628 38.5070 321.6323 15.58133480587910
HST
1 20580U 90037B 96156.13374697 .00000342 00000-0 18658-4 0 08328
2 20580 28.4702 302.4514 0006343 38.9486 321.1556 14.91062428136632
AO-10
1 14129U 83058B 96146.12823962 -.00000065 00000-0 10000-3 0 04272
2 14129 26.1931 207.9775 6001544 18.2491 356.4172 2.05880352069391
RS-10/11
1 18129U 87054A 96156.51056379 .00000052 00000-0 40923-4 0 2215
2 18129 82.9261 157.9095 0010944 182.6969 177.4128 13.72366386448434
UO-11
1 14781U 84021B 96156.05891666 .00000063 00000-0 18362-4 0 8884
2 14781 97.7989 147.3674 0012329 127.6221 232.6070 14.69456277655728
RS-12/13
1 21089U 91007A 96156.15185709 -.00000024 00000-0 -40733-4 0 8932
2 21089 82.9239 199.0071 0027900 271.3386 88.4570 13.74069804267245
AO-13
1 19216U 88051B 96155.36561790 -.00000267 00000-0 34743-3 0 02144
2 19216 57.2592 113.1795 7420327 41.1909 355.3639 2.09807350029556
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UO-14
1 20437U 90005B 96156.10471646 -.00000029 00000-0 56956-5 0 02009
2 20437 98.5442 239.3651 0010151 242.3329 117.6808 14.29921834332183
RS-15
1 23439U 94085A 96156.06065971 -.00000039 00000-0 10000-3 0 01469
2 23439 64.8212 44.3131 0161823 201.4414 157.9672 11.27525270059305
AO-16
1 20439U 90005D 96156.27292509 -.00000014 00000-0 11497-4 0 9852
2 20439 98.5558 241.7271 0010458 242.1803 117.8346 14.29976204332228
DO-17
1 20440U 90005E 96156.22648401 -.00000020 00000-0 92517-5 0 9855
2 20440 98.5605 242.3137 0010358 241.0966 118.9185 14.30117968332249
WO-18
1 20441U 90005F 96156.14609071 -.00000028 00000-0 61164-5 0 00052
2 20441 98.5610 242.1786 0011143 241.4436 118.5624 14.30087345332231
LO-19
1 20442U 90005G 96156.14289186 .00000012 00000-0 21340-4 0 09865
2 20442 98.5619 242.6601 0011492 241.9856 118.0164 14.30196397332254
FO-20
1 20480U 90013C 96156.05251586 .00000016 00000-0 10194-3 0 09025
2 20480 99.0262 183.4065 0540707 154.2190 208.6953 12.83233766296209
AO-21
1 21087U 91006A 96155.97928165 .00000093 00000-0 82657-4 0 07270
2 21087 82.9377 331.4870 0033263 244.2507 115.5215 13.74568514268193
UO-22
1 21575U 91050B 96156.09947313 .00000053 00000-0 32166-4 0 06962
2 21575 98.3515 222.8718 0007135 311.1109 48.9463 14.37025642256185
KO-23
1 22077U 92052B 96156.11185500 -.00000037 00000-0 10000-3 0 05928
2 22077 66.0780 216.8316 0012688 302.3208 57.6580 12.86297395179120
KO-25
1 22828U 93061F 96156.23275721 -.00000028 00000-0 63717-5 0 4554
2 22828 98.5778 232.2370 0009389 256.2370 103.7768 14.28142064108262
IO-26
1 22826U 93061D 96156.10841307 -.00000004 00000-0 15930-4 0 04857
2 22826 98.5819 232.0567 0008615 275.3994 84.6203 14.27804709140130
AO-27
1 22825U 93061C 96156.25127147 .00000012 00000-0 22455-4 0 4781
2 22825 98.5819 232.0347 0008011 274.8615 85.1651 14.27696207140145
PO-28
1 22829U 93061G 96156.10909782 .00000038 00000-0 32872-4 0 04829
2 22829 98.5782 232.1738 0009301 257.8692 102.1451 14.28123210140162

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
June 8, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1063. Rocket exploded, any Ham gear?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: n5ejs@linknet.net
Message-ID: <647cc$16131a.385@news.linknet.net>
Source record: 22280

Anyone know what Ham gear if any was lost aboard the
rocket that blew up today?

Russ N5EJS@LINKNET.NET
N5EJS@WG5W.#CENLA.LA.USA.NA

1064. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4p3l7n$atf@bbcnews.rd.bbc.co.uk>
Source record: 22281

Joachim Alexander Pihl (joachimp@stud.unit.no) wrote:
: failed? (It blew up just after take off today). Will it go on a Ariane 4

It didn't blow up it was blown up. It went off course and had to be
destroyed.

J.

1065. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: moritz@ipers1.e-technik.uni-stuttgart.de
Message-ID: <4p3p4p$4cla@info4.rus.uni-stuttgart.de>
Source record: 22282

In article <4p1p9k$ih@news.jf.intel.com>,
Jim Garver <jgarver@ichips.intel.com> wrote:
>I suspect that most hams don't use helix antennas because most hams these
>days buy their antennas and nobody sells a helix.

Cross yagis are more compact and easier to implement. A Helix
for two will require lots of fiberglass or other waterproof
material for the boom and the struts.

73, Moritz DL5UH

1066. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.SOL.3.91.960605094425.28373D-100000@qni.com>
Source record: 22283

John,
So what is the difference?
It is still a unproven launch truck
it was still destroyed.
its payload is destroyed
Gary Watts
On 5 Jun 1996, John Boyer wrote:

> Joachim Alexander Pihl (joachimp@stud.unit.no) wrote:
> : failed? (It blew up just after take off today). Will it go on a Ariane 4
>
> It didn't blow up it was blown up. It went off course and had to be
> destroyed.
>
> J.
>
>
>
>

1067. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: markw@news
Message-ID: <4p4ash$d3j@hacgate2.hac.com>
Source record: 22284

DH1SAJ (dh1saj@aol.com) wrote:
: tskloss@acs.tamu.edu (Tim Skloss) wrote:

: >Thema: Ariane 5 launch?
: >
: >Despite the VHF/UHF discussion which has taken prevalence on the
: >rec.amateur.* newsgroups, has anyone been following the maiden Ariane 5
: >launch? I read that it was scheduled to lift off Thursday (5/30/96), or
: >is it one week later?
: >
: >Just curious. I understand that P3D is supposed to ride one of these
: >sometime soon. How is its development going?
: >

: Actual schedule for first Ariane 5 liftoff is TUE, 04.June. 1996. But who
: knows what finally happens.....
: P3D is to ride on SECOND flight of Ariane 5 - OR on any Ariane 4 flight
: BEFORE July 1997, if it cannot go with Ariane 5 Flight 2 due to any
: reason.
: It is a signed contract that P3D will have a lift in any case, latest mid
: 1997.
: However, supposed flight with A-5 No.2 will not be earlier than Sep. 96.

: Joe
:

I heard a rumor that the Ariane 5 launch was yesterday and that it
failed (i.e. blew up). Can anyone confirm this?

Markus Wilkinson
Hughes Space and Communications

Net: markw@sdds0.es.hac.com, mark@solkan.physics.usu.edu
Phone: 310/416-4647 (voice), 310/416-4073 (fax)

I used to think that it was terrible that life was so unfair. And then I
thought, 'What if life were fair?' Then all the terrible things that
happened to us would be because we deserved them. I take great comfort in
the general hostility and unfairness of the universe.
Markus Cole, paraphrased

1068. Question About 9600 Baud FSK Packet

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: Lindsay <efrom@lancnews.infi.net>
Message-ID: <31B5C141.7225@lancnews.infi.net>
Source record: 22285

A brief question about 9600 baud satellite packet.
Will a Yeasu FT-990 (or any HF transceiver with a packet port)
pass a 9600 baud satellite packet signal through the
rear packet port, if it has been downconverted
from 435 megs to 28 megs (FM)? I want to pass
the signal through to my TNC. Thanks for your
help.

1069. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: "F. Kevin Feeney" <fkf1@cornell.edu>
Message-ID: <4p4sc1$pg8@newsstand.cit.cornell.edu>
Source record: 22286

I too have heard that helicals gain figures are optimistic, in fact I think there is a more in depth treatment of helicals in the latest antenna compendium, volume 4 I believe.

On the other hand, I built a 70cm band,14 turn, 10 foot long helix for about $25 (mostly the cost of the tubing) and it' s been running for 4-5 years now. I can hear myself on oscar 13 with one watt when angles are good, sometimes keying with slow morse on an ht ptt switch for fun. I can hear VE3ONT moonbounce on it on my FT736 with no preamp (not real well, but it was a thrill anyway) It seems to have a good pattern, no weird lobes or anything that I"ve noticed. So far I haven't seen a need for LHCP. It was pretty forgiving to construct compared to a yagi.

In side by side (well 50 miles apart) with a similar station running barefoot FT736 into a 40CX crossed yagi, we had equivalent signal strengths - so it's competative with antennas others are using.

You might also consider just using linear polarization - most of the europeans I talk to use that. One of the biggest signals on the bird, G4JUJ (haven't heard him around in a while - where'd he go?) told me he used two linear antennas for each band, slaved together by bicycle chain, and he rotated the pair of antennas in polarization until he got the best signal - whatever polarization it was. CP antennas seem to be a primarily American phenomena.

YMMV

Kevin, WB2EMS
"When I was a child, Mommy told me not to talk to strangers. Now that I'm a ham, it's my hobby!"

1070. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4p4qho$m09@news.jf.intel.com>
Source record: 22287

In article <4p3p4p$4cla@info4.rus.uni-stuttgart.de>,
<moritz@ipers1.e-technik.uni-stuttgart.de> wrote:
>
>Cross yagis are more compact and easier to implement. A Helix
>for two will require lots of fiberglass or other waterproof
>material for the boom and the struts.

I didn't mean to imply a helix for 2 meters, but rather for 3/4 meters.
Apparently it is not so easy to design and implement even a linear yagi
on this band. My Cushcraft AO-18 is an example.

Has anybody got any good simulations for a helix? My modeling program
by K6STI will not support enough segments to do more than a couple of
turns.

The appearance of a helix antenna is enough to make me try it.
Reminds me of the old NASA ground stations.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1071. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4p4udt$vl9@ns3-1.CC.Lehigh.EDU>
Source record: 22288

>You sure as hell will not see me givace of the earth says so AND my last
>piece of transmitting equipment is wrenched from my cold, dead, powder
>burned hands.
>
>Philip Collier,
>KG2DH

heehee...like i'm gonna let them get away with this...if they do, they better pay me 2000+$ for more radios to replace the ones they make illegal!!!

DAvid
|---|
| David Roseman | c002@lehigh.edu OUTTA ORDER!
SysOp of NODE 3 BBS	The Flying HAm - BBS	
Running OBV/2 Software	Technomage - BBS	
610.838.2989	N3SQE/1 - HAm V
(Parttime system)	N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1072. Re: Rocket exploded, any Ham gear?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: bpaul@qualcomm.com
Message-ID: <bpaul-0506961753440001@wpaul-toy.qualcomm.com>
Source record: 22289

In article <647cc$16131a.385@news.linknet.net>, n5ejs@linknet.net wrote:

> Anyone know what Ham gear if any was lost aboard the
> rocket that blew up today?

No Ham gear abord, just $500 million worth of scientific satellites.
-BP

>
>
> Russ N5EJS@LINKNET.NET
> N5EJS@WG5W.#CENLA.LA.USA.NA
>

Bill Paul KF6BBL San Diego,CA bpaul@qualcomm.com
Disclaimer:
The above post is the opinion of Bill Paul, not Qualcomm Inc.

1073. Picosats and Band Threats

Newsgroup: rec.radio.amateur.space
Date: 1996-06-05 00:00:00 UTC
From: lisa.keeton@prostar.com
Message-ID: <4p4jqh$4h5@clark.zippo.com>
Source record: 22290

I recently stumbled across a web page about Picosats at
www.cordis.lu/esprit/src/picosat.htm
This project is apparently endorsed and/or sponsored by a European
group called Esprit, with (it appears) blessings from the EC. It looks like an
interesting project with a lot of potential. Has anyone else seen it? Does it
look like it's as 'do-able' as is claimed? (If you haven't seen
the web page, give it a look. My curiosity chip is on overdrive on this
subject.)

On a similar vein, how does this apply to the apparent threat to the
Amateur 2m/70cm bands? If the Powers That Be are actually considering
changing these bands - apparently on a worldwide basis - would the
Europeans even be considering this project? Lastly, would it help
our cause to support this kind of thing?

Lisa KC7PSZ
(your friendly neighborhood ham neophyte)

1074. The ANIK-2 internet satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: herksen@ibm.net
Message-ID: <4p5l7j$1aq0@news-s01.ny.us.ibm.net>
Source record: 22291

Hi there,

i have a technical question for SPACE specialists.

My question is:

There is a satelite, on 103.7 defrees west, and I wonder if I can receive it,
here in Istanbul - Turkey??

Is there anyone who can calculate this for me??

Is there a program that enables me to see the footprint of this satellite??

I have INSTANT TRACK here, but i don't have the KEPPLER data for this
satelite, so I'm lost here.

HELP!!!

Thanks for helping me.

Please send your reply to herksen@ibm.net as I don't visit this group
regularly

Robbert / TA2IX

Robbert J. van Herksen / TA2IX
Istanbul, Turkey
Tel : +90 216 391 6336
Fax : +90 216 391 6336
E-mail: herksen@ibm.net
FIDO : 2:430/205.11
PACKET: ta2ix@ta2em.#ist.tur.eu

IMPORTANT NOTE: Some servers change my reply address.
Please ONLY reply via Email to: herksen@ibm.net
Please do NOT send unaddressed junkmail

1075. Satellite position calculation.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: Vittorio Moretti <cmaus@pentium100.sirnet.it>
Message-ID: <31B60768.6342@pentium100.sirnet.it>
Source record: 22292

Can anybody help me?
Which is the best algoritm to calculate the ham-satellite position using
two line element?
Thank in advance.
Vittorio ik4iro@amsat.org

1076. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: darwin@indy.net
Message-ID: <4p6dns$nff@news.indy.net>
Source record: 22293

In article <4p4ash$d3j@hacgate2.hac.com>, markw@news (Mark Wilkinson)
wrote:
>DH1SAJ (dh1saj@aol.com) wrote:
>: tskloss@acs.tamu.edu (Tim Skloss) wrote:
>
>: >Thema: Ariane 5 launch?
>: >
>: >Despite the VHF/UHF discussion which has taken prevalence on the
>: >rec.amateur.* newsgroups, has anyone been following the maiden
Ariane 5
>: >launch? I read that it was scheduled to lift off Thursday
(5/30/96), or
>: >is it one week later?
>: >
>: >Just curious. I understand that P3D is supposed to ride one of
these
>: >sometime soon. How is its development going?
>: >
>
>: Actual schedule for first Ariane 5 liftoff is TUE, 04.June. 1996.
But who
>: knows what finally happens.....
>: P3D is to ride on SECOND flight of Ariane 5 - OR on any Ariane 4
flight
>
>I heard a rumor that the Ariane 5 launch was yesterday and that it
>failed (i.e. blew up). Can anyone confirm this?
>
You heard right. It veered off course and was blown to smithereens.

1077. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4p6i3m$8k9@bbcnews.rd.bbc.co.uk>
Source record: 22294

Gary Watts (gwatts@qni.com) wrote:
: John,
: So what is the difference?
: It is still a unproven launch truck
: it was still destroyed.
: its payload is destroyed
: Gary Watts

It makes quite a bit of difference. One indicates a guidance problem the other an engine/fuel problem.

J.

1078. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: rlong@magnus.acs.ohio-state.eduu
Message-ID: <rlong-0606961142440001@ts19-14.homenet.ohio-state.edu>
Source record: 22295

In article <4p6i3m$8k9@bbcnews.rd.bbc.co.uk>, boyer@rd.bbc.co.uk (John Boyer) wrote:

> Gary Watts (gwatts@qni.com) wrote:
> : John,
> : So what is the difference?
> : It is still a unproven launch truck
> : it was still destroyed.
> : its payload is destroyed
> : Gary Watts
>
> It makes quite a bit of difference. One indicates a guidance problem the
> other an engine/fuel problem.
>
> J.

Latest word is that it is a guidance problem and may be software related.
I agree the problem is not serious, not like an engine that failed. It
will be fixed quickly and the program will go on.
ron.

1079. HELP: PSK-1T to PK-900 - Anyone done it?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: debaker@bnr.ca
Message-ID: <4p6t6a$m2o@crchh327.rich.bnr.ca>
Source record: 22296
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space

Thanks for reading this:

I want to connect a PSK-1T to an AEA PK-900. Pacomm
says it isn't possible, but I'm sure that hasn't stopped
everyone. If anyone has gotten this combination to work,
please email with the details.

Many Thanks in advance,
David - AB5PI
--
+---+
| David E. Baker Internet: debaker@nortel.com (Richardson, TX, USA) |
| My opinions do not necessarily reflect the opinions of my employer |
+---+

1080. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: "F. Kevin Feeney" <fkf1@cornell.edu>
Message-ID: <4p70bb$hjo@newsstand.cit.cornell.edu>
Source record: 22297

In article <4p4qho$m09@news.jf.intel.com> Jim Garver,
jgarver@ichips.intel.com writes:
>
>I didn't mean to imply a helix for 2 meters, but rather for 3/4 meters.
>Apparently it is not so easy to design and implement even a linear yagi
>on this band. My Cushcraft AO-18 is an example.
>

From what I hear, the matching networks are difficult to make effecient.
That was the impetus behind the quagi by wayne overbeck. He went with the
loop elements to come up with a simple effecient feed, and then yagi
directors to do the rest. The first iteration apparently used a
commercial antenna with the last two elements lopped off and the quad
elements put in their place.

I've had good luck with a 5 element 2 meter quagi and a 10 element 70 cm
quagi for oscar 13. I used them before I got the helix built and the
klm14c, and built another set for field day portable operation.

>Has anybody got any good simulations for a helix? My modeling program
>by K6STI will not support enough segments to do more than a couple of
>turns.

I made up a spreadsheet once in twin (lotus clone) that let me diddle
some physical dimensions while watching gain and others parameters. Its
not terribly complicated, but it let me work out things like a nice 10
inch diameter, x foot long helix with some gain estimates so I could see
the trade offs. Not sure if I could get it to you in a useable format,
but we could try sending it via email or ftp.

>
>The appearance of a helix antenna is enough to make me try it.
>Reminds me of the old NASA ground stations.
>
>
>

Indeed, it does look distinctive. I had an old B&W camera mounted up on
my crossbar so I could see where the antenna was pointing, and sometimes
I'd just watch folks walking down the street. They seemed to get nervous
with the 'James Bond Deathray' tracking them. I was going to put some
sort of glowing red tube down the center of it to enhance the effect, but
never got around to it. :-)

Kevin, WB2EMS
"When I was a child, Mommy told me not to talk to strangers. Now that I'm

a ham, it's my hobby!"

1081. Re: Ariane 5 launch?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: markw@news
Message-ID: <4p70td$5p0@hacgate2.hac.com>
Source record: 22298

I pulled this excerpt from _Jonathan's Space Report_ on sci.space.news

Jonathan's Space Report
No. 289 1996 Jun 5 Cambridge, MA

...
Recent Launches

The first launch of the new Ariane 5 rocket, mission V501, ended with destruction of the rocket after 40 seconds of flight, at an altitude of 4000 m. The vehicle pitched over and then was destroyed by the range safety officer. It is not yet known whether the problem was in the main stage or the solid boosters.

Ariane 5 consists of two P230 Aerospatiale EAP (Etage Acceleration a Poudre) solid strapon boosters, the Aerospatiale/SEP EPC (Etage Principal Cryotechnique) cryogenic main stage, and the Daimler-Benz EPS (Etage 'a Propergols Stockables) storable liquid propellant upper stage with an L9.7 Aestus engine. The design is completely different from the Ariane 1 through 4 family which shared a common core stage with evolutionary modifications. First flights of large launch vehicles are very rare - Ariane 1 in 1979, Shuttle in 1981, Energiya in 1987, H-2 in 1994. This is the only failure of a large core stage on initial flight apart from the Russian N-1 moon rocket in 1969 and the first launch failure of a major space science payload since Mariner 8 in 1971. My best wishes and condolences to those of my friends working on the Cluster project. For comparison, I list below the history of initial launch attempts of new orbital rocket designs.
...

--
Markus Wilkinson
Hughes Space and Communications

Net: markw@sdds0.es.hac.com, mark@solkan.physics.usu.edu
Phone: 310/416-4647 (voice), 310/416-4073 (fax)

I used to think that it was terrible that life was so unfair. And then I thought, 'What if life were fair?' Then all the terrible things that happened to us would be because we deserved them. I take great comfort in the general hostility and unfairness of the universe.
Markus Cole, paraphrased

1082. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: taboo@itnlinx.win-uk.net
Message-ID: <113@itnlinx.win-uk.net>
Source record: 22299

In article <4p4qho$m09@news.jf.intel.com>, Jim Garver (jgarver@ichips.intel.com) writes:
>In article <4p3p4p$4cla@info4.rus.uni-stuttgart.de>,
> <moritz@ipers1.e-technik.uni-stuttgart.de> wrote:
>>
>>Cross yagis are more compact and easier to implement. A Helix
>>for two will require lots of fiberglass or other waterproof
>>material for the boom and the struts.
>
>I didn't mean to imply a helix for 2 meters, but rather for 3/4 meters.
>Apparently it is not so easy to design and implement even a linear yagi
>on this band. My Cushcraft AO-18 is an example.
>
>Has anybody got any good simulations for a helix? My modeling program
>by K6STI will not support enough segments to do more than a couple of
>turns.
>
>The appearance of a helix antenna is enough to make me try it.
>Reminds me of the old NASA ground stations.
>
>
>
>
>
>--
>jgarver@ichips.intel.com WA7LDV I don't speak for Intel
>

I used to work at a Nasa ground station (Winkfield Minitrack Station,
later called a STADAN Station (Sat Tracking and Data Acquisition
Network)). We used Crossed Yagis as we used both left and right circular
polarisation into diversity combiners. This was at 136 Mhz.

Ashley Booth taboo@itnlinx.win-uk.net G8DPH
"Far away is close at hand in images of elsewhere"

1083. Re: Question About 9600 Baud FSK Packet

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.SOL.3.93.960606104156.2203D-100000@spork.callamer.com>
Source record: 22300

When the answer appears regarding the passage of 9600 baud information
through the FT 990, please post it for all to read. TNX Cliff W6HDO/K7RR

On Wed, 5 Jun 1996, Lindsay wrote:

> A brief question about 9600 baud satellite packet.
> Will a Yeasu FT-990 (or any HF transceiver with a packet port)
> pass a 9600 baud satellite packet signal through the
> rear packet port, if it has been downconverted
> from 435 megs to 28 megs (FM)? I want to pass
> the signal through to my TNC. Thanks for your
> help.
>
>

1084. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.SOL.3.93.960606104532.2203E-100000@spork.callamer.com>
Source record: 22301

I agree that a two meter helix is a monster, BUT if you ever heard one of these perform you probably would find the fiberglass well worth it! 73
Cliff Buttschardt W6HDO/K7RR

On 5 Jun 1996 moritz@ipers1.e-technik.uni-stuttgart.de wrote:

> In article <4p1p9k$ih@news.jf.intel.com>,
> Jim Garver <jgarver@ichips.intel.com> wrote:
> >I suspect that most hams don't use helix antennas because most hams these
> >days buy their antennas and nobody sells a helix.
>
> Cross yagis are more compact and easier to implement. A Helix
> for two will require lots of fiberglass or other waterproof
> material for the boom and the struts.
>
> 73, Moritz DL5UH
>
>

1085. newbie: meteor scatter

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: "Lewis J. Gramer" <dedalus@latrade.com>
Message-ID: <834095637.27268@manta.latrade.com>
Source record: 22302

Hi, I'm a radio neophyte, interested in finding out more about equipment and technique for doing meteor forward scatter observations. (I'm an amat. astronomer and visual meteor observer.) What net and other resources (good magazines, local or national organizations, books written for people who are NOT RF gurus) can the readers of this group suggest?

Please respond via email to "dedalus@latrade.com", and I'll summarize to the froup if desired. Thanks!

==
/\ Lewis J. Gramer
____\/ Lattice Trading Inc.
\ /\ /\ /\ 225 Franklin St., Floor 29
____ _\/ \ /\ / Boston, MA 02110
/\ ___ \/ \/ Voice: 617-832-1808 Fax: 617-832-0060
\/ Email: dedalus@latrade.com
WWW: http://www.tiac.net/users/lattice
==

1086. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: drted@ix.netcom.com
Message-ID: <4p7no5$pp4@dfw-ixnews10.ix.netcom.com>
Source record: 22303

[Orange flaming rain falls from the sky.]

ProgrammerA: Hey Harry, did you remember to correct that last glitch
and recompile before the launch?

Harry (muttering to self.): Now lets see, was that 55647 ON LAUNCH
GOTO GUIDANCLOCK or 55647 ON GUIDANCLOCK GOTO LAUNCH???

Gee whiz, I sure would enjoy a job where I could miss a billion dollar
bug and just go on working tomorrow...

In <rlong-0606961142440001@ts19-14.homenet.ohio-state.edu>
rlong@magnus.acs.ohio-state.eduu (Ron Long) writes:
>
>In article <4p6i3m$8k9@bbcnews.rd.bbc.co.uk>, boyer@rd.bbc.co.uk (John
>Boyer) wrote:
>
>> Gary Watts (gwatts@qni.com) wrote:
>> : John,
>> : So what is the difference?
>> : It is still a unproven launch truck
>> : it was still destroyed.
>> : its payload is destroyed
>> : Gary Watts
>>
>> It makes quite a bit of difference. One indicates a guidance problem
the
>> other an engine/fuel problem.
>>
>> J.
>
>Latest word is that it is a guidance problem and may be software
related.
>I agree the problem is not serious, not like an engine that failed. It
>will be fixed quickly and the program will go on.
>ron.

--
Bye... Ted..
Deep in the Heart of the Armpits of Houston, Texas...

1087. Mir space station

Newsgroup: rec.radio.amateur.space
Date: 1996-06-06 00:00:00 UTC
From: ed
Message-ID: <4p7e2r$aa7@baleen.fore.com>
Source record: 22304

Just saw a Tracey Ulman show about a russian woman and an american man in space, lots of sexual tension going on in the tv show.

I couldent help but to laugh about it and think about Shannon on Mir.

So, how long has the russian cosmonaut been sealed in a tin can in space by himself?

Id bet Phyllis Diller would look like a super model after 4 months in space.

Is this a new kind of torture for Soviet men?

Ed

1088. WTB: YAESU G-5400B

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4p9dlv$dpc_004@litigate.mis.ca>
Source record: 22167

Anyone have one they want to sell? de Rick VE9HF.

1089. Re: Question About 9600 Baud FSK Packet

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: Lindsay <efrom@lancnews.infi.net>
Message-ID: <31B8C662.5F8F@lancnews.infi.net>
Source record: 22168

Clifford Buttschardt wrote:
>
> When the answer appears regarding the passage of 9600 baud information
> through the FT 990, please post it for all to read. TNX Cliff W6HDO/K7RR
>
> On Wed, 5 Jun 1996, Lindsay wrote:
>
> > A brief question about 9600 baud satellite packet.
> > Will a Yeasu FT-990 (or any HF transceiver with a packet port)
> > pass a 9600 baud satellite packet signal through the
> > rear packet port, if it has been downconverted
> > from 435 megs to 28 megs (FM)? I want to pass
> > the signal through to my TNC. Thanks for your
> > help.
> >
> >And the answer is no. I called Yaesu Tech Support.
Surely you didn't expect it to be that easy.

1090. R0MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: bd703@scn.org
Message-ID: <DsLu9p.JHs@scn.org>
Source record: 22305

Although there have been several reports of activity on 145.55 from MIR
in the past several weeks, I haven't heard a peep there since April 21st.

However I DID hear Yuri (or was it the other Yuri) on 143.625 mhz at 06:22
UTC on June 4th. He was speaking in Russian, presumably talking to the
ground station in California. (Can someone tell me where and what this
facility is ?)

Kerwin, N7JGW

--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

1091. Re: What happens now (Ariane 502)?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4p8udu$1up@bbcnews.rd.bbc.co.uk>
Source record: 22306

Ted Viens (drted@ix.netcom.com) wrote:
: [Orange flaming rain falls from the sky.]
:
: ProgrammerA: Hey Harry, did you remember to correct that last glitch
: and recompile before the launch?
:
: Harry (muttering to self.): Now lets see, was that 55647 ON LAUNCH
: GOTO GUIDANCLOCK or 55647 ON GUIDANCLOCK GOTO LAUNCH???
:
: Gee whiz, I sure would enjoy a job where I could miss a billion dollar
: bug and just go on working tomorrow...
:

Rather frightning isn't it. Imagine having that sort of responsibility.
We all make mistakes, but how the iron out ALL the bugs God only knows.
J.

1092. Re: Satellite position calculation.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DsMMKL.80w@pe1chl.ampr.org>
Source record: 22307

In <31B60768.6342@pentium100.sirnet.it> Vittorio Moretti <cmaus@pentium100.sirnet.it> writes:

>Can anybody help me?
>Which is the best algoritm to calculate the ham-satellite position using
>two line element?

It depends on the satellite height (or orbital period).
Popular algorithms include SGP4, SDP4 as described in "Spacetrack Report No. 3, Models for Propagation of NORAD Element Sets", F. R. Hoots and R. L. Roehrich, December 1980.

The "TLE Mean" model can be used for satellites above a certain height.

Detailed writeups of satellite calculation formulas and programs have (in the amateur radio community) also been made by W3IWI, HB9CVT and ON6UG.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1093. Radio Meteor Obs. Bull. May 1996: eta Aquarids, sporadic-E

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.69.31B82116@vvs.innet.be>
Source record: 22308

Radio Meteor Observation Bulletin No. 34 June 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

May 1996
Eta Aquarids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

May	UT										
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	33	48	53	58	71	78	108	122	98	126	106
2- 3	31	48	48	50	58	82	123	124	131	166	142
3- 4	33	37	51	61	52	80	101	105	147	164	186*
4- 5	24	44	47	54	79	86	122	161*	187*	256*	212*
5- 6	27	54	41	54	78	89	110	133*	170*	198*	141
6- 7	41	48	62	72	88	81	145	153*	162*	213*	143
7- 8	17	51	65	83	86	117	137	181*	212*	236*	151
8- 9	34	53	61	60	72	90	112	122	143	172	159

```
9-10 | 47 57 67 58 71 80 107 137 129 143 162
10-11 | 58 85 66 79 95 83 123 167 133 167 126
11-12 | 41 46 63 66 84 89 125 160 129 157 167
12-13 | - - - - - - - - - - -
13-14 | 19 37 26 38 45 55 62 74 74 82 106
14-15 | 36 43 38 46 71 79 82 97 83 106 123
15-16 | - - - - - - - - - - -
16-17 | 20 22 23 32 44 41 50 53 61 60 80
17-18 | - - - - - - - - - - -
18-19 | thunder storms
19-20 | Es Es Es Es Es 60 73 Es Es Es Es
20-21 | Es
21-22 | - - - - - - - - - - -
22-23 | 26 30 46 71 63 Es Es Es Es Es Es
23-24 | Es 31 39 54 53 62 70 72 Es Es Es
24-25 | - - - - - - - - - - -
25-26 | - - - - - - - - - - -
26-27 | - - - - - - - - - - -
27-28 | - - - - - - - - - - -
28-29 | - - - - - - - - - - -
29-30 | 29 34 39 53 69 80 78 115 108 99 82
30-31 | 32 51 67 44 70 75 93 98 106 113 83
31- 1 | 47 34 63 69 68 74 92 102 98 90 83
------|-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
May | UT
```

Notes:

. local time = UT + 2 hours
. * extended activity period of the eta Aquarids May 5 - 8.
The radiant of the eta Aquarids rises at 1h30 UT, and culminates
at 7h30 UT.
. early start of the sporadic-E season this year

Maurice De Meyere / Chris Steyaert

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector, direction east.
Receiver: AR-8000 SSB mode, narrow passband filter, no preamplifier.
Frequency: 59.2505 MHz,
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP38 program from AF9Y) on the PC where 640 channels of 2Hz width
are recorded and stored continuously. Every meteor reflection produces
a distinct whistle, which is recorded easily by the real time FFT
program in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width

is used for meteor identification, the other nearby "channels" are used to monitor interference, which can be identified easily. If any interference occurs, the whole 200 second recording of one frame is skipped.

The following figures show the total length of the meteor reflections during one hour, expressed as percentage. The number here shows 10 times this value. (e.g. 100 means 10 percent).

May 1996

UT	6,	7,	8,	9,	10,	11,	12,	13,	14,	15
0h	,	,	,	,	,	,	,	,	,	
1h	,	,	,	,	,	,	,	,	,	
2h	,	,	86,	,	,	,	,118,	,	77	
3h	,142,157,	53,	51,	59,	,104,	88,132				
4h	,142,184,109,161,158,	,131,115,	89							
5h	,275,215,198,164,186,	,138,118,127								
6h	,271,191,213,194,200,	,144,119,148								
7h	,233,176,184,150,180,	,111,111,127								
8h	,253,185,170,153,	,	,191,116,	96						
9h	,197,148,169,104,	,	,103,126,	88						
10h	,138,102,115,156,	,	,	90,117,	85					
11h	,112,	76,	70,184,	,	,131,114,	65				
12h	,	96,	63,	89,153,	,	,	52,	93,	34	
13h	33,143,	75,	85,150,	,	,	49,	73,	72		
14h	25,223,	81,	,	,	,	68,	83,	53		
15h	29,	,	45,	,	45,	,	,	,	,	78
16h	37,	,	48,	,	58,	,	,	28,	,	69
17h	,	,	52,	61,	44,	,	,	37,	52,	
18h	,	,	49,	,	,	,	,	33,	49,	
19h	,	,	91,	38,	,	,	,	36,	50,	50
20h	,	61,	,	61,	59,	,	,	,	,	55
21h	56,	70,	,	68,	64,	,	58,	50,	54,	58
22h	88,	73,108,	71,103,	,	79,	55,	73,	62		
23h	,	,	,	89,	,	,	,	,	75,	

| UT | 6, | 7, | 8, | 9, | 10, | 11, | 12, | 13, | 14, | 15 |
| May 1996

| May 1996

UT	16,	17,	18,	19,	20,	21,	22,	23,	24,	25,	26,	27,	28,	29,	30,	31
0h	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	
1h	,	,	,	,	,	,	,	,	,	,	,	,	,	,	,	
2h	128,	73,	,	,	,195,	,	,	,	,	,	,	,118,	,	83		
3h	106,121,	49,	67,	,165,132,149,	,	,	,	,	,150,115,121							
4h	137,131,118,155,	,159,126,153,	,	,	,	,	,123,138,112									
5h	162,141,167,234,	,181,174,149,	,	,	,	,	,145,164,137									
6h	169,183,166,130,	,226,209,154,	,	,	,	,	,182,149,151									
7h	214,170,144,	,	,155,141,	,	,	,	,	,	,145,125,138							

```
8h |
9h |174, 95, 99,114, , 82, 88, , , , , , , 97,104,119
10h |
11h | 93, 42, 91, 91, , 48, 86, , , , , , , 69, 65, 71
12h | 79, 43, 71,118, , 69, 44, , , , , , , 59, 78, 51
13h |
14h | 86, , , 77, , , , , , , , , , 84,107, 90
15h | , , ,101, , ,160, , , , , , , 74, 67, 65
16h | , , , , , , 96, , , , , , , 60, , 54
17h | 34, , , , 68, , 64, , , , , , , , , 51
18h | 30, , , , 72, , 43, , , , , , , 63, 55, 45
19h | 34, , , 47, 56, , 69, , , , , , , , 52,
20h | 42, ,108, , 74, 69, , , , , , , , 65, 69,
21h |
22h | 88, 95, 99,145, 97, 85,106, , , , , , 70, 63, 84,
23h | ,132, , , , , 88, , , , , , , , ,
----|------------------------------------------------------------
UT | 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31
May 1996
```

Notes:
. blank value means no data available, interference or sporadic "E".
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local)
. for further information: http://www.net4you.co.at/user/kuneth/info.html
. Es (sporadic "E") signatures have been found on the following days, making the radio meteor reception difficult (valid only for the observatory location, beaming east, like the meteor reception path, on 59 MHz):

May 18 to May 23: Es at least once
May 24 to May 28: observatory offline
May 29 to May 31: no Es

Werfried Kuneth

Location: Astronomical Observatory, University of Ghent, Belgium
(3 42' 32" E, 51 01' 25" N)
Antenna (2x): 4 elements horizontal Yagi, pointed East, elevation= 30 degs
Antenna amplifier: 10 dB gain
Frequency: (1)=66.29 MHz (signal) and (2)=65.3 MHz (interference control)
Receiver (2x): modified commercial FM receiver
Data acquisition: 12 bits PC-based A/D convertor, 250 Hz sampling rate
Interference rejection:
dual setup: receiver (1) tuned at distant transmitter, receiver (2) tuned at empty frequency. Anticoincindence measurement rejects registration of broadbanded spurious signals (lightnings, computers, ingition motors, etc).
Further information:
see WWW page (additional info + observational data)
http://allserv.rug.ac.be/~hdejongh/astro/meteor/meteor.html

Data format:
results are shown as total reflection time, expressed as
a percentage. The actual number shows 10 times this value.
When no figure is shown, the equipment was either out of service,
or results could have been affected by interference, sporadic E.

| May 1996 | 10x % reflec. time | horiz: day | vert: time |

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

0 | 13 13 16 12 13 23 22 13 19 19 15 13 22 20 23
1 | 26 17 23 29 28 26 21 26 26 20 33 22 21 33 57
2 | 34 43 32 74 71 59 47 41 47 36 47 36 41 33 26
3 | 48 67 119 44 67 61 61 105 50 46 70 88 58 39 52
4 | 62 51 61 52 203 130 58 81 52 64 47 63 67 46 56
5 | 69 90 79 126 121 111 131 102 58 71 61 81 70 47 44
6 | 71 60 76 137 177 109 107 98 70 81 56 91 74 45 56
7 | 97 38 82 112 173 121 116 86 78 54 84 116 51 44 66
8 | 61 70 67 74 162 94 83 49 61 74 73 88 58 81 47
9 | 69 30 53 102 125 75 65 53 60 80 82 94 45 60 48
10 | 73 33 39 52 114 46 34 53 44 45 56 59 38 74 32
11 | 38 24 34 57 131 24 47 45 23 24 51 40 25 24 36
12 | 25 13 23 22 29 21 18 24 19 87 33 51 37 19 15
13 | 18 19 12 17 22 9 16 22 9 53 25 21 9 65 21
14 | 14 18 20 18 20 18 15 19 12 79 17 33 14 15 9
15 | 12 9 7 15 19 16 19 12 12 80 14 30 11 8 11
16 | 9 11 21 11 12 13 16 12 10 15 8 14 18 8 24
17 | 9 9 19 10 11 8 13 11 7 10 10 12 8 12 11
18 | 13 8 9 6 11 10 12 11 5 8 10 14 7 8 13
19 | 8 14 11 12 15 7 12 11 62 12 9 11 10 11 13
20 | 10 15 9 10 12 10 16 7 21 14 12 14 8 9 14
21 | 7 7 7 10 14 8 9 10 10 13 9 15 7 9 8
22 | 15 10 11 19 8 8 12 10 10 15 10 16 11 15 10
23 | 13 9 13 12 10 9 17 15 9 19 15 61 19 9 12

| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

| May 1996 | 10x % reflec. time | horiz: day | vert: time |

| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

0 | 27 25 25 22 14 12 28 36 20 48 22 25 15 10
1 | 25 23 24 29 22 19 28 34 29 27 23 19 20 21 17 22
2 | 48 32 35 33 41 27 38 50 39 53 41 62 52 45 54 53
3 | 40 52 44 84 71 45 76 53 52 35 32 51 46 49 62 62
4 | 48 51 47 67 116 43 48 61 69 51 57 65 52 49 32
5 | 57 90 41 67 86 39 45 108 73 54 64 62 70 60 24
6 | 89 96 50 66 22 64 93 72 59 80 87 76 35 45
7 | 52 112 52 73 32 60 97 98 64 80 79 51 41 32

8 | 43 86 57 63 52 71 67 66 50 38 38 47
9 | 41 82 66 72 53 53 62 55 52 50 38 28 31
10 | 43 100 85 61 48 32 27 50 40 52 34 22 24 26
11 | 45 46 44 51 21 53 21 27 28 52 26 16 16 25
12 | 24 25 35 42 17 15 12 21 19 23 20 13 13
13 | 19 19 19 31 9 6 18 22 31 14 16 13 15
14 | 20 28 34 18 12 14 26 28 38 19 18 18 16
15 | 21 24 17 20 19 13 37 22 26 21 23 33 15
16 | 20 23 51 16 35 20 21 18 16 14 13
17 | 13 11 32 9 12 9 18 10 7 12
18 | 7 15 8 18 17 37 11 8 12 9
19 | 13 16 30 9 7 11 23 11 17 11 5 8 15
20 | 12 16 27 11 16 9 10 11 16 13 12 10 8 10
21 | 12 9 19 70 8 17 7 11 12 9 18 14 10 6 6 13
22 | 14 15 13 16 8 12 16 10 18 12 10 15 12 10
23 | 10 12 11 11 15 16 16 19 14 18 23 16 18 9 13

| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Notes:
. lots of sporadic-E between May 18 and May 27.
. eta Aquarids activity between May 4 and May 8.

Paul Vauterin

Observer: Chikara Shimoda
Location: Asahi,Nagano,Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were
recorded on a pen-recorder chart.

1996 | UT
April	11 12 13 14 15 16 17 18 19 20 21 22	*(1) **(2)
1	9 10 19 24 22 20 20 21 15 19 21 22	17.3 19.7
2	7 14 19 9 18 12 17 14 14 15 23 17	13.2 16.7
3	9 8 19 15 18	13.8
4	8 7 16 16 16 23 19 19 13 20 18 20	14.3 18.2
5	8 18 25 19 9 23 19 21 18 17 25 13	17.0 18.8
6	7 13 17 13 16 21 18 21 15 17 20 20	14.5 18.5
7	9 16 19 22 31 24 19 24 18 19 20 16	20.2 19.3
8	9 10 11 19 15 23 16 18 16 15 16 12	14.5 15.5
9	10 14 19 19 15 17 14 8 17 24 19 20	15.7 17.0
10	13 12 13 15 22 20 16 21 21 22 24 19	15.8 20.5
11	5 13 12 17 14 22 14 19 16	13.8 16.3
12	9 13 17 21 9 20 20 18 24 24 24 15	14.8 20.8
13	8 15 11 24 15 24 19 18 18 21 17 22	16.2 19.2

```
14 | 11 14 24 20 23 17 19 17 18 26 20 16 | 18.2 19.3
15 | 12 11 18 14 21 22 18 25 25 | 16.3 22.7
16 | 11 10 15 21 18 20 16 22 19 22 27 28 | 15.8 22.3
17 | 10 16 16 24 18 16 23 12 22 25 22 26 | 16.7 21.7
18 | 10 7 14 20 12 21 21 14 18 24 15 18 | 14.0 18.3
19 | 12 12 15 20 23 21 22 18 22 19 20 23 | 17.2 20.7
20 | 19 15 22 26 18 17 20 20 32 28 | 20.5 22.5
21 | 6 10 14 18 21 20 27 14 22 29 19 23 | 14.8 22.3
22 | 9 12 17 26 17 25 18 27 30 33 | 17.7 27.0
23 | 10 24 32 28 24 25 20 22 18 27 31 29 | 23.8 24.5
24 | 9 11 16 24 20 21 24 14 22 18 32 26 | 16.8 22.7
25 | 9 20 25 23 21 20 20 19 18 22 24 17 | 19.7 20.0
26 | 6 13 18 21 20 26 16 18 19 27 28 19 | 17.3 21.2
27 | 7 7 11 20 19 21 18 24 19 26 33 38 | 14.2 26.3
28 | 6 19 12 19 18 22 17 23 28 21 34 32 | 16.0 25.8
29 | 10 17 23 26 23 28 36 26 41 | 21.2 34.3
30 | 15 18 19 24 11 | 17.4
-----|-------------------------------------------------|-----------
April| 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

* (1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

- local time = JST = UT + 9 hours

Chikara Shimoda

----------------------------------------------------------------
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora, SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

Eta Aquarids 1996

UT | 03 May 04 May 05 May 06 May
--------------------------------------
0 | 153 155 187 130
1 | 191 181 231* 215
2 | 254 250 346* 245
```

```
3 | 342 307 419* 183
4 | 342 379 408* 528
5 | 385 485 409* 415
6 | 488 459 443* 508
7 | 468 569 697* 514
8 | 405 435 514* 409
9 | 298 271 360* 340
10 | 227 213 427* 259
11 | 157 114 206 221
12 | 199 158 198 189
13 | 116 148 211 167
14 | 98 114 122 203
15 | 111 82 89 125
16 | 77 83 79 100
17 | 73 62 36 61
18 | 64& 55 21 49
19 | 103& 54 41 84
20 | 82& 89 83 74
21 | 112& 131 108 117
22 | 144& 135 144 126
23 | 145 149 146 153
---------------------------------------
UT | 03 May 04 May 05 May 06 May
```

. * eta Aquarids maximum
. & 03-05-96" 18-22 UT Data lost - reconstructed from TB-data"

Ilkka Yrlola / via M. De Meyere

2. ANNOUNCEMENT

The "UKW-TV-Arbeitskreis der AGDX e.V." (VHF-TV Working group of the AGDX) produces a monthly electronic newsletter with European VHF stations updates.
Contact Onken Ulrich MSM PH43 CH <ulrich.onken@chbs.MHS.CIBA.COM> for further information.

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

4. CONTRIBUTORS / USEFUL ADDRESSES

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--
Christian Steyaert (RMOB9605) 7 June 1996

- -

1094. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: thomas.g.booth@den.mmc.com
Message-ID: <thomas.g.booth-060696215229@160.205.37.78>
Source record: 22309

In article <4p26pn$h57@murrow.corp.sgi.com>, jimf@zoinks.corp.sgi.com (Jim Fellows) wrote:

(snip)

> From what I have read (no personal measurements) the gain equations for
> helical antennas commonly seen are optimistic. The Antenna Handbook as well
> as the Satellite Experimenters Handbook both mention this I believe. I am
> going from memory, but I believe that I have seen a "rule of thumb" that a
> helical needs to be one-third to one-half again as long in wavelengths as a
> crossed yagi (no offset) system to produce the same forward gain.

It's been too long since I last looked, but I believe that Kraus in his first edition of _Antennas_ expressed the characteristics of the helical antenna in terms of directivity instead of gain. I suspect that somewhere along the way someone applied the old "directivity equals gain" notion in retelling the results of Kraus' work, thus setting the stage for "optimistic gain equations."

> I am planning on doing some experimentaion, but need the time and range to do
> so. I'd really like to see some more "real world measurements" published,
> since the texts I've seen state this is lacking.

I'm not sure I agree that there's a lack of "real world" measurements - much of Kraus' early work on helical antennas was based on empirical measurements rather than theory (which may account for some errors in Kraus' directivity results). I think that back in the '70s some systematic measurement of helical antennas was performed by a couple of individuals at The Aerospace Corporation; doggone it if I can't remember where that information can be found. If someone is interested, I could find the reference...

TGB

\\ The opinions expressed herein are my own. //

1095. Re: Our VHF/UHF frequencies at risk - again!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: clinton.peebles@saloon.bcbbs.net
Message-ID: <9606070604222466@saloon.bcbbs.net>
Source record: 22310

```
M> Just relax guys...we won't loose anything here...besides, the US and
M>Canada hams arn't the only one's using these freqs...this LEO freq allocation
M>request will have to battle every Country, not just No. America, since LEO's
M>receive and transmit farther then most Country boundaries...
```

I wouldn't go that far. Bill Gates is involved in this and he has more money than some countries. I agree chances are slim, but not impossible.

 QMPro 1.53 I'd give my right arm to be ambidextrous..

1096. MIR visual

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: colston@viagrafix.com
Message-ID: <4p9nvn$i7g@ionews.ionet.net>
Source record: 22311

Search results for MIR > Newsgroup article

Subject:

WATCH MIR ALL NIGHT
Date:

Wed, 05 Jun 1996 07:47:39 -0700
Newsgroups:

sci.astro
From:

Dale Ireland <direland@olympic.net>

Once a year the orbit of the space station MIR and the Earth's
inclination combine to
produce a situation such that MIR nearly follows the day-night
terminator throughout
it's orbit and so is visible all night on every pass. It may be
possible to see as many
as 4 consecutive passes theoretically 5. This is the week! For the
next few nights
centered around June 8 MIR can be seen on nearly every pass. A
visibility list by
city may be found at the SKY and Telescope web site www.skypub.com.

--
Dale Ireland

ty

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****
K
C Lloyd Colston kc5fm@amsat.org
5 Pryor, OK USA colston@viagrafix.com

F Jesus is Lord Living to serve
M http://www.angelfire.com/pages0/KC5FM/index.html
Success comes in cans; not can'ts
Business consulting, writing, telecommunications
****

1097. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: "F. Kevin Feeney" <fkf1@cornell.edu>
Message-ID: <4pa2po$la5@newsstand.cit.cornell.edu>
Source record: 22312

In article <1996Jun7.150250.6831@gov.nt.ca> John Boudreau,
ve8ev@gov.nt.ca writes:
>My only advice to someone contemplating building one is to collect
>construction information from several different sources and take the
>best ideas from each. The prime goal during construction is to make
>it as light as possible.
>YMMV
>73
>John - VE8EV

I agree with John wholeheartedly. I found the equations for dimensions and gain calculations in both the antenna handbook and the satellite experimenters handbook - some parts of what I wanted in each. The radial match info came from one of those two books and a construction article I found, which didn't exactly agree with each other. A little headscratching and some experimentation got us to the finished version.

And weight is the big bugaboo. Mine is rugged, it's hit the ground 3-5 times so far (I kept trying cheap tripods to hold the whole mess up) and keeps on trucking, but it's twice as heavy as the 14C on the other end of the support arm. I get away by sliding the horizontal arm back and forth in my turned sideways U100 to find the balance point between the antennas, and clamp it there. Looks a bit asymetric, but after you've digested the helix, that's nothing. :-)

73 de Kevin, WB2EMS
"When I was a child, Mommy told me not to talk to strangers. Now that I'm a ham, it's my hobby!"

1098. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: ve8ev@gov.nt.ca
Message-ID: <1996Jun7.150250.6831@gov.nt.ca>
Source record: 22313

Just to add some real world experience to this discussion, I built a simple 10 turn RHCP helix antenna for 70cm. Some wood, #10 guage wire and 1/2" grid wire mesh for the reflector. As a transmitting antenna it has always had outstanding performance. With 50 watts of drive I have always been able to generate a downlink signal on AO-13 comparable to other stations heard using crossed yagis. As a receiving antenna for FO-20, UO-22, KO-23, KO-25 and AO-27 (with 40' of 1/2" heliax and cheap preamp/10m downconverter both in the shack) I have never had any problems on receive either. Aside from being fairly easy to build and match, the biggest advantage of a helix is often not mentioned, that is that for the amount of gain developed it has a very broad beamwidth, on the order of 20-30 degrees for a 10 turn version. This is an invaluable feature when using manually controlled antennas on LEO birds. My only advice to someone contemplating building one is to collect construction information from several different sources and take the best ideas from each. The prime goal during construction is to make it as light as possible.
YMMV
73
John - VE8EV

==========
John Boudreau - VE8EV E-mail: ve8ev@amsat.org
Inuvik, NWT Packet: VE8EV@KL7AA.#NAK.AK.USA.NOAM
CANADA VE8EV@KO-23/KO-25
==========

1099. NORAD Two-Line Orbital Element Sets (TLE822)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4pa8bo$5k1@blackbird.afit.af.mil>
Source record: 22314

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #822 -
Alouette 1
1 00424U 62049A 96158.90881224 .00000034 00000-0 28924-4 0 2016
2 00424 80.4524 293.8777 0024826 54.6963 305.6498 13.67869294680939
ATS 1
1 02608U 66110A 96147.94477780 -.00000352 00000-0 10000-3 0 9695
2 02608 14.6153 353.0624 0010169 73.6366 286.4527 1.00346266 24658
ATS 3
1 03029U 67111A 96157.43981228 -.00000126 00000-0 10000-3 0 5030
2 03029 14.9134 359.9326 0010091 277.7756 29.3876 1.00273203104645
Starlette
1 07646U 75010A 96156.24541980 -.00000132 00000-0 75481-5 0 9746
2 07646 49.8245 199.7812 0205678 187.7145 172.0566 13.82190864 77176
LAGEOS
1 08820U 76039A 96156.54665830 .00000013 00000-0 10000-3 0 1986
2 08820 109.8534 21.6861 0043715 131.6954 228.7622 6.38664675213021
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96150.41626382 .00000070 00000-0 10000-3 0 6805
2 10061 12.3364 37.3178 0009978 138.2168 47.9291 1.00255647 14254
IUE
1 10637U 78012A 96146.70019288 -.00000205 00000-0 10000-3 0 2542
2 10637 35.7682 83.5064 1361412 56.1394 317.7933 1.00245172 19715
GPS BI-01
1 10684U 78020A 96153.64401905 -.00000027 00000-0 10000-3 0 4505
2 10684 64.9728 24.3509 0058961 162.7269 197.5227 1.98069497119100

```
GPS BI-02
1 10893U 78047A 96155.41676106 .00000001 00000-0 10000-3 0 2475
2 10893 63.1747 261.4355 0231907 15.2255 345.4817 2.01627575132530
GOES 3
1 10953U 78062A 96157.28724626 -.00000143 00000-0 10000-3 0 6671
2 10953 11.3405 40.1031 0002107 352.8681 223.4228 1.00273373 18936
SeaSat 1
1 10967U 78064A 96157.88653032 -.00000075 00000-0 19680-4 0 4919
2 10967 107.9921 151.3650 0001290 281.3276 78.7721 14.38107730939823
GPS BI-03
1 11054U 78093A 96154.50435150 .00000000 00000-0 10000-3 0 4096
2 11054 62.8655 260.5723 0046609 180.7912 179.2205 1.93505133128370
Nimbus 7
1 11080U 78098A 96156.19018958 -.00000049 00000-0 -68039-5 0 5914
2 11080 98.9463 19.0680 0009569 6.2945 353.8329 13.83693808889377
GPS BI-04
1 11141U 78112A 96153.78002399 -.00000029 00000-0 10000-3 0 468
2 11141 64.9933 26.7516 0050104 28.4144 331.9378 1.92894662 17586
GPS BI-05
1 11690U 80011A 96156.38497478 -.00000041 00000-0 10000-3 0 300
2 11690 65.3122 25.7359 0144320 189.7015 170.0880 2.00572609133949
GPS BI-06
1 11783U 80032A 96155.59007523 .00000007 00000-0 10000-3 0 1476
2 11783 62.3081 254.1138 0226983 29.4173 331.8687 2.03456765118556
GOES 5
1 12472U 81049A 96156.78498963 .00000025 00000-0 10000-3 0 9349
2 12472 8.1568 50.3151 0006334 40.3898 319.5383 1.00216670 12973
Cosmos 1383
1 13301U 82066A 96156.89279990 .00000005 00000-0 -10972-4 0 4994
2 13301 82.9313 142.8148 0026044 276.5580 83.2611 13.68074497695698
LandSat 4
1 13367U 82072A 96158.72909257 .00004035 00000-0 90308-3 0 9332
2 13367 98.0733 209.9640 0006923 165.2861 194.8490 14.57187209739010
DMSP B5D2-1
1 13736U 82118A 96158.34900143 .00000012 00000-0 23139-4 0 214
2 13736 98.6249 346.9108 0009954 58.1841 302.0307 14.25788214699523
IRAS
1 13777U 83004A 96159.06408522 -.00000245 00000-0 -13867-3 0 3385
2 13777 98.9670 344.7801 0013314 124.7640 235.4779 13.99247643351957
Cosmos 1447
1 13916U 83021A 96157.64355223 .00000075 00000-0 62768-4 0 5959
2 13916 82.9457 199.5741 0037199 182.1918 177.9081 13.74340805662150
TDRS 1
1 13969U 83026B 96155.87834081 -.00000299 00000-0 10000-3 0 5959
2 13969 8.9688 43.8837 0005337 288.3935 189.5149 1.00209356 21251
GOES 6
1 14050U 83041A 96156.19631347 -.00000261 00000-0 10000-3 0 5177
2 14050 6.9909 53.7393 0005267 359.4558 194.1945 1.00256650106065
OSCAR 10
1 14129U 83058B 96158.27042146 .00000096 00000-0 10000-3 0 4293
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2 14129 26.2624 206.1209 6010272 21.3933 355.6848 2.05880189 69645
LandSat 5
1 14780U 84021A 96156.51571675 .00000101 00000-0 32681-4 0 4765
2 14780 98.3311 214.3249 0002433 355.2271 4.8904 14.57054117652080
UoSat 2
1 14781U 84021B 96156.05891666 .00000063 00000-0 18362-4 0 8884
2 14781 97.7989 147.3674 0012329 127.6221 232.6070 14.69456277655728
GPS BI-09
1 15039U 84059A 96151.05221340 -.00000032 00000-0 10000-3 0 4156
2 15039 64.6443 21.1484 0082930 19.2644 341.1138 1.92302548 87083
Cosmos 1574
1 15055U 84062A 96155.26657603 .00000012 00000-0 -37987-5 0 7954
2 15055 82.9543 256.1964 0028960 22.0995 338.1400 13.73635002599073
GPS BI-10
1 15271U 84097A 96158.48589100 -.00000035 00000-0 10000-3 0 1645
2 15271 62.0461 254.6083 0158911 357.8436 2.1245 2.00611654 85053
Cosmos 1602
1 15331U 84105A 96158.87516840 .00000169 00000-0 17020-4 0 4792
2 15331 82.5328 122.6941 0020507 346.5332 13.5342 14.84755803631449
NOAA 9
1 15427U 84123A 96158.59314361 .00000046 00000-0 47922-4 0 7242
2 15427 98.9511 223.5151 0015193 348.1078 11.9732 14.13784440592132
GPS BI-11
1 16129U 85093A 96148.69820375 -.00000048 00000-0 10000-3 0 7256
2 16129 65.3178 24.8701 0157256 84.4317 277.4163 1.89368035 21530
Mir
1 16609U 86017A 96158.50040951 .00001299 00000-0 23505-4 0 5386
2 16609 51.6469 177.3678 0005064 49.5093 310.6367 15.58140512588288
SPOT 1
1 16613U 86019A 96158.85939281 .00000089 00000-0 62356-4 0 9459
2 16613 98.7289 227.2668 0001464 15.6516 344.4697 14.20019237218843
Cosmos 1766
1 16881U 86055A 96155.16349208 .00000178 00000-0 18495-4 0 3932
2 16881 82.5200 183.8936 0021102 26.9806 333.2501 14.83735464531762
EGP
1 16908U 86061A 96158.08944449 -.00000083 00000-0 10000-3 0 915
2 16908 50.0105 31.1223 0011394 345.0872 14.9626 12.44414361115023
NOAA 10
1 16969U 86073A 96158.73790701 .00000053 00000-0 40919-4 0 6507
2 16969 98.5233 156.1072 0014372 28.3135 331.8831 14.24986296505114
MOS-1
1 17527U 87018A 96156.22319410 -.00000043 00000-0 00000+0 0 4212
2 17527 98.9376 218.5203 0020082 3.4937 356.6362 14.00396951473176
GOES 7
1 17561U 87022A 96157.45277443 -.00000180 00000-0 10000-3 0 9278
2 17561 3.0382 69.5670 0005652 4.5241 248.2095 1.00356380 17188
Kvant-1
1 17845U 87030A 96159.14175251 .00023423 00000-0 30998-3 0 6510
2 17845 51.6469 174.1549 0005499 48.9441 311.1402 15.58182375522552
DMSP B5D2-3
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1 18123U 87053A 96158.49131207 .00000021 00000-0 32962-4 0 4651
2 18123 98.7709 348.9673 0013461 288.4646 71.5070 14.15443822462983
RS-10/11
1 18129U 87054A 96159.06234086 .00000022 00000-0 78877-5 0 2230
2 18129 82.9261 156.0239 0011169 174.8721 185.2548 13.72366229448780
Meteor 2-16
1 18312U 87068A 96158.11524137 .00000048 00000-0 30067-4 0 4859
2 18312 82.5561 0.8685 0010795 253.1865 106.8111 13.84079276444640
Meteor 2-17
1 18820U 88005A 96158.78102172 .00000052 00000-0 33251-4 0 9554
2 18820 82.5422 55.3874 0016149 321.6317 38.3694 13.84757360422083
DMSP B5D2-4
1 18822U 88006A 96159.06149011 .00000013 00000-0 23873-4 0 2719
2 18822 98.3844 351.6062 0007044 39.9431 320.2265 14.23191958433133
Glonass 34
1 19163U 88043A 96158.73343541 -.00000043 00000-0 10000-3 0 849
2 19163 65.2611 86.1854 0008173 168.7289 191.3260 2.13101337 62028
Glonass 36
1 19165U 88043C 96157.85196265 .00000003 00000-0 10000-3 0 4919
2 19165 65.2362 86.1837 0001082 355.3299 4.7224 2.13101869 62613
METEOSAT 3
1 19215U 88051A 96147.90227339 -.00000072 00000-0 10000-3 0 2618
2 19215 3.2258 67.8383 0001994 129.3183 230.3886 0.96947597 16974
AO-13
1 19216U 88051B 96159.17871540 .00001049 00000-0 25136-3 0 2159
2 19216 57.2510 112.3968 7422607 41.5495 355.3608 2.09804110 29632
OKEAN 1
1 19274U 88056A 96156.43140906 .00000098 00000-0 91796-5 0 944
2 19274 82.5120 283.5283 0019476 161.0308 199.1635 14.82484764427487
Meteor 3-2
1 19336U 88064A 96157.15980602 .00000051 00000-0 10000-3 0 4868
2 19336 82.5397 174.9345 0015822 268.1873 91.7439 13.16977826377891
Glonass 39
1 19503U 88085C 96153.65837495 -.00000027 00000-0 10000-3 0 3794
2 19503 65.5851 325.2454 0004728 158.0899 201.9325 2.13101740 60014
NOAA 11
1 19531U 88089A 96159.03704886 -.00000006 00000-0 21911-4 0 5382
2 19531 99.1856 176.8897 0010735 273.5523 86.4421 14.13093765397012
TDRS 2
1 19548U 88091B 96148.87823587 -.00000182 00000-0 10000-3 0 2088
2 19548 2.4558 72.2503 0000826 48.7272 165.9697 1.00265711 15325
Glonass 40
1 19749U 89001A 96156.98075906 .00000005 00000-0 10000-3 0 6007
2 19749 65.2024 85.7705 0007783 260.3498 99.5619 2.13101618 57598
Glonass 41
1 19750U 89001B 96154.68955798 -.00000000 00000-0 10000-3 0 5038
2 19750 65.2236 85.9188 0007697 229.2332 130.6889 2.13101733 57568
GPS BII-01
1 19802U 89013A 96158.17367081 .00000027 00000-0 10000-3 0 2416
2 19802 55.3232 111.0798 0022196 144.6661 215.4688 2.00576729 53490
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Akebono
1 19822U 89016A 96158.08524858 .00004704 00000-0 26837-3 0 7357
2 19822 75.0648 130.3533 3743704 114.7458 288.5257 7.91664519165816
Meteor 2-18
1 19851U 89018A 96155.47588265 .00000015 00000-0 -23568-6 0 4836
2 19851 82.5180 292.0055 0015405 19.2785 340.8955 13.84411706366936
MOP-1
1 19876U 89020B 96147.85768171 -.00000048 00000-0 10000-3 0 1999
2 19876 1.9461 71.1947 0020532 284.9932 74.2426 0.97109087 6419
TDRS 3
1 19883U 89021B 96152.46716902 -.00000262 00000-0 10000-3 0 2175
2 19883 0.0274 17.3010 0002541 101.1592 257.9607 1.00268326198953
GPS BII-02
1 20061U 89044A 96156.02360403 -.00000040 00000-0 10000-3 0 2238
2 20061 54.2042 286.9502 0155576 220.0223 138.8129 2.00562205 51190
Nadezhda 1
1 20103U 89050A 96158.79707970 -.00000032 00000-0 -51000-4 0 7965
2 20103 82.9586 116.3433 0039294 82.1556 278.4057 13.73865913347251
GPS BII-03
1 20185U 89064A 96158.36256789 -.00000167 00000-0 10000-3 0 2697
2 20185 55.1160 111.5294 0018899 312.4267 47.4471 2.00545987 49829
GMS 4
1 20217U 89070A 96158.79131519 -.00000379 00000-0 10000-3 0 3854
2 20217 1.7701 75.2770 0001808 139.1265 85.5877 1.00258807 25314
INTERCOSMOS 24
1 20261U 89080A 96158.82026417 -.00000003 00000-0 -10520-4 0 5033
2 20261 82.5913 277.3364 1242597 65.2380 307.2785 12.47340914304618
GPS BII-04
1 20302U 89085A 96158.39153412 -.00000047 00000-0 10000-3 0 2364
2 20302 53.2695 226.6898 0020945 191.6132 168.3713 2.00564110 48610
Meteor 3-3
1 20305U 89086A 96158.92712493 .00000044 00000-0 10000-3 0 5759
2 20305 82.5484 131.6855 0005781 350.0399 10.0738 13.04425791316861
COBE
1 20322U 89089A 96158.11396011 .00000166 00000-0 13417-3 0 2179
2 20322 98.9450 173.5490 0009520 64.2061 296.0088 14.03456017335375
Kvant-2
1 20335U 89093A 96158.05146078 .00013706 00000-0 18455-3 0 6082
2 20335 51.6462 179.6208 0005235 46.0981 314.0916 15.58152321371395
GPS BII-05
1 20361U 89097A 96154.91411886 -.00000042 00000-0 10000-3 0 844
2 20361 55.9879 53.8426 0085611 132.1006 228.6651 2.00564966 38020
COSMOS 2054 (Altair-1)
1 20391U 89101A 96158.51075324 .00000000 00000-0 10000-3 0 3617
2 20391 3.8056 62.9832 0003826 26.8247 333.1998 1.00271927 23962
SPOT 2
1 20436U 90005A 96158.21847470 -.00000044 00000-0 00000+0 0 800
2 20436 98.6983 232.0628 0001398 51.9766 308.1536 14.20039492330284
UO-14
1 20437U 90005B 96158.20393364 -.00000000 00000-0 16722-4 0 1871
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2 20437 98.5440 241.4250 0010277 235.3419 124.6805 14.29922195332480
UO-15
1 20438U 90005C 96157.22238095 -.00000004 00000-0 15356-4 0 9832
2 20438 98.5389 238.4236 0009091 244.2184 115.8062 14.29231595332218
PACSAT
1 20439U 90005D 96156.27292509 -.00000014 00000-0 11497-4 0 9852
2 20439 98.5558 241.7271 0010458 242.1803 117.8346 14.29976204332228
DO-17
1 20440U 90005E 96156.22648401 -.00000020 00000-0 92517-5 0 9855
2 20440 98.5605 242.3137 0010358 241.0966 118.9185 14.30117968332249
WO-18
1 20441U 90005F 96158.24506347 .00000033 00000-0 29709-4 0 9903
2 20441 98.5609 244.2429 0011123 235.4747 124.5381 14.30088138332533
LO-19
1 20442U 90005G 96155.79308945 .00000012 00000-0 21362-4 0 9853
2 20442 98.5619 242.3160 0011492 243.0140 116.9869 14.30196358332201
GPS BII-06
1 20452U 90008A 96156.30736855 .00000062 00000-0 10000-3 0 1729
2 20452 54.0299 167.2891 0059284 87.5435 273.1721 2.00568401 46557
MOS-1B
1 20478U 90013A 96158.22048854 .00000088 00000-0 10000-3 0 9424
2 20478 99.1285 227.8329 0004732 279.8005 80.2621 13.93962732243022
DEBUT
1 20479U 90013B 96159.13596119 -.00000040 00000-0 -24392-4 0 9855
2 20479 99.0229 186.1042 0540398 146.6739 216.9638 12.83341560296614
FO-20
1 20480U 90013C 96157.53394949 -.00000027 00000-0 53742-5 0 8828
2 20480 99.0263 184.6068 0540878 150.8634 212.3824 12.83233360296399
MOS-1B R/B
1 20491U 90013D 96156.77806171 .00000884 00000-0 17359-2 0 2487
2 20491 99.0689 248.5987 0469913 323.6542 33.3481 13.02988895300243
LACE
1 20496U 90015A 96156.67533450 -.00000283 00000-0 32947-6 0 6550
2 20496 43.1052 274.7814 0011935 328.3998 31.6047 15.35646730351901
Nadezhda 2
1 20508U 90017A 96158.78104818 -.00000053 00000-0 -72881-4 0 7974
2 20508 82.9547 250.8426 0046367 35.9079 324.5177 13.73507355314464
OKEAN 2
1 20510U 90018A 96159.22891740 .00000140 00000-0 15954-4 0 5033
2 20510 82.5241 235.0600 0019583 355.7342 4.3713 14.78603976338208
GPS BII-07
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UFO F2
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2 23549 143.3660 165.2809 0224529 51.2320 310.8278 15.15396284 64807
GFZ-1
1 23558U 86017JE 96156.23343906 .00001067 00000-0 17888-4 0 1310
2 23558 51.6484 178.7259 0006044 168.6395 191.4736 15.62170386587981
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ERS-2
1 23560U 95021A 96159.22068403 .13102698 00000-0 42116+1 0 2276
2 23560 98.5468 233.4367 0000824 65.2558 294.8711 14.32165625 59147
Spektr
1 23579U 95024A 96158.05146078 .00013706 00000-0 18455-3 0 3601
2 23579 51.6462 179.6208 0005235 46.0981 314.0916 15.58152321 59706
GOES 9
1 23581U 95025A 96157.44221088 .00000075 00000-0 00000+0 0 1967
2 23581 0.1849 83.5481 0000916 256.7452 297.7512 1.00278182 3790
Helios 1A
1 23605U 95033A 96157.86627901 .00000058 00000-0 20122-4 0 2259
2 23605 98.1221 93.7357 0001564 66.3292 293.8075 14.63840958 48890
UPM SAT 1
1 23606U 95033B 96157.86065294 .00000101 00000-0 26593-4 0 1729
2 23606 98.1016 94.7526 0006536 215.0797 144.9977 14.67249636 49055
CERISE
1 23607U 95033C 96155.33110300 -.00000012 00000-0 65033-5 0 936
2 23607 98.1030 92.1298 0005091 228.7966 131.2806 14.66944042 48707
TDRS 6
1 23613U 95035B 96152.52800041 .00000031 00000-0 10000-3 0 1732
2 23613 0.6307 83.3966 0001769 240.0378 298.9228 1.00023030 3210
Glonass 74
1 23620U 95037A 96158.18406930 .00000041 00000-0 00000+0 0 1443
2 23620 64.8252 204.3457 0018397 172.2392 187.8640 2.13102846 6772
Glonass 75
1 23621U 95037B 96158.36125022 .00000040 00000-0 00000+0 0 1476
2 23621 64.8381 204.3368 0017745 181.9205 178.1455 2.13102563 6776
Glonass 76
1 23622U 95037C 96155.60399383 .00000067 00000-0 00000+0 0 1473
2 23622 64.8288 204.4381 0036697 167.4734 192.7049 2.13102507 6715
Prognoz-M2
1 23632U 95039A 96157.42795100 -.00001289 00000-0 00000+0 0 607
2 23632 70.4840 249.8280 8405854 321.7760 348.0860 0.26357800 813
SICH-1
1 23657U 95046A 96156.22882524 .00000099 00000-0 11638-4 0 832
2 23657 82.5344 212.4847 0029658 90.4034 270.0574 14.73475796 40922
RADARSAT
1 23710U 95059A 96157.02449652 -.00000044 00000-0 00000+0 0 1430
2 23710 98.5700 163.8769 0001035 75.7114 284.4184 14.29971870 30505
Glonass 77
1 23734U 95068A 96157.59865286 .00000045 00000-0 00000+0 0 1208
2 23734 64.8259 204.2793 0018974 319.4593 40.4768 2.13102089 3722
Glonass 78
1 23735U 95068B 96158.28197365 .00000040 00000-0 00000+0 0 1139
2 23735 64.8278 204.2536 0007970 220.9979 139.0156 2.13125287 3739
Glonass 79
1 23736U 95068C 96156.42539624 .00000057 00000-0 00000+0 0 993
2 23736 64.8167 204.3345 0008325 207.5538 152.4870 2.13102113 3693
XTE
1 23757U 95074A 96159.19045712 .00006777 00000-0 53489-3 0 617
```

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2 23757 22.9842 119.7330 0012950 300.6754 59.2436 14.97661614 23963
1996010D
1 23797U 96010D 96157.78057944 .00044756 -25158-6 11987-2 0 900
2 23797 48.1693 253.3109 7341806 26.4242 357.2721 2.24786993 2406
Soyuz TM-23
1 23798U 96011A 96158.05146078 .00013706 00000-0 18455-3 0 967
2 23798 51.6462 179.6208 0005235 46.0981 314.0916 15.58152321 16465
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96157.33085429 .00000076 00000-0 42223-3 0 649
2 23824 47.7477 255.2313 7259166 25.0242 357.1400 2.21651823 2359
GPS BIIA-25
1 23833U 96019A 96156.43461551 -.00000066 00000-0 00000+0 0 331
2 23833 54.6989 348.5835 0038521 147.6692 212.5975 2.00564464 1421
Priroda
1 23848U 96023A 96158.05146078 .00013706 00000-0 18455-3 0 494
2 23848 51.6462 179.6208 0005235 46.0981 314.0916 15.58152321 6796
MSX
1 23851U 96024A 96158.86922955 -.00000047 00000-0 00000+0 0 302
2 23851 99.3898 137.8748 0019038 176.3519 183.7756 13.97724016 6056
Progress M-31
1 23860U 96028A 96158.05146078 .00013706 00000-0 18455-3 0 415
2 23860 51.6462 179.6208 0005235 46.0981 314.0916 15.58152321 4967
Palapa C2
1 23864U 96030A 96157.47476787 -.00000370 00000-0 00000+0 0 282
2 23864 0.0101 15.2982 0000836 53.7999 120.0419 1.00273432 215
MSTI 3
1 23868U 96031A 96157.71950709 .00001940 00000-0 41296-4 0 252
2 23868 97.1230 348.3701 0010318 218.7934 141.2580 15.46131966 3055
1996031B
1 23869U 96031B 96159.08195228 .00052488 29396-5 22678-3 0 206
2 23869 97.0747 350.5049 0041431 89.7264 270.8753 15.83724508 3322
Galaxy 9
1 23877U 96033A 96154.44520243 .00000050 00000-0 00000+0 0 149
2 23877 0.0805 110.4745 0099807 322.0238 219.9494 0.98798602 116
1996033B
1 23878U 96033B 96156.58349245 .00001857 00000-0 60586-4 0 87
2 23878 25.8354 1.0505 0842938 299.9767 51.9674 13.82094087 1590
1996033C
1 23879U 96033C 96155.99615744 -.00000202 00000-0 00000+0 0 53
2 23879 23.0281 73.0601 6783256 3.4106 359.4866 2.11149407 230
Gorizont 32
1 23880U 96034A 96157.85810137 .00000085 00000-0 00000+0 0 199
2 23880 1.4590 283.7817 0014700 332.7500 359.7675 1.00265097 114
1996034B
1 23881U 96034B 96149.37506907 .12519477 12777-4 84098-4 0 213
2 23881 51.6253 265.1638 0010849 276.2132 83.7707 16.52789070 548
1996034C
```

```
1 23882U 96034C 96146.93642506 .15866946 12578-4 59433-3 0 42
2 23882 51.6150 278.9349 0004235 339.3430 27.3955 16.44057387 145
1996034D
1 23883U 96034D 96157.08711348 -.00000172 00000-0 00000+0 0 21
2 23883 1.4968 283.6951 0021021 333.9453 26.7360 0.97949646 103
1996034E
1 23886U 96034E 96157.36984255 .00000320 00000-0 16865-3 0 40
2 23886 47.3301 280.4131 7317002 2.9023 359.6186 2.22624971 252
1996034F
1 23887U 96034F 96157.38856030 -.00000024 00000-0 84617-4 0 56
2 23887 47.4051 280.4797 7297361 2.8492 359.5537 2.22241794 255
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1100. WTB:Kansas City Tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4p9di3$dpc_002@litigate.mis.ca>
Source record: 22315

How much is a Kansas City Tracker and can someone give me a phone number for them. Thanks. de Rick VE9HF. Anyone have one forsale?

1101. WTB: KLM SAT ANTS

Newsgroup: rec.radio.amateur.space
Date: 1996-06-07 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4p9dk9$dpc_003@litigate.mis.ca>
Source record: 22316

I'm looking to buy the 22C and 40C, or wahtever they are. The big ones. Anyone have any they want to sell? de Rick VE9HF.

1102. Trade DSP-93 for DSP2232 or 1232

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bb54e0.94e406c0$25a447cc@desktop>
Source record: 22169
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.swap

Hate to do it but I just have no time to tweak my DSP93 as I need to get it going for sat work. SO I wish to trade it for a DSp2232 or 1232. It is built and works perfectly. Also includes the PACCOMM TNC board installed. Includes all docs and software.

Thanks for the bandwidth

Get me at bsmith@msn.com.

73.

Bob Smith N3FTU
Suwanee, GA
mailto: bsmith@msn.com
http://www.wp.com/~bsmith
ARRL, TAPR

1103. RE: HELP: PSK-1T to PK-900 - Anyone done it?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bb54e1.1b8b2820$25a447cc@desktop>
Source record: 22170
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space

I've interfaced true TNC-2 TAPR header equipment to that header in the
PK900 David so I imagine it should work. Just Match the header outs to
the lisiting in the maunals and see if that works.

On Thursday, June 06, 1996, David Baker wrote...
>
> Thanks for reading this:
>
> I want to connect a PSK-1T to an AEA PK-900. Pacomm
> says it isn't possible, but I'm sure that hasn't stopped
> everyone. If anyone has gotten this combination to work,
> please email with the details.
>
> Many Thanks in advance,
> David - AB5PI
> --
> +---+
> | David E. Baker Internet: debaker@nortel.com (Richardson, TX, USA) |
> | My opinions do not necessarily reflect the opinions of my employer |
> +---+
>

1104. F I E L D D A Y Baltimore BRATS

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: Samuel Geller <sgeller@mail.bcpl.lib.md.us>
Message-ID: <Pine.SOL.3.93.960608093051.25630F-100000@mail>
Source record: 22171

```
================================================================================
The Baltimore Radio Amateur Television Society will hold their annual
Field Day at the Baltimore County Fire/Rescue Academy Training Center
on York Road, just inside the I-695 Beltway at Exit 26 in Towson, MD.

The event begins at 2:00 pm. on Saturday June 22nd., and goes
continously until Sunday June 23d. at 2:00 pm. Amateur radio
operators are also invited to assist in the setup beginning at
8:00 am. on Saturday morning and after the event on Sunday afternoon.

Field Day is a conglomeration of a contest, an emergency
preparedness exercise (all operation is via generator or battery
power) and a public relations event to help publicize ham radio.
Please plan to join us and operate at least some of the time
between Saturday afternoon and Sunday afternoon. Plan to bring your
family and friends as well, and expose them to ham radio. (Licensed
operators will be on hand to assist them.)

Refreshments will be provided.

For more information, contact the BRATS at (410) 467-4634
home page: http://www.smart.net/~brats
e-mail: brats@smart.net

REMINDER: Enter only from York Road....and please don't park in an
unauthorized parking space. Talk-in is available on 2 meters-amateur
radio 147.63/03.
================================================================================
```

1105. H A M F E S T and Computer Fest

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: Samuel Geller <sgeller@mail.bcpl.lib.md.us>
Message-ID: <Pine.SOL.3.93.960608093236.25630G-100000@mail>
Source record: 22172

```
---------------------------------------------------------------
| The Famous BRATS Maryland |
| |
| H A M F E S T and C O M P U T E R F E S T |
| |
| Sunday July 28, 1996 |
| |
| At the Maryland State Fairgrounds, Timonium, MD |
| (On York Road, just North of the Baltimore Beltway (695)) |
| |
| Air Conditioned Building LARGE Tailgating Area |
| |
| Plenty of Free Parking |
| Accessible to the Handicapped |
| For Information, or table reservations, call (410)467-4634 |
| OR brats@smart.net OR our home page: http://smart.net/~brats |
| |
| Talk-in on the BRATS Repeater System 147.030(+) and 224.960(-) |
---------------------------------------------------------------
```

1106. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: Ron Lile <rel@bcl.net>
Message-ID: <Dsp844.4Il@bcl.net>
Source record: 22173

I can agree that helix are big for two meters
I have modeled them on EZnec, but find it just as easy to design them with a spread sheet or a calculator. There are equations around with sufficient accuracy for amateur use.

As to the materials, I have used at many frequencies aluminum for the boom and fiberglass road markers
for the strutts. 1.25 inch aluminum in either round of square cross section works out to about 10 -12 feet. The fiberglass is 3/8 inch diameter and costs only a few $ for 3 feet.

But, I still like crossed yagis because it is still smaller and is easier to change circularity. They are harder to make for <3 dB ellipicity though

See QEX ~ March 1994 about discussion on metal booms.

Ron K0RL

Clifford Buttschardt <cbuttsch@slonet.org> writes:
> I agree that a two meter helix is a monster, BUT if you ever heard one of
> these perform you probably would find the fiberglass well worth it! 73
> Cliff Buttschardt W6HDO/K7RR
>
>
> On 5 Jun 1996 moritz@ipers1.e-technik.uni-stuttgart.de wrote:
>
> > In article <4p1p9k$ih@news.jf.intel.com>,
> > Jim Garver <jgarver@ichips.intel.com> wrote:
> > >I suspect that most hams don't use helix antennas because most hams these
> > >days buy their antennas and nobody sells a helix.
> >
> > Cross yagis are more compact and easier to implement. A Helix
> > for two will require lots of fiberglass or other waterproof
> > material for the boom and the struts.
> >
> > 73, Moritz DL5UH
> >
> >
>

1107. ARLK040 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-08 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk040.1996@arrl.org>
Source record: 22174
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK040
ARLK040 Keplerian data

ZCZC SK40
QST de W1AW
Keplerian Bulletin 40 ARLK040
From ARRL Headquarters
Newington, CT June 8, 1996
To all radio amateurs

SB KEP ARL ARLK040
ARLK040 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 99978U 96172.64753500 .00004574 00000-0 90566-5 0 12
2 99978 39.0107 9.7607 0009801 335.0250 228.9835 15.98792223 15
Mir
1 16609U 86017A 96159.20590948 .00000990 00000-0 19486-4 0 05605
2 16609 51.6480 173.8323 0005156 51.5748 308.5709 15.58143218588395
AO-10
1 14129U 83058B 96159.24173482 -.00000041 00000-0 10000-3 0 04302
2 14129 26.1772 205.8678 6004632 21.7639 355.7061 2.05880127069666
RS-10/11
1 18129U 87054A 96159.42688009 .00000040 00000-0 27489-4 0 02263
2 18129 82.9260 155.7540 0011160 173.7570 186.3724 13.72366415448832
UO-11
1 14781U 84021B 96159.46359534 .00000107 00000-0 25873-4 0 09082
2 14781 97.7989 150.6195 0012351 116.9930 243.2530 14.69457663656221
RS-12/13
1 21089U 91007A 96159.13737295 .00000054 00000-0 41752-4 0 09143
2 21089 82.9234 196.7926 0027717 262.5548 97.2459 13.74070502267657
AO-13
1 19216U 88051B 96159.17871540 .00001049 00000-0 25136-3 0 2159
2 19216 57.2510 112.3968 7422607 41.5495 355.3608 2.09804110 29632
UO-14
1 20437U 90005B 96159.25354170 .00000025 00000-0 26380-4 0 01966
2 20437 98.5439 242.4547 0010238 231.8733 128.1528 14.29922548332635
```

```
RS-15
1 23439U 94085A 96159.16494588 -.00000039 00000-0 10000-3 0 01418
2 23439 64.8218 39.2942 0161694 200.8815 158.5456 11.27525454059657
AO-16
1 20439U 90005D 96159.28168771 .00000003 00000-0 18130-4 0 00038
2 20439 98.5554 244.6839 0010480 232.3260 127.6971 14.29976593332650
DO-17
1 20440U 90005E 96159.23494892 -.00000003 00000-0 15758-4 0 00046
2 20440 98.5608 245.2741 0010436 230.7952 129.2312 14.30118222332670
WO-18
1 20441U 90005F 96159.29455082 .00000001 00000-0 17231-4 0 09988
2 20441 98.5606 245.2741 0011159 232.3078 127.7087 14.30087982332680
LO-19
1 20442U 90005G 96159.29111401 -.00000002 00000-0 16131-4 0 00096
2 20442 98.5624 245.7593 0011477 232.0362 127.9783 14.30196435332709
FO-20
1 20480U 90013C 96159.09334903 .00000004 00000-0 74598-4 0 08943
2 20480 99.0263 185.8705 0540891 147.3295 216.2507 12.83233652296596
AO-21
1 21087U 91006A 96159.47326368 .00000093 00000-0 82657-4 0 07243
2 21087 82.9382 328.9013 0033117 233.6169 126.1932 13.74568724268673
UO-22
1 21575U 91050B 96159.23275183 .00000037 00000-0 26854-4 0 07184
2 21575 98.3493 225.9120 0007064 301.3660 58.6835 14.37026110256637
KO-23
1 22077U 92052B 96159.22186734 -.00000037 00000-0 10000-3 0 05866
2 22077 66.0780 210.3205 0012719 301.2099 58.7669 12.86297441179523
KO-25
1 22828U 93061F 96159.24537953 -.00000013 00000-0 12282-4 0 04718
2 22828 98.5773 235.1948 0009333 246.0382 113.9824 14.28142417108694
IO-26
1 22826U 93061D 96159.19182442 -.00000052 00000-0 -34491-5 0 04798
2 22826 98.5819 235.0880 0008386 261.5045 98.5192 14.27804166140576
AO-27
1 22825U 93061C 96159.19475067 .00000014 00000-0 23493-4 0 04970
2 22825 98.5814 234.9244 0007913 264.1348 95.8946 14.27696474140569
PO-28
1 22829U 93061G 96159.26188358 .00000040 00000-0 33571-4 0 04748
2 22829 98.5778 235.2699 0009322 248.2933 111.7254 14.28123772140612

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
June 11, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1108. WTB: Yaesu G-5400B

Newsgroup: rec.radio.amateur.space
Date: 1996-06-09 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4pd4mf$c14_002@litigate.mis.ca>
Source record: 22175

Anyone have one they want to sell? de Rick.

1109. Satelite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: brasil@nlink.com.br
Message-ID: <4pg0mr$3ie@mirage.nlink.com.br>
Source record: 22176

Does anyone knows how to do it thru the Net ?

Kleber de Burgos
Brasil@nilnk.com.br

1110. Re: newbie: meteor scatter

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: n7tcf@primenet.com
Message-ID: <4ph4k1$bti@nnrp1.news.primenet.com>
Source record: 22177

Start with "Beyond the Line of Sight", an ARRL book. It reprints a couple of article from QST
on meteors.

In <834095637.27268@manta.latrade.com>, "Lewis J. Gramer" <dedalus@latrade.com> writes:
>Hi, I'm a radio neophyte, interested in finding out more about equipment
>and technique for doing meteor forward scatter observations. (I'm an amat.
>astronomer and visual meteor observer.) What net and other resources (good
>magazines, local or national organizations, books written for people who
>are NOT RF gurus) can the readers of this group suggest?
>
>Please respond via email to "dedalus@latrade.com", and I'll summarize to
>the froup if desired. Thanks!
>
>==
> /\ Lewis J. Gramer
>____\/ Lattice Trading Inc.
> \ /\ /\ /\ 225 Franklin St., Floor 29
> ____ _\/ \ /\ / Boston, MA 02110
> /\ ___ \/ \/ Voice: 617-832-1808 Fax: 617-832-0060
> \/ Email: dedalus@latrade.com
> WWW: http://www.tiac.net/users/lattice
>==

1111. How to track a satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: bf7237491@v9000.ntu.ac.sg
Message-ID: <1996Jun10.212737.1@v9000.ntu.ac.sg>
Source record: 22178

Can anybody help me answer this question?
How do I go about to track a satellite for example RS10?

1112. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: moritz@ipers1.e-technik.uni-stuttgart.de
Message-ID: <4phd5f$4atq@info4.rus.uni-stuttgart.de>
Source record: 22179

>Aside from being fairly easy to build and
>match, the biggest advantage of a helix is often not mentioned, that is
>that for the amount of gain developed it has a very broad beamwidth,
>on the order of 20-30 degrees for a 10 turn version.

Sorry, but it's not as simple as this.
The gain and the beam width of an antenna are interrelated, and
independent of the design as long as the
antenna under test does not incorporate an attenuator or amplifier.
This is simple geometry.

73, Moritz DL5UH

1113. How much is a Kansas City Tracker?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4pfsbo$c10_001@litigate.mis.ca>
Source record: 22180

How much is a Kansas City Tracker? Anyone have their number? Anyone have a used one they want to sell? de Rick VE9HF.

1114. WTB: YAESU G-5400B

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4pfsel$c10_002@litigate.mis.ca>
Source record: 22181

Anyone have one forsale?

1115. Re: How to track a satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960610164213.12274C-100000@spacelink>
Source record: 22182

On 10 Jun 1996 bf7237491@v9000.ntu.ac.sg wrote:

>
> Can anybody help me answer this question?
> How do I go about to track a satellite for example RS10?
>
>
Easy as cake! You need a good satellite tracking program for your
computer. THere are a bunch out there, including some free on-line
from NASA Spacelink. You need a source of Keplerian Elements
(you're at one right now) which are mathematical descriptions of
current satellite orbits. You type in, or automatically run in, the
elements. You need to set the location of your site and correct for the
time zone you live in. Bingo! The program will tell you where your
particualr satellite is at the present time, and when it will pass
overhead (or in range) again. Satellite tracking is interesting and fun,
too. Some good programs are Instant Track, Orbits, STS Tracker. There
are tons of other programs too, some more sophisticated, some less so.

---------- Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

1116. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4pi9b6$llp@news.jf.intel.com>
Source record: 22183

In article <4phd5f$4atq@info4.rus.uni-stuttgart.de>,
<moritz@ipers1.e-technik.uni-stuttgart.de> wrote:

>>... the biggest advantage of a helix is often not mentioned, that is
>>that for the amount of gain developed it has a very broad beamwidth,
>>on the order of 20-30 degrees for a 10 turn version.

>The gain and the beam width of an antenna are interrelated, and
>independent of the design as long as the
>antenna under test does not incorporate an attenuator or amplifier.
>This is simple geometry.

What about the F/B ratio? The screen reflector of a helix has to
increase the F/B ratio considerably so that the energy that usually
escapes to the rear of any kind of Yagi antenna instead must find
another way. I won't argue the broad beamwidth vs. gain of a helix
because I don't know yet but I have to think that plane , parabolic,
and corner reflectors vs. passive reflecting elements on a Yagi
are an example of geometric factors not independent of the design.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1117. Re: Satelite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-06-10 00:00:00 UTC
From: KD6FYK <kd6fyk@wco.com>
Message-ID: <31BD0C8C.5317@wco.com>
Source record: 22184

Kleber de Burgos wrote:
>
> Does anyone knows how to do it thru the Net ?
>
> Kleber de Burgos
> Brasil@nilnk.com.br

try http://206.103.128.4:80/logsat/

73 steve

1118. Re: Satelite Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb575c.56fab7e0$068067ce@ns.netwide.net>
Source record: 22185

There's at least two or three sites that do this. The first I found is at:
http://www.acs.ncsu.edu/scripts/HamRadio/sattrack.perl

Have fun!
Roberto ik8sqi

Interested in satellites? Check out:
http://www.netwide.net/logsat

> brasil@nlink.com.br (Kleber de Burgos) wrote in article
<4pg0mr$3ie@mirage.nlink.com.br>...
> Does anyone knows how to do it thru the Net ?
>
> Kleber de Burgos
> Brasil@nilnk.com.br
>
>

1119. JVFax7.0

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: m.aschauer@magnet.at
Message-ID: <15470.6497783@magnet.at>
Source record: 22186

hi there,
the jvfax7.0 is a fine program for all meteosat users (not only for them).
the author eberhard backeshoff has made a good job, even in the design of
the overlay-maps.
But unfortunatly there are no borders for the different countrys.
Im searching for a overlay map (meteosat format d2 and c03) w i t h the
borders if all european states.
if youve any idea how to add this borders to the existing overlay maps,
please let me know.
thanks in advance
73,
Michael Aschauer
e-mail: m.aschauer@magnet.at
--- OffRoad 1.9o registered to Michael Aschauer

1120. Re: How to track a satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: Larry Ledlow <LLEDLOW@mailgw.sanders.lockheed.com>
Message-ID: <31BDC626.27@mailgw.sanders.lockheed.com>
Source record: 22187

bf7237491@v9000.ntu.ac.sg wrote:
>
> Can anybody help me answer this question?
> How do I go about to track a satellite for example RS10?

Shareware tracking programs are available from many sources, including AMSAT via anonymous ftp. You'll need current orbital element sets, which describe the satellite motion. The data is posted in this newsgroup. Plug in the data and voila! satellite tracking made easy.

73 de NA5E
--

Larry L. Ledlow, Jr. lledlow@mailgw.sanders.lockheed.com
Principal Systems Engineer 1-603-885-3287 voice
SSD Communications Systems 1-603-885-7149 fax
Sanders - A Lockheed Martin Co. "Make it so!"

1121. Satellite Communications expertise needed

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: jkolin@cloud9.net
Message-ID: <4pkce4$ll0@news.cloud9.net>
Source record: 22188

If you are very familiar with SatComm or GPS or E.L.Ts please
contact me.

Jay Kolinsky
Pound Ridge, NY
914-764-5775=Day

1122. Satellites, which can hear me?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: zachb@iastate.edu
Message-ID: <zachb.834512008@oper.cc.iastate.edu>
Source record: 22189

Hi,

I would appreciate some advice on which satellites I could talk to and hear using a FM only dual-band 2m/73cm mobile rig. I live in central Iowa (usually).

I have been playing with sattrack and find it quite useful. But I dunno which satellite I should be trying to hear/talk to. It seems 2m/73cm is a good combination, but mostly I've heard about ssb stuff, not too much FM, especially voice (not packet).

Are there any satellites which I could possibly hear and talk to (fm repeater type?) with my FM dual-band rig?

Thanks for the info!

Zach KB0PIL
zachb@iastate.edu

--

Zach Beese Operations Staff
1320 Gateway, Apt. #611 Durham Computation Center
Ames, IA 50014 Iowa State University
****
email: zachb@iastate.edu
phone: (515) 296-2927 (home) or (515) 294-6935 (work)
URL: http://www.public.iastate.edu/~zachb
radio: KB0PIL

1123. ARLS005 Phase 3-D update

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls005.1996@arrl.org>
Source record: 22190
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS005
ARLS005 Phase 3-D update

ZCZC AS13
QST de W1AW
Space Bulletin 005 ARLS005
From ARRL Headquarters
Newington, CT June 11, 1996
To all radio amateurs

SB SPACE ARL ARLS005
ARLS005 Phase 3-D update

Ariane 5 failure could affect Phase 3-D launch

The spectacular failure of an Ariane 5 launch vehicle, the same type of rocket that's scheduled to carry the Phase 3-D satellite aloft later this year, may have an impact on the Phase 3-D program. The rocket, on its maiden operational test, had to be destroyed June 4 by ground-based command 40 seconds into the flight at an altitude of about 12,000 feet (4000 meters) when it appeared to veer off course. The launch was from the European Space Agency's Kourou launch facility in French Guiana, South America. Ariane 501 carried a group of four scientific satellites known as ''Cluster'' which were destroyed as well. No Amateur Radio satellites were aboard.

The AMSAT Phase 3-D spacecraft, now under construction, is manifested on the second flight of the Ariane 5 series (Ariane 502) which, according to ESA's latest schedule, is to be launched in October of this year. AMSAT officials say it's too early to know what effect the Ariane 501 failure will have on the 502 schedule, the possible Phase 3-D launch date, or the vehicle on which it will ride. But they do not rule out a schedule that extends beyond the re-entry of AO-13 into the Earth's atmosphere.

AMSAT-DL President Karl Meinzer, DJ4ZC, and AMSAT-NA President Bill Tynan, W3XO, expressed their sadness on hearing the news. In a joint statement they said, ''We at AMSAT have enjoyed a mutually beneficial relationship with ESA for over 15 years, and we are, quite naturally, distressed to hear of this unfortunate occurrence.'' They noted that except for the RS and Fuji satellites, all successful Amateur Radio satellite launches since the early 1980s have been on Ariane vehicles. Both men expressed confidence that the ESA team will overcome this setback and develop a successful launch vehicle. DJ4ZC and W3XO said they stand together in anticipating a successful

launch of Phase 3-D on a future Ariane mission.
NNNN
/EX

1124. ARLS006 Field Day in space?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls006.1996@arrl.org>
Source record: 22191
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB SPACE @ ARL $ARLS006
ARLS006 Field Day in space?

ZCZC AS14
QST de W1AW
Space Bulletin 006 ARLS006
From ARRL Headquarters
Newington, CT June 11, 1996
To all radio amateurs

SB SPACE ARL ARLS006
ARLS006 Field Day in space?

During this year's ARRL Field Day June 22-23, some SAREX activities
will take place on shuttle mission STS-78, set to launch June 20.
NASA Payload Commander Susan Helms, KC7NHZ, Mission Specialist
Charles Brady, N4BQW, and Payload Specialist Robert Thirsk, VA3CSA,
hope to find free time to hand out points from the shuttle to Field
Day ops. The crew will use separate receive and transmit
frequencies:

FM voice downlink (worldwide): 145.55 MHz
FM voice uplink: 144.91, 144.93, 144.95, 144.97 and 144.99 MHz
FM voice uplink (Europe only): 144.70, 144.75 and 144.80 MHz
FM packet downlink: 145.55 MHz
FM packet uplink: 144.49 MHz
NNNN
/EX
```

1125. ARLK041 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk041.1996@arrl.org>
Source record: 22192
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK041
ARLK041 Keplerian data

ZCZC SK41
QST de W1AW
Keplerian Bulletin 41 ARLK041
From ARRL Headquarters
Newington, CT June 11, 1996
To all radio amateurs

SB KEP ARL ARLK041
ARLK041 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 99978U 96172.64753500 .00004574 00000-0 90566-5 0 12
2 99978 39.0107 9.7607 0009801 335.0250 228.9835 15.98792223 15
Mir
1 16609U 86017A 96163.11819058 .00001369 00000-0 24404-4 0 05715
2 16609 51.6477 154.2102 0005078 65.0992 295.0524 15.58163216589052
HST
1 20580U 90037B 96163.16200088 .00000347 00000-0 19132-4 0 08683
2 20580 28.4699 257.2785 0006395 110.2505 249.8769 14.91065010137685
AO-10
1 14129U 83058B 96163.12722915 .00000003 00000-0 10000-3 0 4302
2 14129 26.1723 205.2357 6007420 22.7978 355.4952 2.05880692 69747
RS-10/11
1 18129U 87054A 96162.99936722 .00000018 00000-0 28938-5 0 02296
2 18129 82.9259 153.1137 0011382 163.7927 196.3589 13.72366326449321
UO-11
1 14781U 84021B 96163.00445993 .00000068 00000-0 19308-4 0 09095
2 14781 97.7997 154.0036 0012556 106.9063 253.3517 14.69457983656744
RS-12/13
1 21089U 91007A 96163.14233552 .00000035 00000-0 21152-4 0 09136
2 21089 82.9234 193.8234 0027640 250.9156 108.9004 13.74070654268204
AO-13
1 19216U 88051B 96162.03840914 .00002245 00000-0 57810-3 0 2185
2 19216 57.2504 111.8235 7424153 41.7519 355.3387 2.09816994 29696
```

```
UO-14
1 20437U 90005B 96163.10210559 .00000080 00000-0 47705-4 0 01917
2 20437 98.5435 246.2306 0010111 221.0313 139.0152 14.29923640333180
RS-15
1 23439U 94085A 96163.15617011 -.00000039 00000-0 10000-3 0 1397
2 23439 64.8216 32.8400 0161459 200.2085 159.2397 11.27525638 60103
AO-16
1 20439U 90005D 96163.13010497 .00000035 00000-0 30400-4 0 00015
2 20439 98.5558 248.4667 0010456 220.5499 139.4922 14.29977360333203
DO-17
1 20440U 90005E 96163.08298460 .00000032 00000-0 29111-4 0 00057
2 20440 98.5609 249.0593 0010422 218.9099 141.1335 14.30118995333220
WO-18
1 20441U 90005F 96163.14266860 .00000017 00000-0 23326-4 0 09924
2 20441 98.5604 249.0581 0011220 220.4662 139.5682 14.30088571333237
LO-19
1 20442U 90005G 96163.13894047 .00000038 00000-0 31523-4 0 00032
2 20442 98.5623 249.5449 0011440 219.0924 140.9459 14.30197202333258
FO-20
1 20480U 90013C 96163.14777426 -.00000048 00000-0 -43566-4 0 08979
2 20480 99.0262 189.1539 0540850 138.1382 226.2414 12.83233422297119
AO-21
1 21087U 91006A 96162.96724664 .00000094 00000-0 82657-4 0 07276
2 21087 82.9376 326.3130 0033142 223.2991 136.5560 13.74568960269152
UO-22
1 21575U 91050B 96163.13194409 -.00000007 00000-0 11859-4 0 07175
2 21575 98.3495 229.6953 0006683 287.4839 72.5619 14.37025977257199
KO-23
1 22077U 92052B 96163.18713373 -.00000037 00000-0 10000-3 0 5838
2 22077 66.0778 202.0190 0012910 300.2177 59.7559 12.86297433180038
KO-25
1 22828U 93061F 96163.16879230 .00000049 00000-0 37189-4 0 04701
2 22828 98.5771 239.0487 0009284 233.7832 126.2482 14.28143561109252
IO-26
1 22826U 93061D 96163.25631782 .00000058 00000-0 41229-4 0 4785
2 22826 98.5779 239.0756 0008344 248.7248 111.3042 14.27806039141157
AO-27
1 22825U 93061C 96163.11938812 .00000008 00000-0 20802-4 0 04940
2 22825 98.5813 238.7790 0007835 250.5826 109.4506 14.27696909141129
PO-28
1 22829U 93061G 96163.25541244 .00000013 00000-0 22534-4 0 4713
2 22829 98.5779 239.1927 0009326 234.0766 125.9549 14.28123998141188

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
June 15, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1126. FO-20 and Field day

Newsgroup: rec.radio.amateur.space
Date: 1996-06-11 00:00:00 UTC
From: George.Henry@f668.n115.z1.fidonet.org
Message-ID: <377_9606120742@station1.planetc.com>
Source record: 22193

Does anyone know if FO-20 will be available for Field Day operations, and what the current schedule for FO-20 is???

73 de KA3HSW

... No you cannot call 911! I'm downloading my mail!

1127. Not satellite tracking!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4pm2fs$fl2@bbcnews.rd.bbc.co.uk>
Source record: 22194

All this talk about sat tracking programs is making one fundamental mistake.

They are usually sat prediction programs. None of them actually track the sats.

J.

1128. NEED QSL Manager for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4pn9nh$58j@sloth.swcp.com>
Source record: 22195

Hello Everybody,
I am looking for the E-Mail address for Dave, N6JLH, the stateside
QSL manager for Mir. Please E-Mail it to me at n5zgt@swcp.com. I would
appreciate it!
Best of 73,
Brian, N5ZGT

1129. ANY VHF/UHF FM SATELLITES?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4pn9q1$58j@sloth.swcp.com>
Source record: 22196

Hello Everybody,
Are there any satellites on VHF/UHF that can be used by FM? I don't have an allmode XCVR, and was wondering if I could use any of the satellites using FM.
Thanks!
Best of 73,
Brian, N5ZGT

1130. NASA Channels

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: danny@godzilla.zeta.org.au
Message-ID: <4pmckn$u1d@gidora.kralizec.net.au>
Source record: 22197

Hi there, would anybody have or know where to obtain a list of
the frequencies that NASA uses when talking to Astronaughts in space,
and during launch.

Actually any frequency NASA uses would be much appreciated.

Please reply to my mail address, as this is for my father
and I don't frequent these newsgroups often.

Thanks again,
/\
* 7777777 7777777 DANNY STRINGER *
* 77 77 Australasia Pty. Ltd | Email: danny@zeta.org.au *
* 77 Systems St Leonards, N.S.W. | Phone: 015-064-023 *
* 77 77 Sydney, Australia. | tHiS.nATiOn.iS.A.rAvE.nAtiON *
* URL: http://www.zeta.org.au/~danny/docs/homepage.htm *
\/\/\/\/\/\ *finger danny@godzilla.zeta.org.au for PGP Public Key* /\/\/\/\/\/

1131. Cell Phone & GPS Expertise Needed

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: jkolin@cloud9.net
Message-ID: <4pnk0s$su4@news.cloud9.net>
Source record: 22198

I'm looking for eng.types that have experience with cell phone design
and or GPS.

Please contact me.

Jay K. NE2Q
in New York

1132. Re: NASA select broadcast on european satellites?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-12 00:00:00 UTC
From: william.r.jones.1@gsfc.nasa.gov
Message-ID: <4pmdg1$eac@post.gsfc.nasa.gov>
Source record: 22199

In article <31B30D10.4EC5@ee.port.ac.uk>, Erik Finskas OH2LAK <finskase@ee.port.ac.uk>
says:
>
>I've heard that NASA select transmissions from shuttle launches/missions
>are broadcasted via tv-satellites in US. Do anyone know is there such
>transmissions in
>european tv-satellites??

The Canadian Space Agency (CSA) used to retransmit NASA TV over
Olympus before it died. An earth station in Holland retransmitted
that to a European satellite. As far as I know now, there is no
other path from NASA TV to Europe.

BTW, there is a "shortwave" service via amatuer station WA3NAN,
which comes out of the Goddard Space Center in Greenbelt MD. 'NAN
retransmits the Shuttle Air-to-Ground voice communications to
amatuers over several HF frequencies and a local 2 meter frequency.

Listen on: 3860, 7185, 14295, 21395 HF & 147.45 Mhz

This is primarily a amatuer radio-oriented service, although there
are many SWLs that tune in.

Check out their Web site @
http://garc.gsfc.nasa.gov/www/garc-home-page.html

1133. Re: ANY VHF/UHF FM SATELLITES?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-13 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <31BFC4B9.3B3D@wco.com>
Source record: 22200

Brian Mileshosky, N5ZGT wrote:
>
> Hello Everybody,
> Are there any satellites on VHF/UHF that can be used by FM? I don't
> have an allmode XCVR, and was wondering if I could use any of the
> satellites using FM.
> Thanks!
> Best of 73,
> Brian, N5ZGT

brian,try ao-27--145.850up/436.800down

73 steve cm88ll

1134. Space Shuttle Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-06-13 00:00:00 UTC
From: af454@FreeNet.Carleton.CA
Message-ID: <4pnurj$c3f@freenet-news.carleton.ca>
Source record: 22201

Hello Folks !

I am a shortwave and scanner listener. I am currently looking for some
Space Shuttle Frequencies that can be heard in Ottawa Ontario Canada.

Do you know of any ?

I hope you folks can help.

Many Thanks,

James Poulin
Ottawa, Ont Canada

--

James Poulin
af454@freenet.carleton.ca

1135. Re: Space Shuttle Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-06-13 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4ppfb3$ctq@news.mhv.net>
Source record: 22202

In article <4pnurj$c3f@freenet-news.carleton.ca>, af454@FreeNet.Carleton.CA (James Poulin) wrote:
>
>Hello Folks !
>
>I am a shortwave and scanner listener. I am currently looking for some
>Space Shuttle Frequencies that can be heard in Ottawa Ontario Canada.
>
>Do you know of any ?
>
>I hope you folks can help.
>
>Many Thanks,
>
>James Poulin
>Ottawa, Ont Canada
>
>James Poulin
>af454@freenet.carleton.ca

Try WA3NAN, the Goddard amateur radio club on single side band:

3.860
7.185
14.285
14.295
21.390
21.395
28.650

Here in N.Y. I get them best on the first 2.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1136. QSL wall card holders..where?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-13 00:00:00 UTC
From: back@maine.maine.edu
Message-ID: <4pq712$a8n@service-2.agate.net>
Source record: 22203
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.amateur.antenna,rec.radio.swap

Hello all,
I was wondering if anyone out there knows where I can get some of the
QSL vinyl-like,clear QSL card holders that you can hang on a wall.?
Anyone have any suggestions, locations, phone #'s..

Thanks, J, N1RWY FN54VF

"Promoting the use of mobile computing..and mobile packet!"
http://www.umecut.maine.edu/~baack

1137. Re: QSL wall card holders..where?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-13 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <31C106DA.5F37@wco.com>
Source record: 22204
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.amateur.antenna,rec.radio.swap

Jason Baack wrote:
>
> Hello all,
> I was wondering if anyone out there knows where I can get some of the
> QSL vinyl-like,clear QSL card holders that you can hang on a wall.?
> Anyone have any suggestions, locations, phone #'s..
>
> Thanks, J, N1RWY FN54VF
>
> "Promoting the use of mobile computing..and mobile packet!"
> http://www.umecut.maine.edu/~baack

jason,20thcentury plastics,1-800-767-0777,stock #ppv840-000,holds 8,
19.00 per 100 with 2 free photo albums.
73 steve cm88ll

1138. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-14 00:00:00 UTC
From: jimeagle@execpc.com
Message-ID: <4pqc7o$pmj@homer.alpha.net>
Source record: 22205

>
>Has anybody got any good simulations for a helix? My modeling program
>by K6STI will not support enough segments to do more than a couple of
>turns.
>

Kraus's book on Antennas, a standard work in almost all college libraries, gives a lot of info on Helix antennas.

Johnson's book on Antennas, McGraw Hill, discusses the subject further and includes matching information (originated, by the way, by Kraus apparently.)

IEEE proceedings in the 1960-1975 period has a lot of references to these antennas.

>The appearance of a helix antenna is enough to make me try it.
>Reminds me of the old NASA ground stations.

Read just about any satellite article in Radio Electronics or Electronics Illustrated in the 60's or 70's and you'll see single, dual, or quad helix antennas for tracking. Since the basic impedance of a helix is about 140 Ohms, two paralleled provide 70 Ohms and four provide 35 Ohms.. both of which can be fairly easily matched to 50 Ohms using coaxial transformers. The VHF handbook has construction info on making these using hardware store square aluminum tubing with appropriate connectors and center conductor diameter.

=== jimeagle@execpc.com WB6JNN/9

1139. Re: ANY VHF/UHF FM SATELLITES?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-14 00:00:00 UTC
From: boblucas@netins.net
Message-ID: <4pqhjp$kb1@insosf1.netins.net>
Source record: 22206

MIR can be had on 145.55 and 145.800 FM simplexIn article
<4pn9q1$58j@sloth.swcp.com>, n5zgt@swcp.com says...
>
>Hello Everybody,
> Are there any satellites on VHF/UHF that can be used by FM? I don't
>have an allmode XCVR, and was wondering if I could use any of the
>satellites using FM.
> Thanks!
>Best of 73,
>Brian, N5ZGT
>
>
>

1140. WTB: YAESU G-5400B

Newsgroup: rec.radio.amateur.space
Date: 1996-06-14 00:00:00 UTC
From: litigate@mi.net
Message-ID: <4pqj4j$c30_003@litigate.mis.ca>
Source record: 22207

Anyone have one forsale? de Rick VE9HF.

1141. a question about FT736R

Newsgroup: rec.radio.amateur.space
Date: 1996-06-14 00:00:00 UTC
From: Michel Soldevila <sol@soleil.serma.cea.fr>
Message-ID: <31C15AE8.2700@soleil.serma.cea.fr>
Source record: 22208

Hi everybody,
Just a question about the FT736R : When using reduced power, say 10 W,
the ALC
meter doesn't deviate. How can I adjust the mic gain ?
Thanks for helping me
73 de F1GOC

1142. Re: How much is a Kansas City Tracker?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-14 00:00:00 UTC
From: Lee Groller <lfg4s@virginia.edu>
Message-ID: <31C1D853.214A@virginia.edu>
Source record: 22209

litigate wrote:
>
> How much is a Kansas City Tracker? Anyone have their number? Anyone have a
> used one they want to sell? de Rick VE9HF.
Rick...

I have one somewhere in my " junk " and will look for it if you are
interested. E-mail to lfg4s@virginia.edu.

Lee
WD4BAV

1143. ARLK042 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk042.1996@arrl.org>
Source record: 22117
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK042
ARLK042 Keplerian data

ZCZC SK42
QST de W1AW
Keplerian Bulletin 42 ARLK042
From ARRL Headquarters
Newington, CT June 15, 1996
To all radio amateurs

SB KEP ARL ARLK042
ARLK042 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 99978U 96172.64753500 .00004574 00000-0 90566-5 0 12
2 99978 39.0107 9.7607 0009801 335.0250 228.9835 15.98792223 15
Mir
1 16609U 86017A 96166.13250491 -.00000871 00000-0 -47034-5 0 05534
2 16609 51.6469 139.1006 0005377 72.3443 287.8131 15.58191764589526
AO-10
1 14129U 83058B 96165.06999368 -.00000011 00000-0 10000-3 0 04316
2 14129 26.1674 204.9170 6008172 23.3305 355.4069 2.05881143069782
RS-10/11
1 18129U 87054A 96165.98859067 .00000027 00000-0 13144-4 0 02308
2 18129 82.9257 150.9038 0011492 155.7083 204.4607 13.72366439449732
UO-11
1 14781U 84021B 96166.00057355 .00000048 00000-0 15854-4 0 09022
2 14781 97.7998 156.8663 0012775 98.7092 261.5561 14.69458474657189
RS-12/13
1 21089U 91007A 96166.12785452 .00000027 00000-0 12941-4 0 09102
2 21089 82.9233 191.6097 0027636 242.1193 117.7163 13.74070685268618
AO-13
1 19216U 88051B 96166.32757020 .00000250 00000-0 46083-3 0 2203
2 19216 57.2433 110.9434 7425809 42.1303 355.2427 2.09832812 29784
UO-14
1 20437U 90005B 96166.11098241 .00000021 00000-0 24793-4 0 02102
2 20437 98.5434 249.1824 0010237 211.2518 148.8057 14.29923465333618
```

```
RS-15
1 23439U 94085A 96166.08306677 -.00000039 00000-0 10000-3 0 01542
2 23439 64.8204 28.1042 0161039 199.7333 159.7312 11.27525998060439
AO-16
1 20439U 90005D 96166.13886800 -.00000003 00000-0 15504-4 0 09908
2 20439 98.5556 251.4236 0010503 210.9579 149.0994 14.29977319333639
DO-17
1 20440U 90005E 96166.16141260 .00000052 00000-0 37095-4 0 09954
2 20440 98.5608 252.0872 0010409 210.0410 150.0176 14.30119632333667
WO-18
1 20441U 90005F 96166.15119688 .00000047 00000-0 34967-4 0 00100
2 20441 98.5603 252.0171 0011093 211.3619 148.6903 14.30089201333669
LO-19
1 20442U 90005G 96166.14724068 .00000013 00000-0 21829-4 0 09963
2 20442 98.5624 252.5052 0011470 209.7422 150.3113 14.30197325333680
FO-20
1 20480U 90013C 96166.11060605 .00000001 00000-0 65761-4 0 8847
2 20480 99.0260 191.5539 0540758 131.4210 233.4676 12.83233874297499
AO-21
1 21087U 91006A 96165.95169209 .00000094 00000-0 82657-4 0 07276
2 21087 82.9377 324.1042 0033365 214.4662 145.4331 13.74569032269566
UO-22
1 21575U 91050B 96166.12596527 .00000031 00000-0 24852-4 0 07009
2 21575 98.3500 232.6014 0006776 278.9657 81.0766 14.37026604257628
KO-23
1 22077U 92052B 96166.14164565 -.00000037 00000-0 10000-3 0 06077
2 22077 66.0779 195.8338 0013096 299.7959 60.1747 12.86297475180411
KO-25
1 22828U 93061F 96165.76104853 .00000005 00000-0 19515-4 0 04638
2 22828 98.5772 241.5952 0009251 226.0194 134.0225 14.28143504109628
IO-26
1 22826U 93061D 96166.12949574 .00000004 00000-0 19377-4 0 04932
2 22826 98.5783 241.8974 0008333 239.8274 120.2083 14.27805942141564
AO-27
1 22825U 93061C 96166.13294900 .00000032 00000-0 30577-4 0 04844
2 22825 98.5812 241.7385 0007778 241.1875 118.8527 14.27697445141558
PO-28
1 22829U 93061G 96166.12794935 .00000072 00000-0 46238-4 0 04924
2 22829 98.5771 242.0125 0009299 225.2442 134.7981 14.28124966141594

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
June 18, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1144. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_834861938@rtfm.mit.edu>
Source record: 22210
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb, rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet mailing list counterparts and complements. It is intended to serve as a guide for the new reader on what to find where. Questions and comments may be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October 1994 to add the discussion of non-Usenet mailing lists and streamline most of the history discussion, and to change the moderator information for rec.radio.info.

History
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Way back when, before there was a Usenet, the Internet hosted a mailing list for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions were held on the mailing list, and sent to the mailboxes of those who had signed up for it. When the Usenet software was created, and net news as we now know it was developed, a newsgroup was created for hams: net.ham-radio. The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became progressively higher. First one by one, and then as part of two reorganizations, what was once one group became many. In the process, developments elsewhere on the net were reflected in the groups as they were created, most notably the change to place all of the ham radio groups in one hierarchy.

The collection of newsgroups continues to grow as more people join the net, and as more topics of discussion gain volume, I expect to see more groups be created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the notable exception being rec.radio.swap. There are also a few mailing lists that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them, and not to the groups that aren't. The whole idea of having different

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

1145. JVFax7.0

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: m.aschauer@magnet.at
Message-ID: <15470.4897264@magnet.at>
Source record: 22211

hi there,
the jvfax7.0 is a fine program for all meteosat users (not only for them).
the author eberhard backeshoff has made a good job, even in the design of
the overlay-maps.
But unfortunatly there are no borders for the different countrys.
Im searching for a overlay map (meteosat format d2 and c03) w i t h the
borders if all european states.
if youve any idea how to add this borders to the existing overlay maps,
please let me know.
thanks in advance
73,
Michael Aschauer
e-mail: m.aschauer@magnet.at
--- OffRoad 1.9o registered to Michael Aschauer

1146. Re: FO-20 and Field day

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: rlong@magnus.acs.ohio-state.eduu
Message-ID: <rlong-1506961629590001@ts12-5.homenet.ohio-state.edu>
Source record: 22212

In article <377_9606120742@station1.planetc.com>,
George.Henry@f668.n115.z1.fidonet.org (George Henry) wrote:

> Does anyone know if FO-20 will be available for Field Day operations, and
> what the current schedule for FO-20 is???
>
FO-20 operates in its normal analog (voice and cw) mode at all times. It
will be available for FD of course. Just run your tracking program to find
the time of the passes. Ron.

1147. amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: dr-guru@cuci.nl
Message-ID: <31c32bd9.175265@news>
Source record: 22213

Good euwning.

I am looking for a'n FTP site where to find the Kepler 2 line element's.
I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
but my kepler's are 7 day's old.
(I now ,it is not much.

Ton Muller
Live long and prosper.

1148. Kansas city satalite tracker???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: dr-guru@cuci.nl
Message-ID: <31c32c48.286269@news>
Source record: 22214

Euh.
Can any one say to me what the kansas city satalite trackingsystem will meen?
I am a'n dutch amateur how want to listen to mir and other stoff flouting space
(Excl dead russian commonauts (hi))
Ton Muller
Live long and prosper.

1149. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: Bill Meenahan <wjmeena@ix.netcom.com>
Message-ID: <31C3658D.6FB5@ix.netcom.com>
Source record: 22215

Ton Muller wrote:
>
> I am looking for an FTP site where to find the Keplerian elements.

====

W1AW posts the main ones here regularly, most recently on 11 June.

You can find a much larger set at

Celestial -- Satellite Orbital Element Sets from Dr Kelso
http://www.grove.net/~tkelso/

Best of luck to you, Tom!

-- Bill Meenahan
Laurel, Maryland, USA

1150. Re: How to track a satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-15 00:00:00 UTC
From: Bill Meenahan <wjmeena@ix.netcom.com>
Message-ID: <31C36722.5FBD@ix.netcom.com>
Source record: 22216

bf7237491@v9000.ntu.ac.sg wrote:
>
> How do I track a satellite for example RS10?
>====

Try WinOrbit. It's a free software package for Microsoft
Windows (3.1 or later), which will compute and display the position of
earth satellites. But there are other free tracking programs as well.

Here are pointers you should find useful:

WinOrbit
http://www.sat-net.com/winorbit/

Walnut Creek
http://www.polarnet.com/Files/Mirrors/Simtel1/disc1/satelite/00_index.htm

AMSAT
http://www.amsat.org/amsat/ftpsoft.html#win-trk

Dallas Remote Imaging Group
http://www.drig.com/

Celestial -- Satellite Orbital Element Sets from Dr Kelso
http://www.grove.net/~tkelso/

Spotting Satellites -- Jet Propulsion Laboratory
http://spacelink.msfc.nasa.gov/Instructional.Materials/
Interdisciplinary.Materials/Lesson.Plans.and.Activities/
Spotting.Satellites

[Combine the three lines of the above URL into one line, without
spaces, before copying into your browser.]

-- Bill Meenahan
Laurel, Maryland, USA

1151. Re: Space Shuttle Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: robert@kd3bj.ampr.org
Message-ID: <robert.834891382@kd3bj.ampr.org>
Source record: 22118

af454@FreeNet.Carleton.CA (James Poulin) writes:

>Hello Folks !

>I am a shortwave and scanner listener. I am currently looking for some
>Space Shuttle Frequencies that can be heard in Ottawa Ontario Canada.

>Do you know of any ?

>I hope you folks can help.

>Many Thanks,

>James Poulin
>Ottawa, Ont Canada

>--

>James Poulin
>af454@freenet.carleton.ca
try the Goddard Amateur Radio Club site. I think the address is
garc.gsfc.nasa.gov. They broadcast shuttle audio, have a list of the
freqs they broadcat on, and I believe a list of shuttle freqs in
general.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

1152. WISP and my MFJ 1270C

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bb5b7e.204329a0$01a447cc@desktop>
Source record: 22119

Trying to get WISP and my MFJ 1270C w/ MFJ 9600 board working. Problem is that MSPE does not put the TNC into KISS mode - I must do this manually for each pass. I see in the log that the commands are sent but I think something must be fouling up someplace. Any ideas.

I'm running @ 19.2 terminal and use the TNC-2 setting.

Thanks in advance. This sort of kills the automated aspect!

Bob Smith N3FTU
Suwanee, GA
mailto://bsmith@msn.com
http://www.wp.com/~bsmith
ARRL, TAPR

1153. Re: Helical antennas not popular?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jun16.121540.21324@ke4zv.atl.ga.us>
Source record: 22120

In article <4phd5f$4atq@info4.rus.uni-stuttgart.de>
moritz@ipers1.e-technik.uni-stuttgart.de () writes:
>>Aside from being fairly easy to build and
>>match, the biggest advantage of a helix is often not mentioned, that is
>>that for the amount of gain developed it has a very broad beamwidth,
>>on the order of 20-30 degrees for a 10 turn version.
>
>Sorry, but it's not as simple as this.
>The gain and the beam width of an antenna are interrelated, and
>independent of the design as long as the
>antenna under test does not incorporate an attenuator or amplifier.
>This is simple geometry.
>
>73, Moritz DL5UH

The geometry isn't quite so simple. What matters with respect to
gain are the solid angle subtended by the main beam, the level of
sidelobes, and the F/B ratio. The helix has symmetric E and H
planes, unlike most yagis, so the solid angle is a regular conic
section instead of a irregular pyramid section. Sidelobes are also
often much lower for the helix (but they can be larger too depending
mainly on the ratio of helix length to diameter). And the F/B of
a helix is almost always very good. Taken together, these factors
can allow the helix to have a greater gain for a given azimuthal
pattern than some yagis.

The major advantage of the helix over the yagi, however, is that
it offers a rather broad *bandwidth* over which its gain characteristics
remain good. High gain yagis are inherently narrowband antennas. The
helix is usable over a considerably wider bandwidth because it is a
travelling wave structure.

The major disadvantages are mechanical. A high gain helix is large
and difficult to support and orient.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1154. Mir Beaconing on 440

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4q0r0d$kmi@news.monad.net>
Source record: 22121

Has anyone else heard Mir's new beacon on 437.925 supposedly there is a new 9600 baud packet setup, and 440 repeater setup there
according to Miles (WF1F) it will soon be operational.. I am sure he will make an anouncement when he is ready..
it is a short woman's voice in german .. the signal is poor at best and very short so make sure you have your doppler shift set and you
might hear it.. in my opinion this is going to be a rich boy's toy.. but I guess that is the wave of the future... have fun.. CYA 73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

This country, with its institutions, belongs to the people who
inhabit. Whenever they shall grow weary of the existing Government,
they can exercise their constitutional right of amending it, or
their revolutionary right to dismember or overthrow it.
-- Abraham Lincoln (1809-1865)

1155. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: millerj@dnaco.net
Message-ID: <4q1soc$11n@pike.dnaco.net>
Source record: 22122

dr-guru@cuci.nl (Ton Muller) wrote:

>Good euwning.

>I am looking for a'n FTP site where to find the Kepler 2 line element's.
>I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
>but my kepler's are 7 day's old.
>(I now ,it is not much.

>Ton Muller
>Live long and prosper.
ftp.amsat.org

1156. Re: QSL wall card holders..where?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-16 00:00:00 UTC
From: "Dale \"Squeak\" Porray" <ad7k@accessnv.com>
Message-ID: <31C4F5D3.4712@accessnv.com>
Source record: 22123
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.amateur.antenna,rec.radio.swap

Jason Baack wrote:
>
> Hello all,
> I was wondering if anyone out there knows where I can get some of the
> QSL vinyl-like,clear QSL card holders that you can hang on a wall.?

Available at most well-stocked amateur dealers, including Amateur
Electronic Supply.

Our nearest store to you is in Wickliffe, Ohio ... their telephone number
is 800-321-3594.

73, and good luck!

"Squeak" Porray, AD7K
Manager, Amateur Electronic Supply/Las Vegas

1157. Re: The ANIK-2 internet satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-06-17 00:00:00 UTC
From: bytomatic@aol.com
Message-ID: <4q3q03$4cs@newsbf02.news.aol.com>
Source record: 22124

>There is a satelite, on 103.7 defrees west, and I wonder if I can receive
it,
>here in Istanbul - Turkey??

It is below the horizon at your location. Better luck will be had when a
closer bird starts carrying internet feeds.

1158. Re: Kansas city satalite tracker???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-17 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb5c76.2325d980$068067ce@ns.netwide.net>
Source record: 22125

Ton,

Take a look at http://www.netwide.net/logsat You will find a link to the
KCT.

Roberto

> dr-guru@cuci.nl (Ton Muller) wrote in article <31c32c48.286269@news>...
> Euh.
> Can any one say to me what the kansas city satalite trackingsystem will
meen?
> I am a'n dutch amateur how want to listen to mir and other stoff
flouting space
> (Excl dead russian commonauts (hi))
> Ton Muller
> Live long and prosper.
>

1159. Re: How much is a Kansas City Tracker?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-17 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb5c76.7ef1e920$068067ce@ns.netwide.net>
Source record: 22126

Rick,

Here's the info:

The Kansas City Tracker (KCT) sells for about $230 and is manufactured by:

L.L. Grace Communications Products
P.O. Box 1345
Voorhees, NJ 08043 USA
Tel. 609-751-1018 Fax 609-751-9705
email: n2rec@amsat.org

Take a look at LogSat's home page at http://www.netwide.net/logsat for
more info on its uses.

Roberto ik8sqi

> Lee Groller <lfg4s@virginia.edu> wrote in article
<31C1D853.214A@virginia.edu>...
> litigate wrote:
> >
> > How much is a Kansas City Tracker? Anyone have their number? Anyone
have a
> > used one they want to sell? de Rick VE9HF.
> Rick...
>
> I have one somewhere in my " junk " and will look for it if you are
> interested. E-mail to lfg4s@virginia.edu.
>
> Lee
> WD4BAV
>

1160. Re: Kansas city satalite tracker???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-17 00:00:00 UTC
From: "Jack E. Davis" <jedavis@mail.pacbell.net>
Message-ID: <NEWTNews.835078572.28859.pacmail@PacBell.pacbell.net>
Source record: 22127

> Ton,
>
> Take a look at http://www.netwide.net/logsat You will find a link to the
> KCT.
>
> Roberto
>
> > dr-guru@cuci.nl (Ton Muller) wrote in article <31c32c48.286269@news>...
> > Euh.
> > Can any one say to me what the kansas city satalite trackingsystem will
> meen?
> > I am a'n dutch amateur how want to listen to mir and other stoff
> flouting space
> > (Excl dead russian commonauts (hi))
> > Ton Muller
> > Live long and prosper.
> >

Don't overlook the TrakBox for AZ/EL control _and_ radio control.

Look at ftp.tapr.org for details. The manuals are there along with the
latest firmware. Great project. But then I am biased. :-)

--

Jack Davis - WA4EJR

1161. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: seamus@macronet.com
Message-ID: <4q549e$mh0@news.esrin.esa.it>
Source record: 22128

dr-guru@cuci.nl (Ton Muller) wrote:

>Good euwning.

>I am looking for a'n FTP site where to find the Kepler 2 line element's.
>I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
>but my kepler's are 7 day's old.
>(I now ,it is not much.

>Ton Muller
>Live long and prosper.

A real complete file of kep data is at the Air Force Institiute of Technology. the FTP is archive.afit.af.mil/pub/space/tle.new. Change the .new extension to .txt, erase the VERY FIRST LINE AT THE TOP OF THE TEXT EDITOR (and use the DOS editor) go no further below that first line and it will work wonderful. it conatins data for over 50 satellites including the ham ones.

Any problems do e-mail me.

Jim N2ETE

1162. Re: Kansas city satalite tracker???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: "JOSE V. GAVILA" <Fermax.esp@vlc.servicom.es>
Message-ID: <31C63B3A.3B0D@vlc.servicom.es>
Source record: 22129

Ton Muller wrote:
>
> Euh.
> Can any one say to me what the kansas city satalite trackingsystem will meen?
> I am a'n dutch amateur how want to listen to mir and other stoff flouting space
> (Excl dead russian commonauts (hi))
> Ton Muller
> Live long and prosper.

Hello Ton,

Well the Kansas City Tracker (or KCT for short) is a PC compatible ISA 8 bit card which allows, with the proper software (from Instantrack, MS-DOS to WiSP, Windows), to track the satellites or whatever flying object if you have the orbital keplerian data for it. I use one to track amateur satellites. There are two versions; KCT and KCT/T. The later adds the 'tuning' feature so you can control Doppler effect same time that you track the satellite (this is very useful for LEOS (low orbit satellites)), because, as they run very fast (about 1.5 hours one complete orbit!), Doppler effect if very high.

Please, if you want more specific info, tell me!

Best regards

73s JOSE - EB5AGV@AMSAT.ORG

1163. HamSats... HELP

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: NewsBoy! <103123.1142@CompuServe.COM>
Message-ID: <4q6qou$1bu$1@mhafc.production.compuserve.com>
Source record: 22130

Allright.. I am really confused now... Is there a comprehensive
guide to the different modes and how to operate on them
available? Where can i go for a written manual??

If anyone has any info, please e-mail and post it here...

Thanks!
Dylan

--
"I am personally responsible for the agony of Christ"
"I am personally responsible for the agony of Christ"
"I am personally responsible for the agony of Christ"
"I am personally responsible for the agony of Christ"

1164. HELP : phasing lines for X- yagi.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: Scott Macmillan <scott@golfmike>
Message-ID: <3caNKCAUYvxxEwDe@golfmike>
Source record: 22131

Hi all, thanks for your time. I have a Tonna 9 ele crossed yagi for
2 meters, and a 2 way power splitter. Can anyone tell me the best
way to make the phasing lines to give me right hand circular
polarization for AO10/13 etc?

Is it OK to route the cables down the boom of the antenna, or will
this distort the polarization?
The N type plug that connects the coax to the driven element is at the
end of a tube (about 10" long) that attaches to the boom, so it would
seem that the coax is to route along the boom. I have read that this is
not a good idea.

Thanks in advance, and see you on the birds.

--
Best 73's DE Scott
GM7OMU - IO75tv.

1165. Returned mail: Service unavailable

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: MAILER-DAEMON@ns.iunet.IT
Message-ID: <199606181407.AA10814@ns.iunet.it>
Source record: 22132

```
----- Transcript of session follows -----
While talking to wgdos.studio5.it:
>>> DATA
<<< 554 Transazione fallita; supero tempo
421 wgdos.studio5.it (TCP)... Deferred: Connection reset by peer during result wait with
wgdos.studio5.it
554 <ik1wvq@studio5.it>... Service unavailable: Connection reset by peer during result
wait with wgdos.studio5.it

----- Unsent message follows -----
Received: from ab.infocomm.it ([192.106.9.2]) by ns.iunet.it with SMTP id AA10405
(5.65c8/IDA-1.4.4 for <ik1wvq@studio5.it>); Tue, 18 Jun 1996 16:07:22 +0200
Received: from [132.239.254.201] by ab.infocomm.it id 82290.wrk; Tue, 18 Jun 1996 16:17:22
-1
Received: by mail.ucsd.edu; id EAA01426
sendmail 8.6.12/UCSD-2.2-sun
Tue, 18 Jun 1996 04:30:38 -0700 for ham-space-list
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Received: by mail.ucsd.edu; id EAA01405
sendmail 8.6.12/UCSD-2.2-sun
Tue, 18 Jun 1996 04:30:35 -0700 for ham-space-ddist
Message-Id: <199606181130.EAA01405@ mail.ucsd.edu>
Date: Tue, 18 Jun 96 04:30:33 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #179
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 18 Jun 96 Volume 96 : Issue 179

Today's Topics:
amsat kepler elements?? WHERE!!???
How much is a Kansas City Tracker?
Kansas city satalite tracker??? (2 msgs)
The ANIK-2 internet satellite

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
```

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 18 Jun 1996 00:32:32 GMT
From: seamus@macronet.com (Jim Laughlan)
Subject: amsat kepler elements?? WHERE!!???

dr-guru@cuci.nl (Ton Muller) wrote:

>Good euwning.

>I am looking for a'n FTP site where to find the Kepler 2 line element's.
>I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
>but my kepler's are 7 day's old.
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>Ton Muller
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satellites including the ham ones.

Any problems do e-mail me.

Jim N2ETE

Date: Mon, 17 Jun 1996 13:56:34 -0400
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: How much is a Kansas City Tracker?

Rick,

Here's the info:

The Kansas City Tracker (KCT) sells for about $230 and is manufactured by:

L.L. Grace Communications Products
P.O. Box 1345
Voorhees, NJ 08043 USA
Tel. 609-751-1018 Fax 609-751-9705
email: n2rec@amsat.org

Take a look at LogSat's home page at http://www.netwide.net/logsat for
more info on its uses.

Roberto ik8sqi

> Lee Groller <lfg4s@virginia.edu> wrote in article
<31C1D853.214A@virginia.edu>...

> litigate wrote:
> >
> > How much is a Kansas City Tracker? Anyone have their number? Anyone
have a
> > used one they want to sell? de Rick VE9HF.
> Rick...
>
> I have one somewhere in my " junk " and will look for it if you are
> interested. E-mail to lfg4s@virginia.edu.
>
> Lee
> WD4BAV
>

Date: Mon, 17 Jun 1996 13:54:10 -0400
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: Kansas city satalite tracker???

Ton,

Take a look at http://www.netwide.net/logsat You will find a link to the
KCT.

Roberto

> dr-guru@cuci.nl (Ton Muller) wrote in article <31c32c48.286269@news>...
> Euh.
> Can any one say to me what the kansas city satalite trackingsystem will
meen?
> I am a'n dutch amateur how want to listen to mir and other stoff
flouting space
> (Excl dead russian commonauts (hi))
> Ton Muller
> Live long and prosper.
>

Date: Tue, 18 Jun 1996 07:14:34 +0200
From: "JOSE V. GAVILA" <Fermax.esp@vlc.servicom.es>
Subject: Kansas city satalite tracker???

Ton Muller wrote:
>
> Euh.
> Can any one say to me what the kansas city satalite trackingsystem will meen?
> I am a'n dutch amateur how want to listen to mir and other stoff flouting space
> (Excl dead russian commonauts (hi))
> Ton Muller
> Live long and prosper.

Hello Ton,

Well the Kansas City Tracker (or KCT for short) is a PC compatible ISA 8 bit card which allows, with the proper software (from Instantrack, MS-DOS to WiSP, Windows), to track the satellites or whatever flying object if you have the orbital keplerian data for it. I use one to track amateur satellites. There are two versions; KCT and KCT/T. The later adds the 'tuning' feature so you can control Doppler effect same time that you track the satellite (this is very useful for LEOS (low orbit satellites)), because, as they run very fast (about 1.5 hours one complete orbit!), Doppler effect if very high.

Please, if you want more specific info, tell me!

Best regards

73s JOSE - EB5AGV@AMSAT.ORG

Date: 17 Jun 1996 10:27:15 -0400
From: bytomatic@aol.com (Bytomatic)
Subject: The ANIK-2 internet satellite

>There is a satelite, on 103.7 defrees west, and I wonder if I can receive it,
>here in Istanbul - Turkey??

It is below the horizon at your location. Better luck will be had when a closer bird starts carrying internet feeds.

End of Ham-Space Digest V96 #179
****

1166. ARLS007 STS-78 update

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls007.1996@arrl.org>
Source record: 22133
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS007
ARLS007 STS-78 update

ZCZC AS15
QST de W1AW
Space Bulletin 007 ARLS007
From ARRL Headquarters
Newington, CT June 18, 1996
To all radio amateurs

SB SPACE ARL ARLS007
ARLS007 STS-78 update

The countdown continues for the Thursday, June 20, launch of space shuttle Columbia. Shuttle mission STS-78 will carry the SAREX payload. Three amateurs will be among the crew of seven--two Americans and one Canadian: Susan T. Helms, KC7NHZ, will serve as the payload commander. She was a crew member aboard the shuttle Endeavour during STS-54 in January 1993 and operated SAREX from aboard Discovery during STS-64 in September 1994, Charles E. Brady Jr, N4BQW, is a mission specialist on his first shuttle flight. Canadian Robert Brent Thirsk, VA3CSA, will serve as a payload specialist. He's also on his first shuttle flight.

Remaining crew members include Commander Terence T. Henricks, Pilot Kevin R. Kregel, Mission Specialist Richard M. Linnehan, and Payload Specialist Jean-Jacques Favier. During the mission, the shuttle will carry the Life and Microgravity Spacelab to conduct experiments in the weightless environment.

SAREX--the Shuttle Amateur Radio EXperiment--is sponsored by ARRL, AMSAT and NASA and is supported by the FCC. Amateur Radio has been flying aboard the shuttles since 1983.

Launch time for STS-78 is 10:49 AM (Eastern) from the Kennedy Space Center, Cape Canaveral, Florida. The launch will place the shuttle into Earth orbit at an altitude of 173 statute miles. The mission is planned to run for 16 days and ends July 7.

The SAREX Working Group has chosen 11 schools from around the world to make scheduled contacts with the shuttle during this SAREX mission, so students can ask questions of the astronauts during the contact. The schools selected for a scheduled radio contact during this mission are:

Bethlehem Central Senior High School, Delmar, New York

Eisenhower Middle School, San Antonio, Texas

Heritage Middle School, Colleyville, Texas

Anacortes Middle School, Anacortes, Washington

Valley Heights Junior-Senior High School, Blue Rapids, Kansas

Monroe Elementary School, Santa Barbara, California

Maple Grove Education Centre, Nova Scotia, Canada

Saskatoon Public AreospaCe Education (SPACE), Saskatoon, Saskatchewan, Canada

Toowoomba State High School, Queensland, Australia

Catholic Ladies College, Victoria, Australia

CENG--Nuclear Center of Grenoble, Grenoble, France

During most SAREX missions, crew members also make random contacts with earthbound hams. Over the past several years, ham astronauts have contacted thousands of amateurs around the world and, on many missions, they have even carried 2-meter packet. They make these contacts during their breaks, before and after mealtime, and during their pre-sleep time. Innovative computer software allows the crew to operate the packet gear in an unattended mode, allowing amateurs to make contacts with the robot station when the astronauts are working or sleeping. The call signs to look for on FM voice are KC7NHZ, N4BQW and VA3CSA. The FM packet call sign is W5RRR-1.

The crew uses separate receive and transmit frequencies. Please do not transmit on the shuttle's downlink frequency. The downlink is your receiving frequency. The uplink is your transmitting frequency. The crew will not favor any of the uplink frequencies, so your ability to communicate with SAREX will be the luck of the draw. Transmit only when the shuttle is within range of your station and when the shuttle's station is on the air. Here are the SAREX frequencies:

Worldwide FM Voice Downlink: 145.55 MHz

FM Voice Uplink: 144.91, 144.93, 144.95, 144.97, and 144.99 MHz

Europe-only FM Voice Uplink: 144.70, 144.75, and 144.80 MHz

FM Packet Downlink: 145.55 MHz

FM Packet Uplink: 144.49 MHz

Some SAREX activities will take place on shuttle mission STS-78 during this year's ARRL Field Day, June 22-23. KC7NHZ, N4BQW and VA3CSA hope to find enough free time to hand out points from the shuttle to Field Day ops.

Send reports and QSLs to ARRL EAD, STS-78 QSL, 225 Main St, Newington, CT 06111-1494, USA. Include the following information in your QSL or report: STS-78, date and time in UTC, frequency and mode. If you wish to receive a card, include an SASE using a large, business-sized envelope. ''The Net'' in Anacortes, Washington, has generously volunteered to manage the cards for this mission.

Members of the Goddard Amateur Radio Club in Greenbelt, Maryland, retransmit live shuttle air-to-ground audio over the amateur frequencies from club station WA3NAN. To listen in, tune to 3.86, 7.185, 14.295, 21.395, and 28.65 MHz and in the Maryland/DC area on VHF at 147.45 MHz.

Listen to W1AW for SAREX information and Keplerian element updates as they become available. For more information, check the ARRL SAREX Web Page, http://www.arrl.org/sarex or call the ARRL Educational Activities Department, 860-594-0301.
NNNN
/EX

1167. ARLK043 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk043.1996@arrl.org>
Source record: 22134
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK043
ARLK043 Keplerian data

ZCZC SK43
QST de W1AW
Keplerian Bulletin 43 ARLK043
From ARRL Headquarters
Newington, CT June 18, 1996
To all radio amateurs

SB KEP ARL ARLK043
ARLK043 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 99978U 96172.64753500 .00004574 00000-0 90566-5 0 12
2 99978 39.0107 9.7607 0009801 335.0250 228.9835 15.98792223 15
Mir
1 16609U 86017A 96170.10881283 .00002136 00000-0 34309-4 0 05573
2 16609 51.6476 119.1572 0005393 83.9994 276.1598 15.58209871590144
HST
1 20580U 90037B 96170.59184162 .00000297 00000-0 14114-4 0 8153
2 20580 28.4691 209.5221 0006098 185.8941 174.1576 14.91066493138799
AO-10
1 14129U 83058B 96165.06999368 -.00000011 00000-0 10000-3 0 04316
2 14129 26.1674 204.9170 6008172 23.3305 355.4069 2.05881143069782
RS-10/11
1 18129U 87054A 96169.99852363 .00000042 00000-0 29151-4 0 02318
2 18129 82.9253 147.9391 0011882 144.8383 215.3558 13.72366776450283
UO-11
1 14781U 84021B 96169.94999340 .00000032 00000-0 13148-4 0 09002
2 14781 97.7995 160.6379 0012822 87.5592 272.7087 14.69459074657765
RS-12/13
1 21089U 91007A 96170.13281974 .00000041 00000-0 27624-4 0 09085
2 21089 82.9229 188.6393 0027680 230.2228 129.6488 13.74071055269169
AO-13
1 19216U 88051B 96167.28069696 .00000326 00000-0 43448-3 0 02211
2 19216 57.2404 110.7445 7426044 42.2336 355.2251 2.09832268029804
```

```
UO-14
1 20437U 90005B 96170.09949569 -.00000084 00000-0 -15954-4 0 02090
2 20437 98.5439 253.0974 0010777 196.2055 163.8786 14.29922546334188
RS-15
1 23439U 94085A 96170.07429021 -.00000039 00000-0 10000-3 0 01545
2 23439 64.8202 21.6507 0161055 199.0130 160.4742 11.27526057060889
AO-16
1 20439U 90005D 96170.12722896 -.00000034 00000-0 37026-5 0 09926
2 20439 98.5557 255.3432 0010576 198.3476 161.7326 14.29977138334209
DO-17
1 20440U 90005E 96170.14937844 -.00000030 00000-0 52473-5 0 09919
2 20440 98.5605 256.0079 0010434 197.4461 162.6365 14.30119161334239
WO-18
1 20441U 90005F 96170.13924723 -.00000032 00000-0 43406-5 0 00101
2 20441 98.5603 255.9387 0011207 198.2837 161.7942 14.30088798334235
LO-19
1 20442U 90005G 96170.13498797 -.00000001 00000-0 16440-4 0 09910
2 20442 98.5624 256.4287 0011550 197.0584 163.0209 14.30197493334257
FO-20
1 20480U 90013C 96170.55482714 -.00000051 00000-0 -50035-4 0 8855
2 20480 99.0261 195.1536 0541042 121.3738 244.1471 12.83233276298069
AO-21
1 21087U 91006A 96170.46475840 .00000094 00000-0 82657-4 0 7145
2 21087 82.9372 320.7629 0033673 201.0650 158.9121 13.74569120270189
UO-22
1 21575U 91050B 96170.16441199 .00000030 00000-0 24370-4 0 06993
2 21575 98.3500 236.5203 0006842 266.6969 93.3444 14.37027169258206
KO-23
1 22077U 92052B 96170.10691180 -.00000037 00000-0 10000-3 0 06021
2 22077 66.0774 187.5319 0013376 299.3643 60.6028 12.86297484180923
KO-25
1 22828U 93061F 96170.10482797 .00000002 00000-0 18436-4 0 04625
2 22828 98.5771 245.8620 0009237 213.4112 146.6490 14.28143858110245
IO-26
1 22826U 93061D 96170.12391346 -.00000012 00000-0 12686-4 0 04908
2 22826 98.5788 245.8207 0008319 228.3262 131.7212 14.27806008142135
AO-27
1 22825U 93061C 96170.12767119 -.00000057 00000-0 -55417-5 0 04823
2 22825 98.5805 245.6590 0007856 227.1412 132.9106 14.27696978142123
PO-28
1 22829U 93061G 96170.12147929 -.00000018 00000-0 10252-4 0 04898
2 22829 98.5777 245.9365 0009341 212.5593 147.5009 14.28124380142169

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
June 22, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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1168. NORAD Two-Line Orbital Element Sets (TLE826)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4q7bql$s7o@blackbird.afit.af.mil>
Source record: 22135

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #826 -
Alouette 1
1 00424U 62049A 96167.02785025 .00000117 00000-0 12740-3 0 2066
2 00424 80.4569 285.8687 0025435 35.9526 324.3333 13.67870388682049
ATS 1
1 02608U 66110A 96164.88620970 -.00000350 00000-0 10000-3 0 9708
2 02608 14.6190 352.8750 0009241 81.9555 278.1241 1.00338050 24829
ATS 3
1 03029U 67111A 96169.18581740 -.00000121 00000-0 10000-3 0 5057
2 03029 14.9144 359.8059 0010091 278.1114 309.3341 1.00273250104764
Starlette
1 07646U 75010A 96168.89778353 -.00000120 00000-0 16553-4 0 9770
2 07646 49.8246 149.8524 0205944 229.5280 128.7499 13.82191227 78925
LAGEOS
1 08820U 76039A 96169.54373306 .00000015 00000-0 10000-3 0 2011
2 08820 109.8549 26.1389 0043692 129.9811 230.4852 6.38664447213851
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96167.55760218 .00000051 00000-0 10000-3 0 6837
2 10061 12.3630 37.1159 0010596 123.7954 129.4310 1.00261245 14425
IUE
1 10637U 78012A 96168.49745209 -.00000284 00000-0 10000-3 0 2582
2 10637 35.7447 83.1505 1366793 56.7909 263.5492 1.00239446 19923
GPS BI-01
1 10684U 78020A 96167.78054079 -.00000051 00000-0 10000-3 0 4553
2 10684 64.9855 23.9297 0059384 162.5647 197.6903 1.98069449119387

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GPS BI-02
1 10893U 78047A 96168.31186277 -.00000013 00000-0 10000-3 0 2501
2 10893 63.1713 261.0267 0231709 15.2178 345.5229 2.01627236132795
GOES 3
1 10953U 78062A 96167.27005502 -.00000143 00000-0 10000-3 0 6698
2 10953 11.3533 39.9836 0005343 332.0926 248.0177 1.00272749 19038
SeaSat 1
1 10967U 78064A 96170.19854388 -.00000002 00000-0 43669-4 0 4942
2 10967 107.9930 176.8428 0001398 286.5629 73.5358 14.38109417941596
GPS BI-03
1 11054U 78093A 96167.42389787 -.00000019 00000-0 10000-3 0 4119
2 11054 62.8504 260.1863 0046690 179.8076 180.2427 1.93505215128621
Nimbus 7
1 11080U 78098A 96168.69971080 -.00000102 00000-0 -54193-4 0 5944
2 11080 98.9429 30.9676 0009096 333.6363 26.4328 13.83692550891101
GPS BI-04
1 11141U 78112A 96161.55628798 -.00000071 00000-0 10000-3 0 477
2 11141 64.9885 26.5354 0050382 28.4185 331.9028 1.92894619 17734
GPS BI-05
1 11690U 80011A 96162.86642355 -.00000062 00000-0 10000-3 0 321
2 11690 65.3145 25.5414 0144600 189.7207 170.0614 2.00572703134073
GPS BI-06
1 11783U 80032A 96167.38612699 -.00000006 00000-0 10000-3 0 1506
2 11783 62.3087 253.7168 0227143 29.4777 331.8302 2.03456979118796
GOES 5
1 12472U 81049A 96164.76723027 .00000030 00000-0 10000-3 0 9355
2 12472 8.1700 50.2336 0006333 40.6120 319.3048 1.00218814 13053
Cosmos 1383
1 13301U 82066A 96168.96030040 .00000005 00000-0 -10972-4 0 5021
2 13301 82.9318 133.9660 0025694 238.7223 121.1412 13.68074892697341
LandSat 4
1 13367U 82072A 96170.19641422 .00000006 00000-0 11216-4 0 9385
2 13367 98.0734 221.0841 0007355 129.8057 230.3786 14.57179307740681
DMSP B5D2-1
1 13736U 82118A 96170.13863997 .00000033 00000-0 32021-4 0 303
2 13736 98.6247 358.5091 0009799 28.4586 331.7126 14.25789509701209
IRAS
1 13777U 83004A 96170.07605006 -.00000084 00000-0 -28055-4 0 3483
2 13777 98.9654 355.5540 0013720 96.2863 263.9867 13.99246099353499
Cosmos 1447
1 13916U 83021A 96166.16155510 .00000109 00000-0 98405-4 0 5970
2 13916 82.9455 193.2748 0037727 158.0129 202.2653 13.74341936663322
TDRS 1
1 13969U 83026B 96168.68223973 -.00000301 00000-0 10000-3 0 5992
2 13969 8.9642 43.7036 0002652 338.5196 79.5286 1.00256691 21383
GOES 6
1 14050U 83041A 96169.40426355 -.00000255 00000-0 10000-3 0 5191
2 14050 7.0118 53.6014 0005386 11.5675 269.2274 1.00252233106192
OSCAR 10
1 14129U 83058B 96163.12722915 .00000003 00000-0 10000-3 0 4302
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2 14129 26.1723 205.2357 6007420 22.7978 355.4952 2.05880692 69747
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1 14780U 84021A 96170.18146299 .00000067 00000-0 25139-4 0 4800
2 14780 98.3283 227.9939 0001683 304.3453 55.7574 14.57055309654070
UoSat 2
1 14781U 84021B 96168.52003118 .00000013 00000-0 99306-5 0 8913
2 14781 97.7992 159.2709 0012770 92.0771 268.1897 14.69458795657559
GPS BI-09
1 15039U 84059A 96166.65273129 -.00000053 00000-0 10000-3 0 4175
2 15039 64.6458 20.7104 0083150 19.1416 341.2439 1.92302199 87384
Cosmos 1574
1 15055U 84062A 96168.23215013 .00000068 00000-0 57062-4 0 7988
2 15055 82.9552 246.6360 0028014 347.8497 12.1978 13.73635870600853
GPS BI-10
1 15271U 84097A 96168.45528970 -.00000002 00000-0 10000-3 0 1690
2 15271 62.0106 254.2769 0153789 358.2442 1.8077 2.00613544 85257
Cosmos 1602
1 15331U 84105A 96167.23184984 .00000136 00000-0 13140-4 0 4818
2 15331 82.5333 114.8665 0019247 319.3253 40.6527 14.84758178632681
NOAA 9
1 15427U 84123A 96169.63347211 .00000044 00000-0 47005-4 0 7373
2 15427 98.9461 234.5579 0014529 316.5233 43.4789 14.13786647593691
GPS BI-11
1 16129U 85093A 96169.82124139 -.00000055 00000-0 10000-3 0 7280
2 16129 65.3229 24.3099 0157487 84.3663 277.4867 1.89367842 21931
Mir
1 16609U 86017A 96169.91641208 .00002262 00000-0 35947-4 0 5536
2 16609 51.6477 120.1223 0005334 83.8270 276.3331 15.58209264590111
SPOT 1
1 16613U 86019A 96168.23074175 .00000089 00000-0 62356-4 0 9487
2 16613 98.7285 236.5124 0001889 349.5746 10.5391 14.20020523220175
Cosmos 1766
1 16881U 86055A 96168.51638587 .00000202 00000-0 21476-4 0 3960
2 16881 82.5190 171.3787 0019410 345.3021 14.7634 14.83739132533746
EGP
1 16908U 86061A 96166.28143182 -.00000083 00000-0 10000-3 0 933
2 16908 50.0110 5.9370 0011455 5.5389 354.5570 12.44414408116046
NOAA 10
1 16969U 86073A 96169.76180238 .00000031 00000-0 31590-4 0 6635
2 16969 98.5229 166.8121 0013852 357.7418 2.3693 14.24988602506689
MOS-1
1 17527U 87018A 96168.22638288 -.00000043 00000-0 00000+0 0 4245
2 17527 98.9366 230.2497 0020104 331.3590 28.6466 14.00395381474857
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1 17561U 87022A 96157.45277443 -.00000180 00000-0 10000-3 0 9278
2 17561 3.0382 69.5670 0005652 4.5241 248.2095 1.00356380 17188
Kvant-1
1 17845U 87030A 96170.10877825 -.00020905 00000-0 -26567-3 0 6594
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1 18123U 87053A 96169.44807452 -.00000010 00000-0 17440-4 0 4798
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1 18129U 87054A 96169.92561567 .00000042 00000-0 29675-4 0 2304
2 18129 82.9253 147.9929 0011873 145.0158 215.1774 13.72366777450271
Meteor 2-16
1 18312U 87068A 96167.07932234 .00000035 00000-0 17851-4 0 4879
2 18312 82.5545 353.7559 0010778 224.5844 135.4455 13.84079375445888
Meteor 2-17
1 18820U 88005A 96170.19737954 .00000027 00000-0 10715-4 0 9658
2 18820 82.5426 46.3077 0015528 287.9732 71.9729 13.84758036423665
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1 18822U 88006A 96170.02901258 .00000015 00000-0 24876-4 0 2791
2 18822 98.3838 2.0507 0006591 11.0607 349.0711 14.23192891434693
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1 19163U 88043A 96168.11867427 -.00000037 00000-0 10000-3 0 872
2 19163 65.2614 85.8737 0008330 156.5206 203.5240 2.13102183 62211
Glonass 36
1 19165U 88043C 96168.64491195 -.00000032 00000-0 10000-3 0 4944
2 19165 65.2359 85.8207 0002885 343.5851 16.4156 2.13101882 62845
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1 19215U 88051A 96164.40512295 -.00000119 00000-0 10000-3 0 2645
2 19215 3.2587 67.7350 0002148 121.9976 237.5930 0.96948198 17138
AO-13
1 19216U 88051B 96167.28069696 .00000326 00000-0 43448-3 0 2211
2 19216 57.2404 110.7445 7426044 42.2336 355.2251 2.09832268 29804
OKEAN 1
1 19274U 88056A 96169.32314192 .00000124 00000-0 12386-4 0 976
2 19274 82.5133 271.4629 0020955 119.4352 240.8948 14.82488133429398
Meteor 3-2
1 19336U 88064A 96170.07496679 .00000051 00000-0 10000-3 0 4893
2 19336 82.5390 165.7970 0015562 233.0809 126.8886 13.16977919379595
Glonass 39
1 19503U 88085C 96168.67479955 -.00000066 00000-0 10000-3 0 3822
2 19503 65.5679 324.7414 0005140 149.6629 210.3546 2.13101672 60336
NOAA 11
1 19531U 88089A 96169.79952336 .00000028 00000-0 40370-4 0 5519
2 19531 99.1850 187.9310 0010694 239.7453 120.2653 14.13095306398534
TDRS 2
1 19548U 88091B 96166.68997630 -.00000190 00000-0 10000-3 0 2122
2 19548 2.4926 72.0780 0004683 94.5788 69.5360 1.00262537 15504
Glonass 40
1 19749U 89001A 96169.18159617 -.00000027 00000-0 10000-3 0 6033
2 19749 65.2065 85.3573 0007581 260.7182 99.2098 2.13101588 57855
Glonass 41
1 19750U 89001B 96164.07482245 -.00000060 00000-0 10000-3 0 5063
2 19750 65.2274 85.6027 0007744 230.4896 129.4683 2.13101758 57768
GPS BII-01
1 19802U 89013A 96168.14423600 -.00000033 00000-0 10000-3 0 2478
2 19802 55.3352 110.6778 0020607 172.5592 187.4480 2.00577405 53696
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1 19822U 89016A 96166.92930623 .00005788 00000-0 33436-3 0 7389
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Meteor 2-18
1 19851U 89018A 96168.26827430 .00000032 00000-0 15402-4 0 4853
2 19851 82.5208 281.8058 0014603 344.9275 15.1455 13.84412426368701
MOP-1
1 19876U 89020B 96161.24387907 -.00000060 00000-0 10000-3 0 2009
2 19876 1.9712 71.2187 0020403 285.7561 73.2883 0.97108721 6543
TDRS 3
1 19883U 89021B 96163.26131617 -.00000278 00000-0 10000-3 0 2200
2 19883 0.0195 251.5245 0003223 241.4978 179.9048 1.00269001199056
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1 20061U 89044A 96168.48818705 -.00000065 00000-0 10000-3 0 2275
2 20061 54.1986 286.4292 0156942 219.6780 139.1744 2.00562104 51440
Nadezhda 1
1 20103U 89050A 96169.72130491 .00000043 00000-0 29743-4 0 8070
2 20103 82.9591 108.2876 0039494 52.1754 308.2971 13.73866904348751
GPS BII-03
1 20185U 89064A 96168.83366552 -.00000027 00000-0 10000-3 0 2752
2 20185 55.1334 111.1187 0021985 328.9310 30.9134 2.00547263 50026
GMS 4
1 20217U 89070A 96169.81866898 -.00000370 00000-0 10000-3 0 3901
2 20217 1.7931 75.2175 0001474 173.4077 72.5120 1.00279713 25427
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1 20261U 89080A 96167.24180659 .00000024 00000-0 -98498-6 0 5054
2 20261 82.5921 271.9594 1242603 46.1053 323.6107 12.47341680305662
GPS BII-04
1 20302U 89085A 96169.36004798 .00000023 00000-0 10000-3 0 2403
2 20302 53.2461 226.2175 0022682 189.7626 170.2817 2.00565658 48830
Meteor 3-3
1 20305U 89086A 96168.97497187 .00000044 00000-0 10000-3 0 5823
2 20305 82.5572 124.7539 0003793 300.5919 59.4826 13.04435258318170
COBE
1 20322U 89089A 96169.09287722 .00000120 00000-0 10472-3 0 2208
2 20322 98.9446 184.3431 0009474 39.3985 320.7866 14.03462458336917
Kvant-2
1 20335U 89093A 96170.10877825 -.00020905 00000-0 -26567-3 0 6144
2 20335 51.6497 119.1617 0005210 84.3857 275.5574 15.58180682373277
GPS BII-05
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2 20361 56.0211 53.3267 0076740 136.6134 224.0682 2.00565226 38286
COSMOS 2054 (Altair-1)
1 20391U 89101A 96167.52946759 -.00000141 00000-0 00000+0 0 3675
2 20391 3.8472 63.4454 0003953 40.8947 334.2964 1.00271917 23980
SPOT 2
1 20436U 90005A 96167.87152849 -.00000044 00000-0 00000+0 0 834
2 20436 98.6984 241.5542 0001242 57.9236 302.2061 14.20040131331653
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2 20437 98.5434 249.8003 0010295 208.8911 151.1713 14.29923526333701
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2 20438 98.5384 251.1780 0009198 202.9249 157.1521 14.29232001334078
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1 20439U 90005D 96169.28757416 -.00000042 00000-0 45879-6 0 9887
2 20439 98.5559 254.5191 0010523 201.1820 158.8927 14.29977019334080
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1 20440U 90005E 96169.23984252 -.00000026 00000-0 66330-5 0 9880
2 20440 98.5605 255.1133 0010454 199.9800 160.0973 14.30119167334105
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1 20441U 90005F 96167.20068366 .00000026 00000-0 26874-4 0 9927
2 20441 98.5605 253.0496 0011072 208.0912 151.9670 14.30089136333810
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1 20442U 90005G 96169.22550183 .00000000 00000-0 16880-4 0 9888
2 20442 98.5624 255.5339 0011549 199.7762 160.2974 14.30197428334122
GPS BII-06
1 20452U 90008A 96169.26932984 .00000035 00000-0 10000-3 0 1785
2 20452 54.0413 166.7565 0063476 91.1135 269.1181 2.00569576 46811
MOS-1B
1 20478U 90013A 96170.20724484 .00000088 00000-0 10000-3 0 9460
2 20478 99.1283 239.6746 0004632 255.0562 105.0081 13.93963210244699
DEBUT
1 20479U 90013B 96167.63390708 -.00000007 00000-0 49248-4 0 9876
2 20479 99.0242 192.9902 0540668 127.4171 237.7411 12.83342098297704
FO-20
1 20480U 90013C 96166.11060605 .00000001 00000-0 65761-4 0 8847
2 20480 99.0260 191.5539 0540758 131.4210 233.4676 12.83233874297499
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1 20491U 90013D 96170.21500174 .00000004 00000-0 78317-4 0 2528
2 20491 99.0746 259.9266 0469604 292.1683 63.0223 13.02994691301994
LACE
1 20496U 90015A 96169.87887338 .00000393 00000-0 19348-4 0 6596
2 20496 43.1016 199.4212 0009517 52.4515 307.7206 15.35672079353933
Nadezhda 2
1 20508U 90017A 96169.78093076 .00000061 00000-0 48839-4 0 8085
2 20508 82.9551 242.7326 0045954 5.7995 354.3682 13.73508845315975
OKEAN 2
1 20510U 90018A 96168.22939533 .00000104 00000-0 11105-4 0 5052
2 20510 82.5249 226.7021 0018567 327.3736 32.6316 14.78605677339533
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1 20533U 90025A 96168.67733973 -.00000064 00000-0 00000+0 0 2245
2 20533 54.5764 287.1457 0051993 78.0527 282.5165 2.00567191 45577
PegSat
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2 20546 94.1086 350.8215 0060714 18.0024 342.3371 15.47295670344587
HST
1 20580U 90037B 96167.57974667 .00000270 00000-0 11533-4 0 8146
2 20580 28.4698 228.8837 0006286 155.1092 204.9800 14.91065652138348
MACSAT 2
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1 20608U 90043B 96168.05434781 .00000126 00000-0 18670-4 0 1890
2 20608 89.9263 173.4106 0108622 60.2586 300.9381 14.64924157326124
Glonass 44
1 20619U 90045A 96168.61092445 -.00000067 00000-0 10000-3 0 3034
2 20619 65.1783 323.9741 0026435 203.6910 156.1721 2.13102641 47295
Glonass 45
1 20620U 90045B 96166.38331561 -.00000071 00000-0 10000-3 0 2925
2 20620 65.1874 324.0435 0008738 48.4215 311.6431 2.13102514 47283
Glonass 46
1 20621U 90045C 96168.32785728 -.00000069 00000-0 10000-3 0 8877
2 20621 65.2201 324.0390 0004991 164.6562 195.3368 2.13102359 47320
Kristall
1 20635U 90048A 96170.10877825 -.00020905 00000-0 -26567-3 0 4068
2 20635 51.6497 119.1617 0005210 84.3857 275.5574 15.58180682344100
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1 20638U 90049A 96167.84622330 -.00000289 00000-0 89676-7 0 5694
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2 20670 82.5441 347.9786 0014419 258.5489 101.4053 13.84129742301723
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1 20712U 90065A 96169.52871733 .00000265 00000-0 27218-3 0 2718
2 20712 17.8249 251.5580 7198118 17.0064 358.0601 2.35698783 43128
GPS BII-08
1 20724U 90068A 96168.99811225 -.00000028 00000-0 10000-3 0 610
2 20724 54.9751 108.6661 0129211 181.6045 178.3084 2.00565051 41445
Feng Yun1-2
1 20788U 90081A 96170.02446934 .00000151 00000-0 12810-3 0 9495
2 20788 98.8046 175.4553 0016467 128.1035 232.1620 14.01367419296218
Meteor 2-20
1 20826U 90086A 96169.41874246 .00000032 00000-0 15411-4 0 9977
2 20826 82.5244 284.1369 0013445 152.3884 207.7993 13.83631861288876
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2 20830 55.9511 51.3540 0067631 95.5002 265.3060 2.00564558 42017
GPS BIIA-10
1 20959U 90103A 96169.94917259 -.00000016 00000-0 10000-3 0 190
2 20959 55.1594 110.7008 0110010 235.1024 123.8336 2.00563212 40699
DMSP B5D2-5
1 20978U 90105A 96169.58743747 .00000078 00000-0 43353-4 0 6609
2 20978 98.5997 240.7180 0078518 168.5201 191.7821 14.32657586289778
Glonass 47
1 21006U 90110A 96169.75933461 -.00000023 00000-0 10000-3 0 8606
2 21006 65.1924 84.6794 0057402 190.3346 169.5652 2.13102625 43025
Glonass 48
1 21007U 90110B 96168.07346292 -.00000038 00000-0 10000-3 0 9956
2 21007 65.2033 84.8215 0035144 179.0687 180.9446 2.13101108 42975
Glonass 49
1 21008U 90110C 96168.43733930 -.00000035 00000-0 00000+0 0 2412
2 21008 65.1881 84.7451 0010061 276.2236 83.6747 2.13098686 42977
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AO-21
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Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96167.25592034 .00000500 00000-0 20757-2 0 678
2 23824 47.7182 252.6659 7261892 27.3684 357.0151 2.21663393 2571
GPS BIIA-25
1 23833U 96019A 96169.89623124 -.00000088 00000-0 10000-3 0 385
2 23833 54.6826 348.0230 0038523 145.9284 214.3449 2.00564583 1692
Priroda
1 23848U 96023A 96170.10877825 -.00020905 00000-0 -26567-3 0 556
2 23848 51.6497 119.1617 0005210 84.3857 275.5574 15.58180682 8678
MSX
1 23851U 96024A 96168.96257640 -.00000047 00000-0 00000+0 0 351
2 23851 99.3742 148.1952 0007654 158.2544 201.8933 13.97718885 7466
Progress M-31
1 23860U 96028A 96170.10877825 -.00020905 00000-0 -26567-3 0 476
2 23860 51.6497 119.1617 0005210 84.3857 275.5574 15.58180682 6849
Palapa C2
1 23864U 96030A 96168.54331771 -.00000365 00000-0 00000+0 0 414
2 23864 0.0670 75.5189 0000395 41.2480 107.9347 1.00268538 328
MSTI 3
1 23868U 96031A 96167.55697415 -.00000091 00000-0 -11502-6 0 298
2 23868 97.1229 358.0352 0011655 175.8045 184.3303 15.46133891 4572
1996031B
1 23869U 96031B 96169.56708370 .00044800 27156-5 18593-3 0 334
2 23869 97.0766 1.3398 0039050 50.1352 310.3497 15.84749834 4983
Galaxy 9
1 23877U 96033A 96169.58472801 .00000019 00000-0 00000+0 0 297
2 23877 0.0488 142.0792 0003028 21.0843 190.3650 1.00272013 263
1996033B
1 23878U 96033B 96169.44108795 .00002213 00000-0 78330-4 0 127
2 23878 25.8294 289.1378 0842734 61.8637 306.4455 13.82139368 3371
1996033C
1 23879U 96033C 96168.78257675 -.00000136 00000-0 00000+0 0 101
2 23879 23.0697 69.9664 6780820 8.8715 358.8016 2.11147804 502
Gorizont 32
1 23880U 96034A 96167.83555556 .00000092 00000-0 00000+0 0 232
2 23880 1.4482 283.7344 0015101 331.9641 2.1528 1.00269115 214
1996034B
1 23881U 96034B 96149.37506907 .12519477 12777-4 84098-4 0 213
2 23881 51.6253 265.1638 0010849 276.2132 83.7707 16.52789070 548
1996034C
```

```
1 23882U 96034C 96146.93642506 .15866946 12578-4 59433-3 0 42
2 23882 51.6150 278.9349 0004235 339.3430 27.3955 16.44057387 145
1996034D
1 23883U 96034D 96168.31748417 -.00000028 00000-0 00000+0 0 71
2 23883 1.4729 283.6495 0024029 339.6159 21.1249 0.97946304 213
1996034E
1 23886U 96034E 96165.45460302 .00000626 00000-0 43450-3 0 62
2 23886 47.3068 278.2081 7318972 5.0169 359.3421 2.22641382 437
1996034F
1 23887U 96034F 96166.38748951 .00000120 00000-0 33137-3 0 76
2 23887 47.3599 278.0560 7299951 5.1437 359.3563 2.22247137 450
1983063A
1 23906U 83063E 96166.81112448 .00000569 00000-0 20521-3 0 25
2 23906 82.0249 206.4326 0041766 186.4589 173.6064 14.31840248676196
1996016C
1 23909U 96016C 96163.74233618 .40456583 67558-5 31410-2 0 32
2 23909 67.1294 123.8472 0069255 57.9050 302.6676 16.29168534 14295
1996035A
1 23915U 96035A 96169.39938429 -.00000119 00000-0 00000+0 0 94
2 23915 0.9769 181.9438 1997089 181.1831 181.1212 1.31745179 52
1996035B
1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1169. Re: QSL wall card holders..where?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-18 00:00:00 UTC
From: maccabeus@gatecoms.gatecom.com
Message-ID: <4q50bl$3sr@www.gatecom.com>
Source record: 22136
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.amateur.antenna,rec.radio.swap

Why not just use 35mm picture sleeves? I use a picture rolodex for my
cards! just a thought...

Dale \"Squeak\" Porray (ad7k@accessnv.com) wrote:
: Jason Baack wrote:
: >
: > Hello all,
: > I was wondering if anyone out there knows where I can get some of the
: > QSL vinyl-like,clear QSL card holders that you can hang on a wall.?

: Available at most well-stocked amateur dealers, including Amateur
: Electronic Supply.

: Our nearest store to you is in Wickliffe, Ohio ... their telephone number
: is 800-321-3594.

: 73, and good luck!

: "Squeak" Porray, AD7K
: Manager, Amateur Electronic Supply/Las Vegas

--
73 Phillip KC8DQF
###
"If the government is big enough to give you everything you want, it
is also big enough to take everything you have."
###

1170. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-19 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb5da0.c6e70500$068067ce@ns.netwide.net>
Source record: 22137

Tom,

I'm the author of LogSat. It's one of the best satellite tracking programs you can find, and it only sells for $50. That's nothing compared to the cost of the ham equipment you're using. Unless you stole that too.

Should anybody come with a key, I will never release a shareware version again. There have been already several illegal copies of the commercial software circulating. If this doesn't stop, it will force me to copy-protect the commercial program as well.

And most importantly, copying/cracking software that is copyrighted is a felony in the United States. This copyright extends worldwide to every nation, including nl.

Roberto Franceschetti ik8sqi
author of LogSat

> millerj@dnaco.net wrote in article <4q1soc$11n@pike.dnaco.net>...
> dr-guru@cuci.nl (Ton Muller) wrote:
>
> >Good euwning.
>
> >I am looking for a'n FTP site where to find the Kepler 2 line element's.
> >I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
> >but my kepler's are 7 day's old.
> >(I now ,it is not much.
>
> >Ton Muller
> >Live long and prosper.

1171. Re: HamSats... HELP

Newsgroup: rec.radio.amateur.space
Date: 1996-06-19 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <31C7B537.3E41@wco.com>
Source record: 22138

NewsBoy! wrote:
>
> Allright.. I am really confused now... Is there a comprehensive
> guide to the different modes and how to operate on them
> available? Where can i go for a written manual??
>
> If anyone has any info, please e-mail and post it here...
>
> Thanks!
> Dylan
>
> --
> "I am personally responsible for the agony of Christ"
> "I am personally responsible for the agony of Christ"
> "I am personally responsible for the agony of Christ"
> "I am personally responsible for the agony of Christ"

dylan,get aes catalog or go to arrl or amsat web page and buy satellite
anthology and/or satellite experimenters handbook.
73 steve cm88ll

1172. Q: How do programs control KC traker?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-19 00:00:00 UTC
From: bpaul@qualcomm.com
Message-ID: <bpaul-1906961012560001@wpaul-toy.qualcomm.com>
Source record: 22139
Cross-posted to: rec.radio.amateur.space,rec.radio.homebrew

I am working on building an Az/El rotor and plan to build a microprocessor board to control it. My question is, how do the tracking programs, such as LogSat talk to the Kansas city tracker board. From the few programs I've downloaded and tried, it looks like they only work with the KC Tracker.

I know that the KC tracker is an ISA bus card, so I assume it communicates through an I/O address. I am interested in what is on the KC tracker as far as hardware goes. Is it just a parallel port, micro-based?

What I would really like is a program that outputs the Az/El data out the serial or parallel port. That would make my interface much easier to build than a ISA bus card.

Thanks in advance for any info,
-BP

P.S. If I get alot of detailed info, I'll post a summary. -BP

Bill Paul KF6BBL San Diego,CA bpaul@qualcomm.com
Disclaimer:
The above post is the opinion of Bill Paul, not Qualcomm Inc.

1173. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-19 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <31C8EC36.5467@wco.com>
Source record: 22140

Roberto Franceschetti wrote:
>
> Tom,
>
> I'm the author of LogSat. It's one of the best satellite tracking programs
> you can find, and it only sells for $50. That's nothing compared to the
> cost of the ham equipment you're using. Unless you stole that too.
>
> Should anybody come with a key, I will never release a shareware version
> again. There have been already several illegal copies of the commercial
> software circulating. If this doesn't stop, it will force me to
> copy-protect the commercial program as well.
>
> And most importantly, copying/cracking software that is copyrighted is a
> felony in the United States. This copyright extends worldwide to every
> nation, including nl.
>
> Roberto Franceschetti ik8sqi
> author of LogSat
>
> > millerj@dnaco.net wrote in article <4q1soc$11n@pike.dnaco.net>...
> > dr-guru@cuci.nl (Ton Muller) wrote:
> > >
> > > >Good euwning.
> > >
> > > >I am looking for a'n FTP site where to find the Kepler 2 line
> element's.
> > > >I have FTP't logsat V5.1 for windows (nice programm,has any one a
> key??)
> > > >but my kepler's are 7 day's old.
> > > >(I now ,it is not much.
> > >
> > > >Ton Muller
> > > >Live long and prosper.

logsat is great,if only i could get the manual for it.i bought the
program in december of last year,it is now june of this year.
still waiting,steve cm88ll

1174. Weather and Space info. STS78

Newsgroup: rec.radio.amateur.space
Date: 1996-06-20 00:00:00 UTC
From: charlie@smart.net
Message-ID: <4qa85d$3q8@news.smart.net>
Source record: 22141

If you are interested in Weather and Current shuttle and space
information, you may want to take a look at Mike Robinson's recently
revised and update web page. It has been reformated using a new JAVA
program which Mike got while visiting the Sates recently.
The location is

http://www.airtime.co.uk/users/homebase/homebase.htm

You wont be disappointed.

1175. "OUT OF THIS WORLD (literally) www.heavensgate.com"

Newsgroup: rec.radio.amateur.space
Date: 1996-06-20 00:00:00 UTC
From: heavens <smtp.bluesky.net@dns.bluesky.net>
Message-ID: <19960620012629.aaaa002zy@babyblue.cs.yale.edu>
Source record: 22142

```
HEAVEN'S GATE

- How and When the door to the Physical
Kingdom Level Above Human May Be Entered
- Organized Religions Are Killers of Souls
- UFO's & Space Aliens - Sorting Good from Bad
- Final Warning for Possible Survivors

www.heavensgate.com
```

1176. how work KO23 and KO 23

Newsgroup: rec.radio.amateur.space
Date: 1996-06-20 00:00:00 UTC
From: Walter Girardi <narda@sunrise.it>
Message-ID: <31C8ED5F.AAA@sunrise.it>
Source record: 22143

I can work in pachet al 9k6 and i would like to work KO23 and KO25
Whot i have to do?
Thanck in adwance for ryplay
IZ3ALU WALTER from CORTINA D'AMPEZZO (BL) ITALY
narda@sunrise.it

1177. Re: Q: How do programs control KC traker?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: eagle@3rdplanet.com
Message-ID: <4qdi2t$1eh@ratty.wolfe.net>
Source record: 22144

In article <bpaul-1906961012560001@wpaul-toy.qualcomm.com>, bpaul@qualcomm.com says...
>
>From the few programs I've
>downloaded and tried, it looks like they only work with the KC Tracker.

>I know that the KC tracker is an ISA bus card, so I assume it communicates
>through an I/O address. I am interested in what is on the KC tracker as
>far as hardware goes. Is it just a parallel port, micro-based?

It uses an I/O address that is switch selectable on the board. It does not involve serial or parallel ports at all, neither does it use an IRQ.

>What I would really like is a program that outputs the Az/El data out the
>serial or parallel port.

This you would need to write yourself. There are products already made that communicate through the serial port. One good one that I use is the Sat trak IV. For more info, see my web page...

http://www.teleport.com/~n7ryw/asatpage.html

This is a microcontroller board that controls the rotors and the radio. It is based on the 8052 mcu, probably just the thing you were thinking of.
TTYL

1178. check out my nifty project

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4qe33o$8u6@host-3.cyberhighway.net>
Source record: 22145

I get the biggest kick out of chatting with "space people," have several MIR and one SAREX voice contact, this is almost too fun to be legal! Anyway, I usually go to a nearby hill-top to do my "fishing" and got tired of lugging all the radio stuff, so I built a nifty "ham-shack-in-a-box".. Not terribly unusual, but it was a ball to build. If you have a web browser that does graphics, I invite you to check it out and send me any comments or questions.. You'll find it at:

http://www.cyberhighway.net/~rb/project.html

A note to all of you who frequent this group but don't have a Amateur Radio License, GET ON THE BALL! It's never been easier to get a HAM license, you do NOT need to learn code to use the frequencies that are used by MIR and the Shuttle (SAREX)! A friend of mine, with NO previous radio/electronic knowledge borrowed my study book on Wednesday evening, took his test on Saturday morning and passed with a 98%! You can do it too! Amateur Radio NEEDS new blood, if we don't use these frequencies, we'll loose 'em to big corporations and the government, thats a fact! If you have any questions about becomming a "HAM," please ask me! I'll trip over my big feet to get you the information you seek! The first time you call for an astronaut, beit on the MIR or the Shuttle, and a voice comes back to you saying your call sign and a friendly greeting, it will all be worth it! Trust me, it's litterally the most fun you can have with your clothes on.. hehe

Take Care and 73's

John KB7VZL

1179. DISH for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: "B. Danielson" <n7rfm@empnet.com>
Message-ID: <31CA9DFF.4CC2@empnet.com>
Source record: 22146

Echostar Systems

Basic DISH system $459.00
Premium DISH system $539.00
Premium receiver only $479.00
Installation Kit $79.00
Dual LNB $49.00

Basic Channel Package for $19.99 per month

Comedy Disney History Learning Channel
TNT TBS USA Turner Classic Movies
ESPN ESPN2 Lifetime Home & Garden
E KTLA Sci-Fi The Weather Channel
A&E TNN QVC Food Network
VH-1 CNBC Nick TV Land
C-Span Discovery Cartoon Family
WPDX CNN Court TBS
HNN CNNF CNNI Travel
MTV WGN EWTN HSN

For more information on programing call: 1-800-333-DISH

Satellite Video 541-389-6496 satvideo@empnet.com

http://www.empnet.com/satvideo/welcome.html

1180. (no subject)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: Horn@mint.NET
Message-ID: <199606211547.LAA29642@mint.mint.net>
Source record: 22147

I am looking for a GAP "Challenger DX" vertical antenna, 80 - 2 meters, in reasonably good shape. Also want to find a nice, used IC-2000 H 2M transceiver, too. Please E-Mail at n1umf@mint.net TNX!

1181. FS: DSP-12 digital modem for pacsats and terr.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: la5zl@netpower.no
Message-ID: <4qehci$bar@thelma.netpower.no>
Source record: 22148

For sale:
DSP-12 , by L.L.Grace
Multimode communications controller.
w/ 1 mb.ram, clock back-up.
Firmw. v.1.99

Currently used with Wisp and Win95 in fully auto mode, for both 1200 and 9k6 pacsats.

Asking: $ 450, or equiv.

E.mail: LA5ZL@Netpower.no

1182. Re: DISH for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: landisj@nad.com
Message-ID: <1996Jun21.121615.559@nad.com>
Source record: 22149

In article <31CA9DFF.4CC2@empnet.com>, "B. Danielson" <n7rfm@empnet.com> writes:
> Echostar Systems
>
> Basic DISH system $459.00

Thats pretty high for a dish. I can get a Ku band off center fed dish from MCM
for abt $15. Works great at 10ghz.

Joe - AA3GN
--
landisj@nad.com - speaking only for myself, of course
No, this is not a sig.

1183. NORAD Two-Line Orbital Element Set: Space Shuttle (96173.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4qf2v2$d9u@blackbird.afit.af.mil>
Source record: 22150

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 78
1 23931U 96036A 96173.25000000 .00000778 54141-5 44766-5 0 57
2 23931 39.0156 5.7513 0007759 278.5891 160.5994 16.00552170 116
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1184. NORAD Two-Line Orbital Element Sets (TLE828)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4qf3bj$dc0@blackbird.afit.af.mil>
Source record: 22151

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #828 -
Alouette 1
1 00424U 62049A 96171.05079437 .00000110 00000-0 11850-3 0 2072
2 00424 80.4600 281.9023 0025334 27.8267 332.4233 13.67870651682598
ATS 1
1 02608U 66110A 96164.88620970 -.00000350 00000-0 10000-3 0 9708
2 02608 14.6190 352.8750 0009241 81.9555 278.1241 1.00338050 24829
ATS 3
1 03029U 67111A 96169.18581740 -.00000121 00000-0 10000-3 0 5057
2 03029 14.9144 359.8059 0010091 278.1114 309.3341 1.00273250104764
Starlette
1 07646U 75010A 96172.94657632 -.00000152 00000-0 -91003-5 0 9788
2 07646 49.8248 133.8752 0205956 242.9339 115.0402 13.82190805 79486
LAGEOS
1 08820U 76039A 96169.54373306 .00000015 00000-0 10000-3 0 2011
2 08820 109.8549 26.1389 0043692 129.9811 230.4852 6.38664447213851
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96167.55760218 .00000051 00000-0 10000-3 0 6837
2 10061 12.3630 37.1159 0010596 123.7954 129.4310 1.00261245 14425
IUE
1 10637U 78012A 96168.49745209 -.00000284 00000-0 10000-3 0 2582
2 10637 35.7447 83.1505 1366793 56.7909 263.5492 1.00239446 19923
GPS BI-01
1 10684U 78020A 96171.81955848 -.00000054 00000-0 10000-3 0 4560
2 10684 64.9862 23.8090 0059454 162.5605 197.7011 1.98069443119461

```
GPS BI-02
1 10893U 78047A 96168.31186277 -.00000013 00000-0 10000-3 0 2501
2 10893 63.1713 261.0267 0231709 15.2178 345.5229 2.01627236132795
GOES 3
1 10953U 78062A 96172.29870395 -.00000133 00000-0 10000-3 0 6707
2 10953 11.3604 39.9270 0005217 332.6401 262.7957 1.00272463 19080
SeaSat 1
1 10967U 78064A 96170.19854388 -.00000002 00000-0 43669-4 0 4942
2 10967 107.9930 176.8428 0001398 286.5629 73.5358 14.38109417941596
GPS BI-03
1 11054U 78093A 96167.42389787 -.00000019 00000-0 10000-3 0 4119
2 11054 62.8504 260.1863 0046690 179.8076 180.2427 1.93505215128621
Nimbus 7
1 11080U 78098A 96173.18289237 -.00000051 00000-0 -87073-5 0 5958
2 11080 98.9435 35.2328 0008850 321.4713 38.5809 13.83692877891729
GPS BI-04
1 11141U 78112A 96170.88787481 -.00000055 00000-0 10000-3 0 492
2 11141 65.0046 26.2716 0050138 28.5802 331.7582 1.92894661 17910
GPS BI-05
1 11690U 80011A 96162.86642355 -.00000062 00000-0 10000-3 0 321
2 11690 65.3145 25.5414 0144600 189.7207 170.0614 2.00572703134073
GPS BI-06
1 11783U 80032A 96167.38612699 -.00000006 00000-0 10000-3 0 1506
2 11783 62.3087 253.7168 0227143 29.4777 331.8302 2.03456979118796
GOES 5
1 12472U 81049A 96164.76723027 .00000030 00000-0 10000-3 0 9355
2 12472 8.1700 50.2336 0006333 40.6120 319.3048 1.00218814 13053
Cosmos 1383
1 13301U 82066A 96171.44693999 .00000009 00000-0 -64304-5 0 5052
2 13301 82.9325 132.1437 0026092 232.1562 127.7210 13.68075061697683
LandSat 4
1 13367U 82072A 96170.19641422 .00000006 00000-0 11216-4 0 9385
2 13367 98.0734 221.0841 0007355 129.8057 230.3786 14.57179307740681
DMSP B5D2-1
1 13736U 82118A 96170.13863997 .00000033 00000-0 32021-4 0 303
2 13736 98.6247 358.5091 0009799 28.4586 331.7126 14.25789509701209
IRAS
1 13777U 83004A 96173.07931005 .00000032 00000-0 51674-4 0 3515
2 13777 98.9652 358.4928 0013861 88.4976 271.7776 13.99247268353915
Cosmos 1447
1 13916U 83021A 96170.52975899 .00000079 00000-0 66518-4 0 5982
2 13916 82.9455 190.0446 0037932 145.8236 214.5386 13.74342128663922
TDRS 1
1 13969U 83026B 96168.68223973 -.00000301 00000-0 10000-3 0 5992
2 13969 8.9642 43.7036 0002652 338.5196 79.5286 1.00256691 21383
GOES 6
1 14050U 83041A 96170.86397659 -.00000252 00000-0 10000-3 0 5217
2 14050 7.0171 53.6028 0004175 38.6692 48.9317 1.00251837106212
OSCAR 10
1 14129U 83058B 96163.12722915 .00000003 00000-0 10000-3 0 4302
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2 14129 26.1723 205.2357 6007420 22.7978 355.4952 2.05880692 69747
LandSat 5
1 14780U 84021A 96173.20303365 .00000033 00000-0 17645-4 0 4812
2 14780 98.3279 231.0152 0001772 297.0171 63.0846 14.57055592654519
UoSat 2
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2 22161 62.9832 237.2684 0841812 18.0484 344.8581 13.21899967178627
LAGEOS II
1 22195U 92070B 96172.59518692 -.00000009 00000-0 10000-3 0 4985
2 22195 52.6747 349.5043 0137675 78.3374 283.2605 6.47293579 86496
GPS BIIA-16
1 22231U 92079A 96173.07430104 .00000065 00000-0 10000-4 0 7457
2 22231 54.6782 169.5733 0039222 279.0794 80.4809 2.00571189 26240
GPS BIIA-17
1 22275U 92089A 96171.21030021 .00000045 00000-0 10000-3 0 7473
2 22275 54.6323 167.1387 0050584 249.5906 109.8172 2.00583317 25614
TDRS 5
1 22314U 93003B 96169.81072304 -.00000288 00000-0 10000-3 0 6386
2 22314 2.6180 69.9799 0003144 3.6262 77.5169 1.00256028 12597
GPS BIIA-18
1 22446U 93007A 96171.29531863 -.00000052 00000-0 10000-3 0 7257
2 22446 54.2105 287.1605 0090206 14.9049 345.3195 2.00551466 24601
Glonass 59
1 22512U 93010A 96168.76540891 -.00000032 00000-0 10000-3 0 8039
2 22512 65.1568 84.2402 0008661 182.8840 177.1251 2.13101949 25682
Glonass 60
1 22513U 93010B 96171.05002180 -.00000016 00000-0 00000+0 0 9296
2 22513 65.1473 84.1582 0005377 197.9171 162.0894 2.13102731 25924
Glonass 61
1 22514U 93010C 96173.22084804 -.00000014 00000-0 00000+0 0 9233
2 22514 65.1694 84.0916 0009158 187.5573 172.4615 2.13101930 25973
ASTRO-D
1 22521U 93011A 96171.86788198 .00000517 00000-0 29761-4 0 5027
2 22521 31.1045 48.0205 0055766 194.6603 165.2414 15.02936880182876
UFO F1
1 22563U 93015A 96171.81851836 .00000000 00000-0 10000-3 0 5068
2 22563 25.3761 288.6584 0063907 183.8809 176.0813 0.99252184 16134
GPS BIIA-19
1 22581U 93017A 96171.93542912 -.00000077 00000-0 10000-3 0 5464
2 22581 55.2144 347.9162 0068613 38.8633 321.6067 2.00559375 23677
ARSENE
1 22654U 93031B 96166.91447192 -.00000141 00000-0 10000-3 0 3669
2 22654 3.2208 73.3495 2870936 238.4255 89.9013 1.42202973 11564
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1 22657U 93032A 96172.57093201 -.00000073 00000-0 10000-3 0 6612
2 22657 55.2351 347.7588 0072482 214.8768 144.6530 2.00572564 19011
RADCAL
1 22698U 93041A 96173.25005419 .00000031 00000-0 84115-5 0 4977
2 22698 89.5427 271.1817 0090948 314.6993 44.6819 14.21373559155009
GPS BIIA-21
1 22700U 93042A 96173.03193587 .00000016 00000-0 10000-3 0 5639
2 22700 54.1934 228.1625 0048164 358.7206 1.3516 2.00557068 21821
NOAA 13
1 22739U 93050A 96172.88898932 -.00000097 00000-0 -28851-4 0 896
2 22739 99.0437 128.1488 0009648 210.2624 149.7977 14.10964843147571
GPS BIIA-22
1 22779U 93054A 96172.12419494 -.00000051 00000-0 10000-3 0 6210
2 22779 54.3555 287.1797 0016086 263.1528 96.7288 2.00573415 20565
Meteor 2-21
1 22782U 93055A 96169.99827641 .00000050 00000-0 32204-4 0 4917
2 22782 82.5466 346.4972 0022245 339.5146 20.5113 13.83056078141240
UFO F2
1 22787U 93056A 96170.99347222 -.00000065 00000-0 00000+0 0 6493
2 22787 4.1192 327.2859 0003374 83.0020 286.6533 1.00266790 8856
SPOT 3
1 22823U 93061A 96171.57631387 -.00000044 00000-0 00000+0 0 5589
2 22823 98.6996 245.2781 0001433 77.0983 283.0354 14.20041338141579
STELLA
1 22824U 93061B 96169.24798038 -.00000052 00000-0 -37321-5 0 4781
2 22824 98.5794 244.2053 0005597 231.1767 128.8914 14.27104702141945
AO-27
1 22825U 93061C 96169.77725608 -.00000055 00000-0 -48921-5 0 4818
2 22825 98.5805 245.3148 0007873 228.2021 131.8441 14.27697011142079
IO-26
1 22826U 93061D 96167.74127818 -.00000007 00000-0 14714-4 0 4798
2 22826 98.5787 243.4808 0008339 234.9298 125.1100 14.27805941141798
HEATHSAT
1 22827U 93061E 96169.27084460 .00000021 00000-0 25799-4 0 5414
2 22827 98.5791 244.8874 0008183 220.6873 139.3695 14.27940417142021
ITAMSAT
1 22828U 93061F 96169.26409645 -.00000008 00000-0 14245-4 0 4587
2 22828 98.5771 245.0363 0009286 215.7528 144.3031 14.28143695110123
PO-28
1 22829U 93061G 96172.22333608 .00000000 00000-0 17541-4 0 4733
2 22829 98.5780 248.0023 0009346 206.1215 153.9492 14.28124641142463
KO-25
1 22830U 93061H 96169.55280118 -.00000023 00000-0 78482-5 0 4912
2 22830 98.4650 234.2308 0011285 185.4827 174.6229 14.28110256142089
GPS BIIA-23
1 22877U 93068A 96172.67460615 -.00000063 00000-0 10000-3 0 4339
2 22877 55.6496 49.0195 0041412 306.2685 53.4032 2.00576859 19462
METEOSAT 6
1 22912U 93073B 96172.09498843 -.00000087 00000-0 10000-3 0 4858
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2 22912 0.1161 330.8968 0000337 78.7521 242.7943 1.00272225 7882
HST Array
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2 22920 28.4680 108.3736 0004260 166.4666 193.6045 15.04694636140030
Meteor 3-6
1 22969U 94003A 96173.24822346 .00000051 00000-0 10000-3 0 2635
2 22969 82.5625 257.6277 0014695 228.6440 131.3423 13.16735906115583
TUBSAT-B
1 22970U 94003B 96173.26006802 .00000051 00000-0 10000-3 0 2540
2 22970 82.5562 257.5110 0014737 225.9893 134.0018 13.16827765115595
GPS BIIA-24
1 23027U 94016A 96168.76188620 -.00000090 00000-0 10000-3 0 3709
2 23027 55.0784 349.8746 0063359 198.9084 160.8749 2.00554770 16698
Glonass 62
1 23043U 94021A 96172.35985110 -.00000044 00000-0 00000+0 0 3683
2 23043 64.6504 323.7897 0005924 177.7863 182.2106 2.13103044 17070
Glonass 63
1 23044U 94021B 96169.89604851 -.00000061 00000-0 00000+0 0 3341
2 23044 64.6460 323.8649 0029654 201.4590 158.4053 2.13102892 17027
Glonass 64
1 23045U 94021C 96170.54247591 -.00000056 00000-0 00000+0 0 3423
2 23045 64.6353 323.8609 0011661 33.5660 326.4969 2.13102157 17034
GOES 8
1 23051U 94022A 96171.28671003 -.00000255 00000-0 10000-3 0 5419
2 23051 0.0219 75.0364 0004501 65.9073 155.4967 1.00269978 15386
MSTI 2
1 23101U 94028A 96167.61244025 .00002895 00000-0 46261-4 0 3253
2 23101 97.0838 1.1285 0010967 336.9889 23.0866 15.53948957119057
STRV-1A
1 23125U 94034B 96172.71575110 .00001997 00000-0 40902-3 0 2903
2 23125 7.0510 238.0685 7256716 64.0072 351.4980 2.32067384 16207
STRV-1B
1 23126U 94034C 96173.22997120 .00003552 00000-0 62132-3 0 2582
2 23126 7.0524 238.0239 7259287 64.1727 351.4634 2.32011468 16255
Nadezhda 4
1 23179U 94041A 96173.25917667 .00000047 00000-0 31940-4 0 1982
2 23179 82.9458 233.5734 0037574 110.4017 250.1180 13.75681711 97358
Glonass 65
1 23203U 94050A 96170.21084242 .00000055 00000-0 00000+0 0 2996
2 23203 64.7727 204.0810 0006783 162.3403 197.7579 2.13102178 14424
Glonass 66
1 23204U 94050B 96172.32157064 .00000100 00000-0 10000-3 0 3249
2 23204 64.7478 204.0479 0015515 341.5877 18.3926 2.13104386 14469
Glonass 67
1 23205U 94050C 96172.20420260 .00000055 00000-0 00000+0 0 3006
2 23205 64.7646 204.0301 0003233 281.6373 78.3928 2.13102602 14467
DMSP B5D2-7
1 23233U 94057A 96172.69243229 .00000120 00000-0 87970-4 0 8199
2 23233 98.8257 231.4109 0012308 166.1448 194.0061 14.12714543 93328
OKEAN 1-7
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1 23317U 94066A 96170.73223842 .00000208 00000-0 28071-4 0 1618
2 23317 82.5445 57.6143 0027742 74.9562 285.4714 14.74024397 90761
ELEKTRO
1 23327U 94069A 96172.86705468 -.00000101 00000-0 00000+0 0 1673
2 23327 0.1047 176.4140 0006842 279.7424 201.6141 1.00271445 6037
RESURS 1-3
1 23342U 94074A 96171.18946837 .00000065 00000-0 18829-4 0 5054
2 23342 97.9665 228.2027 0001500 62.2345 297.9001 14.69842274 87100
Glonass 68
1 23396U 94076A 96172.98635032 -.00000014 00000-0 00000+0 0 2729
2 23396 65.0788 84.1500 0027983 190.7544 169.2155 2.13102769 12324
Glonass 69
1 23397U 94076B 96172.69305945 -.00000014 00000-0 00000+0 0 2679
2 23397 65.0732 84.1685 0013050 320.4459 39.4943 2.13102303 12311
Glonass 70
1 23398U 94076C 96172.10752033 -.00000014 00000-0 00000+0 0 2838
2 23398 65.0699 84.1611 0003670 299.4402 60.5520 2.13102525 12315
LUCH (Altair-2)
1 23426U 94082A 96171.73833391 .00000000 00000-0 10000-3 0 3360
2 23426 1.4470 268.9182 0001650 182.8992 177.1036 1.00281997 5559
RS-15
1 23439U 94085A 96172.02555377 -.00000039 00000-0 10000-3 0 1412
2 23439 64.8201 18.4960 0161207 198.6386 160.8592 11.27526125 61101
NOAA 14
1 23455U 94089A 96172.82847599 -.00000006 00000-0 21167-4 0 6452
2 23455 98.9434 118.2933 0008396 231.3296 128.7136 14.11593507 75968
Glonass 71
1 23511U 95009A 96172.53584955 -.00000043 00000-0 00000+0 0 1971
2 23511 64.6637 324.0554 0005802 206.0222 153.9438 2.13103521 10044
Glonass 72
1 23512U 95009B 96171.24693592 -.00000051 00000-0 00000+0 0 2135
2 23512 64.6619 324.1043 0005060 330.2990 29.6624 2.13101921 10012
Glonass 73
1 23513U 95009C 96172.00846610 -.00000046 00000-0 00000+0 0 2237
2 23513 64.6750 324.0904 0012800 196.0374 163.9146 2.13102789 10034
GMS 5
1 23522U 95011B 96162.31032554 -.00000314 00000-0 10000-3 0 1239
2 23522 0.3531 331.1253 0004101 235.7273 301.8182 1.00249550 4385
DMSP B5D2-8
1 23533U 95015A 96172.62336393 -.00000006 00000-0 20314-4 0 5599
2 23533 98.8375 175.0407 0008470 49.5175 310.6733 14.12742361 64118
Microlab 1
1 23547U 95017C 96170.47522249 .00000232 00000-0 82599-4 0 1144
2 23547 69.9783 167.0795 0013730 186.9631 173.1310 14.45542484 63857
OFEQ 3
1 23549U 95018A 96172.32795518 .00015721 00000-0 39655-3 0 2654
2 23549 143.3665 247.1965 0222892 165.0235 195.7215 15.15806651 66846
GFZ-1
1 23558U 86017JE 96172.92944268 .00001667 00000-0 24503-4 0 1354
2 23558 51.6511 94.4940 0005231 234.6106 125.4401 15.62239086590594
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1 23560U 95021A 96172.77360925 .00000016 00000-0 58062-5 0 2443
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1 23579U 95024A 96171.84049456 .00005911 00000-0 83256-4 0 3673
2 23579 51.6485 110.4785 0005195 96.0382 264.4968 15.58209321 61856
GOES 9
1 23581U 95025A 96167.40430022 .00000077 00000-0 00000+0 0 2046
2 23581 0.2011 82.4729 0000778 279.4890 272.5312 1.00281681 3909
Helios 1A
1 23605U 95033A 96172.69911649 .00000040 00000-0 16593-4 0 2339
2 23605 98.1217 108.3550 0001306 66.5879 293.5477 14.63844603 51078
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1 23606U 95033B 96172.86366338 .00000085 00000-0 23717-4 0 1770
2 23606 98.1017 109.5836 0007393 163.7545 196.3897 14.67254017 51253
CERISE
1 23607U 95033C 96169.24588739 .00000058 00000-0 18898-4 0 964
2 23607 98.1036 105.8827 0005599 174.4451 185.6817 14.66946705 50742
TDRS 6
1 23613U 95035B 96164.42597162 -.00000066 00000-0 10000-3 0 1741
2 23613 0.5850 82.5156 0003337 226.6902 277.4964 1.00024421 3337
Glonass 74
1 23620U 95037A 96171.32328135 .00000053 00000-0 00000+0 0 1492
2 23620 64.8288 203.9092 0018424 173.2833 186.8068 2.13102856 7059
Glonass 75
1 23621U 95037B 96170.56199443 .00000054 00000-0 00000+0 0 1510
2 23621 64.8350 203.9307 0018480 183.4916 176.5681 2.13102078 7037
Glonass 76
1 23622U 95037C 96170.15099331 .00000055 00000-0 00000+0 0 1512
2 23622 64.8311 203.9527 0036770 167.8816 192.2802 2.13102530 7028
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1 23632U 95039A 96172.29100520 -.00000806 00000-0 00000+0 0 632
2 23632 70.1900 250.0080 8330225 322.1180 316.8460 0.26343000 859
SICH-1
1 23657U 95046A 96172.66259148 .00000127 00000-0 15991-4 0 870
2 23657 82.5343 197.3615 0029541 40.6784 319.6617 14.73478558 43341
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1 23710U 95059A 96171.57852134 -.00000044 00000-0 00000+0 0 1484
2 23710 98.5782 178.2312 0000953 75.6234 284.5054 14.29974703 32584
Glonass 77
1 23734U 95068A 96172.61495017 .00000077 00000-0 10000-3 0 1300
2 23734 64.8133 203.7607 0019202 318.8959 40.9960 2.13104066 4047
Glonass 78
1 23735U 95068B 96170.48140231 .00000054 00000-0 00000+0 0 1219
2 23735 64.8268 203.8447 0008163 223.1057 136.8977 2.13125148 3991
Glonass 79
1 23736U 95068C 96170.50316965 .00000054 00000-0 00000+0 0 1065
2 23736 64.8187 203.8559 0008523 204.9347 155.0968 2.13102226 3990
XTE
1 23757U 95074A 96170.84956494 .00000497 00000-0 12706-4 0 655
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2 23757 22.9850 40.4251 0013030 80.8711 279.3243 14.97658405 25714
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1 23797U 96010D 96171.07607531 .00117146 32581-6 21260-2 0 985
2 23797 48.1257 249.5231 7328183 29.9324 359.0878 2.26985548 2702
Soyuz TM-23
1 23798U 96011A 96171.84049456 .00005911 00000-0 83256-4 0 1031
2 23798 51.6485 110.4785 0005195 96.0382 264.4968 15.58209321 18615
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
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1 23824U 96010E 96167.25592034 .00000500 00000-0 20757-2 0 678
2 23824 47.7182 252.6659 7261892 27.3684 357.0151 2.21663393 2571
GPS BIIA-25
1 23833U 96019A 96172.88766048 -.00000073 00000-0 10000-3 0 396
2 23833 54.6822 347.9010 0038529 146.0645 214.1983 2.00565103 1758
Priroda
1 23848U 96023A 96171.84049456 .00005911 00000-0 83256-4 0 567
2 23848 51.6485 110.4785 0005195 96.0382 264.4968 15.58209321 8946
MSX
1 23851U 96024A 96171.46801861 -.00000047 00000-0 00000+0 0 361
2 23851 99.3758 150.7539 0006849 154.5437 205.6034 13.97718216 7819
Progress M-31
1 23860U 96028A 96171.84049456 .00005911 00000-0 83256-4 0 487
2 23860 51.6485 110.4785 0005195 96.0382 264.4968 15.58209321 7118
MSTI 3
1 23868U 96031A 96171.56962165 -.00000021 00000-0 13188-5 0 306
2 23868 97.1219 1.9767 0011791 161.0565 199.1125 15.46134440 5196
Galaxy 9
1 23877U 96033A 96172.60127324 .00000022 00000-0 00000+0 0 329
2 23877 0.0401 159.8067 0002006 359.6116 203.0760 1.00273702 302
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1 23878U 96033B 96169.44108795 .00002213 00000-0 78330-4 0 127
2 23878 25.8294 289.1378 0842734 61.8637 306.4455 13.82139368 3371
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1 23879U 96033C 96170.67687779 -.00000109 00000-0 00000+0 0 115
2 23879 23.0744 69.5097 6780159 9.6786 358.7126 2.11147754 542
Gorizont 32
1 23880U 96034A 96170.34096713 .00000094 00000-0 00000+0 0 240
2 23880 1.4427 283.6471 0015120 332.0865 186.5204 1.00270195 245
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1 23881U 96034B 96149.37506907 .12519477 12777-4 84098-4 0 213
2 23881 51.6253 265.1638 0010849 276.2132 83.7707 16.52789070 548
1996034C
1 23882U 96034C 96146.93642506 .15866946 12578-4 59433-3 0 42
2 23882 51.6150 278.9349 0004235 339.3430 27.3955 16.44057387 145
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1 23883U 96034D 96170.35953665 -.00000020 00000-0 00000+0 0 84
2 23883 1.4696 283.6291 0024307 339.6944 21.1277 0.97946379 236
1996034E
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1 23886U 96034E 96172.19154162 .00000690 00000-0 28598-3 0 84
2 23886 47.2838 276.3696 7320730 6.7879 359.1570 2.22651166 583
1996034F
1 23887U 96034F 96166.38748951 .00000120 00000-0 33137-3 0 76
2 23887 47.3599 278.0560 7299951 5.1437 359.3563 2.22247137 450
1983063A
1 23906U 83063E 96171.14375139 .00000545 00000-0 19599-3 0 33
2 23906 82.0251 202.4501 0042348 173.1950 186.9808 14.31844511676811
1996016C
1 23909U 96016C 96163.74233618 .40456583 67558-5 31410-2 0 32
2 23909 67.1294 123.8472 0069255 57.9050 302.6676 16.29168534 14295
1996035A
1 23915U 96035A 96170.43790105 -.00000289 00000-0 00000+0 0 119
2 23915 0.1263 170.7933 0022146 44.4373 155.8318 1.00086079 62
1996035B
1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
STS 78
1 23931U 96036A 96173.25000000 .00000778 54141-5 44766-5 0 57
2 23931 39.0156 5.7513 0007759 278.5891 160.5994 16.00552170 116
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1185. Re: how work KO23 and KO 23

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DtCrJA.1n7@pe1chl.ampr.org>
Source record: 22152

In <31C8ED5F.AAA@sunrise.it> Walter Girardi <narda@sunrise.it> writes:

>I can work in pachet al 9k6 and i would like to work KO23 and KO25
>Whot i have to do?
>Thanck in adwance for ryplay
>IZ3ALU WALTER from CORTINA D'AMPEZZO (BL) ITALY
>narda@sunrise.it

1. get a book about amateur satellites and read about orbits, tracking etc.
e.g.: the satellite experimenter's handbook (ARRL)

2. make sure you can work DUPLEX (transmit on 2m, receive on 70cm)

3. setup some reasonable antennes for these bands. preferably crossed
yagis with circular polarisation, but normal yagis will do for some
experimentation.
I would say a minimum of 5el transmit, 15el receive.
When your cables are long, consider a pre-amp mounted near the antenna.

4. mount the yagis to be movable in both azimuth and elevation.

5. get some software that implements the PACSAT protocols. e.g. look
at ftp.amsat.org
Wellknown programs are: PB/PG, NET, Wisp.

6. when you are lazy: implement automatic tracking of the satellite by
letting the computer control the rotators via some interface or using
a standalone tracking box.

It is a lot of work, but it is fun. When you are only in it for the
end-result (downloading files), you should really consider if it is
worth the expense and the effort. But when your hobby is to study
electronics, computers and software you will have many fun hours ahead.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
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1186. STS-78 Sarex

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4qet68$889@news.mhv.net>
Source record: 22153

Anyone hear Susan, Charles or Robert yet? I didn't hear a thing during 3 passes this afternoon. One more to go at 1934UTC.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1187. STS-78 contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-06-21 00:00:00 UTC
From: "John R. Moore" <w5huq@pobox.com>
Message-ID: <31CB270D.2086@pobox.com>
Source record: 22154

Heard a carrier keying up on 145.550 this afternoon. Listened a
few minutes and heard KC7NHZ Susan work a WA3? and then I called
her one time and she came right back then my wife N4TAE called her
one time and worked her. Very easy contact this time. Hope everyone
has as good of luck as we did.
John W5HUQ

1188. Re: STS-78 Sarex

Newsgroup: rec.radio.amateur.space
Date: 1996-06-22 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4qfi8f$9n8@vivaldi.telepac.pt>
Source record: 22155

Hi Tom

There are reports saying today (21st June)
around 2100 UTC the "action" start.

GOOD LUCK

73's F.Costa CT1EAT

1189. STS Freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-22 00:00:00 UTC
From: Ohlsson <ohlsson@algonet.se>
Message-ID: <31CC41C5.6144@algonet.se>
Source record: 22156

Hi, is it possible to recieve NASA shortwave signals from the U.S. in
Europe? In particular those frome Goddard Space Flight Center.
What do I need to listen?

/Martin

1190. ARLK044 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-22 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk044.1996@arrl.org>
Source record: 22157
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK044
ARLK044 Keplerian data

ZCZC SK44
QST de W1AW
Keplerian Bulletin 44 ARLK044
From ARRL Headquarters
Newington, CT June 22, 1996
To all radio amateurs

SB KEP ARL ARLK044
ARLK044 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 23931U 96036A 96173.58333333 .00000786 54136-5 44616-5 0 70
2 23931 39.0132 3.5128 0007725 282.2939 280.5779 16.00670877 159
Mir
1 16609U 86017A 96172.80243127 .00000283 00000-0 10284-4 0 5589
2 16609 51.6486 105.6503 0005426 97.2361 262.9116 15.58206144590567
AO-10
1 14129U 83058B 96165.06999368 -.00000011 00000-0 10000-3 0 04316
2 14129 26.1674 204.9170 6008172 23.3305 355.4069 2.05881143069782
RS-10/11
1 18129U 87054A 96173.42519464 -.00000001 00000-0 -18222-4 0 02597
2 18129 82.9253 145.4061 0012370 135.7759 224.4387 13.72366348450757
UO-11
1 14781U 84021B 96173.42275637 .00000057 00000-0 17402-4 0 08953
2 14781 97.8001 163.9566 0012916 77.5355 282.7298 14.69459831658271
RS-12/13
1 21089U 91007A 96173.11834033 .00000034 00000-0 20122-4 0 09028
2 21089 82.9228 186.4252 0027778 221.1076 138.7982 13.74071162269570
AO-13
1 19216U 88051B 96172.99946836 .00002271 00000-0 57709-3 0 2233
2 19216 57.2295 109.5685 7428118 42.7100 355.2438 2.09849114 29920
UO-14
1 20437U 90005B 96173.24831875 .00000061 00000-0 40570-4 0 02107
2 20437 98.5439 256.1892 0010651 187.0986 173.0044 14.29923989334635
```

```
RS-15
1 23439U 94085A 96173.08987886 -.00000039 00000-0 10000-3 0 01479
2 23439 64.8199 16.7752 0161066 198.4778 161.0246 11.27526225061226
AO-16
1 20439U 90005D 96173.27593366 -.00000007 00000-0 14145-4 0 00098
2 20439 98.5570 258.4408 0010660 188.7437 171.3560 14.29977470334650
DO-17
1 20440U 90005E 96173.29777084 -.00000015 00000-0 11024-4 0 9892
2 20440 98.5608 259.1057 0010627 187.6309 172.4712 14.30119388334683
WO-18
1 20441U 90005F 96173.28770750 -.00000028 00000-0 59710-5 0 00042
2 20441 98.5603 259.0352 0011385 188.1453 171.9544 14.30088863334684
LO-19
1 20442U 90005G 96173.28320915 -.00000004 00000-0 15217-4 0 9896
2 20442 98.5628 259.5273 0011568 187.6291 172.4716 14.30197649334709
FO-20
1 20480U 90013C 96173.12777808 -.00000010 00000-0 41237-4 0 09031
2 20480 99.0262 197.2380 0541136 115.5455 250.2599 12.83233730298395
AO-21
1 21087U 91006A 96173.44920385 .00000094 00000-0 82657-4 0 07336
2 21087 82.9376 318.5517 0034495 192.2738 167.7581 13.74569326270596
UO-22
1 21575U 91050B 96173.22806102 .00000024 00000-0 22408-4 0 06951
2 21575 98.3499 239.4932 0006771 256.7045 103.3385 14.37027447258643
KO-23
1 22077U 92052B 96173.21692467 -.00000037 00000-0 10000-3 0 05945
2 22077 66.0774 181.0205 0013589 298.9875 60.9786 12.86297552181329
KO-25
1 22828U 93061F 96173.25757122 -.00000022 00000-0 86198-5 0 04827
2 22828 98.5758 248.9540 0009015 205.7953 154.2776 14.28144116110695
IO-26
1 22826U 93061D 96173.20732357 -.00000032 00000-0 44284-5 0 04868
2 22826 98.5792 248.8497 0008324 218.6756 141.3830 14.27805950142576
AO-27
1 22825U 93061C 96173.21131512 -.00000030 00000-0 54031-5 0 05044
2 22825 98.5806 248.6879 0007879 218.2711 141.7914 14.27697334142565
PO-28
1 22829U 93061G 96173.20420259 -.00000000 00000-0 17389-4 0 04800
2 22829 98.5780 248.9660 0009391 202.8168 157.2592 14.28124712142602

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
June 25, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1191. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-22 00:00:00 UTC
From: dr-guru@cuci.nl
Message-ID: <31cc0670.684090@news>
Source record: 22158

Bill Meenahan <wjmeena@ix.netcom.com> wrote:

>Ton Muller wrote:
>>
>> I am looking for an FTP site where to find the Keplerian elements.
>
>====
>
>W1AW posts the main ones here regularly, most recently on 11 June.
>
>You can find a much larger set at
>
>Celestial -- Satellite Orbital Element Sets from Dr Kelso
> http://www.grove.net/~tkelso/
>
>Best of luck to you, Tom!
Thank you very mutch ,I will visit the site.

Ton Muller
Live long and prosper.

1192. Re: amsat kepler elements?? WHERE!!???

Newsgroup: rec.radio.amateur.space
Date: 1996-06-22 00:00:00 UTC
From: dr-guru@cuci.nl
Message-ID: <31cc06a3.735335@news>
Source record: 22159

millerj@dnaco.net wrote:

>dr-guru@cuci.nl (Ton Muller) wrote:
>
>>Good euwning.
>
>>I am looking for a'n FTP site where to find the Kepler 2 line element's.
>>I have FTP't logsat V5.1 for windows (nice programm,has any one a key??)
>>but my kepler's are 7 day's old.
>>(I now ,it is not much.
>
>>Ton Muller
>>Live long and prosper.
>ftp.amsat.org
And found.
thnxs.

Ton Muller
Live long and prosper.

1193. Web Site Announcement

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: hlynka <hlynka@tiac.net>
Message-ID: <31CD7DB0.765D@tiac.net>
Source record: 22068

** Web Site Announcement **

On Top Of The World

http://www.tiac.net/users/hlynka

Offering downloads of shareware.

3D Virtual World Globe Software with these features of interest to hams.

* Displays the world as seen from space, showing the current sunlit
portion.
* Works with Windows 3.1 or Windows 95.
* Determine the antenna direction and distance to any point on Earth.
* Add your own permanent features (contacts) to the world.
* Add your own notes about any place on Earth. (track your contacts)
* Display the correct local time for any place on Earth.

* Sorry, it doesn't track satellites.

-Adrian Hlynka

1194. "NASA" Tracking Software Wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: sco@sco-inc.com
Message-ID: <4qilol$1ki0@mule2.mindspring.com>
Source record: 22160

Anyone know where I can get a PC software program named "NASA" for
tracking sats?

1195. MFJ 1278 TNC for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: "B. Danielson" <n7rfm@empnet.com>
Message-ID: <31CD6A46.7CEC@empnet.com>
Source record: 22161

MFJ 1278 TNC for sale complete w/manual, works
and looks good, $150.00

Bruce, N7RFM
541-389-6496

1196. VHF Communications Magazine 2/1996

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: Michael J Wooding <g6iqm@g6iqm.demon.co.uk>
Message-ID: <3ApOpXA28WzxEwD8@g6iqm.demon.co.uk>
Source record: 22162

Hi All,

For those of you who already subscribe to VHF Communications and to
anyone who may be interested, issue 2/1996 of the magazine will be
shipped Monday June 24th,

For information on the contents of this issue or for any other info
regarding the magazine please take a look at our WWW sites.

UK: http://www.eolas.co.uk/ag/vhfcomm.htm
USA: http://www.clearlight.com/~vhfcomm

Regards ... Mike

--
Michael J Wooding G6IQM email: vhf-comm@g6iqm.demon.co.uk
http://www.eolas.co.uk/ag/vhfcomm.htm & http://www.clearlight.co./~vhfcomm
KM Publications, 5 Ware Orchard, Barby, Nr.Rugby, CV23 8UF, UK
Tel: (0)1788 890365 Fax: (0)1788 891883
VHF Communications Magazine - Especially covering VHF, UHF and Microwaves

1197. Cant compile SatTrack

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: jaykick@gate.net
Message-ID: <4qjsff$cei@navajo.gate.net>
Source record: 22163

Has anyone out there compiled Sat Track on a Linux system. I can't seem to get it work here. Were can I get the binary?

1198. MIR Voice Uplink Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: ks4aw@mail.acadian.net
Message-ID: <4qk9q5$e07@pump.acadian.net>
Source record: 22164

Can anyone post the MIR voice uplink freqs? I was listening today and heard R0MIR talking to bunches of folks but I wasn't sure if there was a seperate uplink from 145.55. Thanks in advance

Joel, KS4AW

1199. Shuttle launch date.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: yolo@utk.edu
Message-ID: <yolo-2306961948200001@news.utk.edu>
Source record: 22165

Hi, I don't know if this is the right newsgroup to ask, but I am sure you guys might know something. I would like to know if there is any shuttle launch in late July (after 22nd) and in August. I know they can be delayed, but I couldn't find any info on NASA's web site. Any information would appreciated. TIA. Please respond by mail.

1200. BBS

Newsgroup: rec.radio.amateur.space
Date: 1996-06-23 00:00:00 UTC
From: paul.jordan@chowda.com
Message-ID: <96062400450447@chowda.com>
Source record: 22166

Radio Wave.....401-831-9869

1201. FLTSATCOM

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: dcwright@webstar.net
Message-ID: <N.062396.230032.36@apache.webstar.net.webstar.net>
Source record: 22069

This may be a little off-base, but can anyone tell me which FLTSATCOM satelittes are currently active in the western hemisphere (preferably with there longitude). Thanks in advance.

Dave Wright
San Angelo, TX
dcwright@webstar.net

1202. Re: STS Freq.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: william.r.jones.1@gsfc.nasa.gov
Message-ID: <4qm00b$e8k@post.gsfc.nasa.gov>
Source record: 22070

In article <31CC41C5.6144@algonet.se>, Ohlsson <ohlsson@algonet.se> says:
>
>Hi, is it possible to recieve NASA shortwave signals from the U.S. in
>Europe? In particular those frome Goddard Space Flight Center.
>What do I need to listen?
>
>/Martin

You will need a decent S/W receiver with a BFO, since the WA3NAN
transmissions are SSB. Listen on the following freqs:

3860, 7185, 14295 & 21395 Khz.

WA3NAN has a WEB site at:
http://garc.gsfc.nasa.gov/www/garc-home-page.html

1203. Re: Can't compile SatTrack

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: Manfred Bester <manfred>
Message-ID: <4qmjop$2gu@agate.berkeley.edu>
Source record: 22071

> Has anyone out there compiled SatTrack on a Linux system. I can't seem to
> get it work here. Were can I get the binary?

SatTrack is known to work very well on Linux systems. The only problems typically encountered at compile time are related to the user's environment definitions. If the include path and the library path for the X11 modules are not defined right, then the compilation and the linking will not work. These problems are resolved by defining the appropriate paths either in the cshrc file or in the Makefile for SatTrack.

Please email the error messages to bester@primenet.com and we'll work it out.

The SatTrack web page at

http://www.primenet.com/~bester/sattrack.html

has just been updated and contains patches for Version 3.1 and new screen examples for V4.0.

-Manfred

--
==========
Bester Tracking Systems http://www.primenet.com/~bester
P.O. Box 9948 email: bester@primenet.com
Berkeley, CA 94709 phone/fax: (510) 849-9922
==========

1204. HELP: EMOTO AZ/EL parts support?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: <>
Message-ID: <1996Jun24.192738.437@nosc.mil>
Source record: 22072

I have two EMOTO AZ/EL antenna rotors, one of which is my mobile system.
I would like to get an address of where I can order a small part (the plastic
cover on the elevation connector]. I would also like to get a better technical
manual as mine arrived with zerox copies that did not include any repair part
list or alignment proceedures.

Any help would be appreciated. 73, John AA6QN

1205. Q: Is there a LINUX driver for the KCT/T card ?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: <>
Message-ID: <1996Jun24.193321.590@nosc.mil>
Source record: 22073

I think the Subject line states the full question. I am very curious on this issue as I would be nice to work with LINUX and my satellite suite. I guess that I am asking for a WISP version for LINUX OS.

73, John AA6QN

1206. Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: bjp@cle.ab.com
Message-ID: <4qmsi8$73u@news1.cle.ab.com>
Source record: 22074

Did anyone make any Contact with STS-78 or RS 10, RS15, AO-13 or AO-10?
We tried this weekend during Field Day, but nothing.

73,

Brian N8RPA

1207. Sun/Moon el. sets?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <31CEEB51.7E10@lanl.gov>
Source record: 22075

Can anyone tell me where to find current 2-line element sets for the
sun, moon, etc?
Thanks in advance.
--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
|My views rarely (if ever) reflect those of my employers|
http://nis-www.lanl.gov/~jdport/

1208. How To Work AO-27 from Brazil!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: kleite@summer.COM.BR
Message-ID: <199606242114.SAA05704@summer.com.br>
Source record: 22076

Dear Fellows:

Since very long time ago I am trying to use AO-27 but, no luck!
And, I never heard that satellite, here in Natal, Brazil.
Also, I don't known anyone who operated via AO-27 from southern
hemisphere. I heard rumor: AO-27 works in northern hemisphere only.
What is wrong for us in southern hemisphere??? I looking to hear
any coments about this matter.
I would like to thank in advance for all replys and if possible,
please, E-mail to below address.
Vy best wishes & 73 de PS7KM,

=-=
Karl M Leite E-mails: kleite@summer.com.br
Rua Estacio de Sa 1838 karl.leite@seasun.com.br
59054-580 Natal, RN, Brasil Fone/Fax: 084-213-2933
=-=

1209. Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4qn877$8l3@sloth.swcp.com>
Source record: 22077

Well, I have been listening to about 5 passes, including one 70
degree pass today, and have heard nothing from STS-78. Not even the
packet robot!
Has anybody heard anything?
73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1210. Re: Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-24 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4qnbmn$g3s@shellx.best.com>
Source record: 22078

In article <4qn877$8l3@sloth.swcp.com>,
Brian Mileshosky, N5ZGT <n5zgt@swcp.com> wrote:
> Well, I have been listening to about 5 passes, including one 70
>degree pass today, and have heard nothing from STS-78. Not even the
>packet robot!
> Has anybody heard anything?

Oh yeah, they've been on the air a lot. I've heard both Susan Helms
and Chuck Brady since last Friday.

The passes over the SF Bay Area have been between approx. 1600Z
and 2200Z. I've mostly heard activity on the 1900Z-2200Z passes
(early afternoon here). That's probably about the time they're
knocking off work for the day.

Evidently the astronauts are getting a partial day off on Tuesday,
so maybe they'll have more time to play radio.

I haven't heard any packet operation yet, nor seen any reports of any.

73,
Patty N6BIS

================================ N6BIS ================================
Support "Due South"! If you're a fan, let CBS know ASAP!
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1211. Max Dopler?? (Using FODTRACK)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bb622c.eca15620$2ca547cc@desktop>
Source record: 22079

Hello, trying to finally get going on UO-22 and KO-23, AO-16 and LU-19. Can anyone give me an idea what the max Dopler affect should be for these birds. I am using FODTRACK to tune the radio and it swings the freqs a lot and I wonder if I'm missing out. I know that PSK requires a big swing, but I though I'd just check anyway.

BTW -- No yagis, using eggbeaters - can I use the KCT SOFTWARE for just radio control. Sure would like to get something windows based.

Thanks
Bob SMith, n3ftu
n3ftu@amsat.org.

1212. Thanks for MIR Help

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: ks4aw@mail.acadian.net
Message-ID: <4qnrsi$us3@pump.acadian.net>
Source record: 22080

To all those who responded to my query - A Wholehearted Thanks! I didn't expect that kind of response to my question. Again thanks to you all...

73's...Joel, KS4AW

1213. Radioheart

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: Valery Filin <FP_FAGOT@opu.opu.odessa.ua>
Message-ID: <45A2E07C7F@OPU.OPU.Odessa.UA>
Source record: 22081

Hello!

Greetings for everybody who lives in this big and various World.
Greetings for all who likes music or radio.
I am writing my message from Odessa.
It's interesting town, intercity near Black Sea
and here i'm making the tiny musical radiostation.
Even a small station begin to live when she has a pulsing heart.
Yeah, it's a transmitter.
Step by step i save up means for the transmitter.
Anyway i need your help.
You can write me a letter:

Valery V. Filin
Visotckogo str. 12, fl.24
Odessa, 270025
Ukraine

I'll glad to read your advices, opinions and simply good words.
Peoples who want help me are interesting for myself.
Maybe you have a records which must be on a radio.
Please, send your ideas.
And at last you can support me by small sum:

Commerzbank AG, Frankfurt/Main acc.no.4008869901USD
in favour of Imexbank, Odessa in favour of
Valery Victorovich Filin acc.no.001139619.44

Or the way trough the american bank:

The Bank Of New York, N.Y. acc.no.890-0054-808 in favour of
Dialogbank in favour of Imexbank acc.no.02000090088 in favour of
Valery Victorovich Filin acc.no.001139619.44

Warmest regards,
Valery

1214. SAREX/STS-78

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: Willard L Simmons <wls@hopper.unh.edu>
Message-ID: <Pine.OSF.3.91a.960625095513.14453B-100000@hopper.unh.edu>
Source record: 22082

I'm writing from the University of New Hampshire. Rick Linnehan, an astronaut on the space shuttle has indicated that he would like to speak to one of his proffesors from UNH. I am looking for a SAREX capable ground station in the southern New Hampshire or Boston area. If anyone can help me or point me in the right direction it would be very helpful. Thank you

Bill.

p.s. I cut this clip out from the SAREX home page indicating what kind of equipment is needed:

A typical SAREX ground station includes a 2-meter FM transceiver and 25-100 watts of output power. A circularly polarized crossed-Yagi antenna capable of being pointed in both azimuth (N-S-E-W) and elevation (degrees above the horizon) is desirable, but successful contacts have even been made with verticals and groundplane antennas. Commercial and public domain computer tracking software is available to assist you in determining when the shuttle will be within range of your station and where to point your antenna. For more information on assembling your own satellite/SAREX station, obtain a copy of the "Satellite Experimenter's Handbook" from ARRL.

1215. HELP! - WISP MSPE problem

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: debaker@bnr.ca
Message-ID: <4qor5m$6ra@crchh327.rich.bnr.ca>
Source record: 22083
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

Greetings,

I just got WISP configured, but I get the error message
"Error - Unknown KISS data type 10" in the upper right hand
corner as data is received. I selected the option to log
KISS data to disk, and it is definately getting data from
the sats (KO-23, KO-25, UO-22), but never "recognises" it.

Can anyone help???? I am using a 486DX4-100/PK-900/FT-736R.
PK-900 firmware is 05.MAR.93. WISP release 9603.

Thanks in advance for any help.
David - AB5PI
--
+---+
| David E. Baker Internet: debaker@nortel.com (Richardson, TX, USA) |
| My opinions do not necessarily reflect the opinions of my employer |
+---+

1216. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: Doug Seyler <o1075djs@wwexplo.unocal.com>
Message-ID: <31D01357.3ECD@wwexplo.unocal.com>
Source record: 22084

Brian J. Pennebaker wrote:
>
> Did anyone make any Contact with STS-78 or RS 10, RS15, AO-13 or AO-10?
> We tried this weekend during Field Day, but nothing.
>
> 73,
>
> Brian N8RPA

The Houston Area Amsat group, working with the Texas DX Society as K5DX,
made contacts through RS10/12, RS15, AO-10, AO-13 and AO-27 and FO-20,
as well as some of the digitals. Not a peep out of STS-78, tho.

Doug
--
==========
Douglas J. Seyler Email: o1075djs@wwexplo.unocal.com
Unocal Phone: (713) 287-7663
14141 Southwest Freeway FAX: (713) 287-5406
Sugar Land, TX 77478-3435
==========

1217. Re: HELP! - WISP MSPE problem

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-2506961318090001@jake-6l.ip.realtime.net>
Source record: 22085
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

In article <4qor5m$6ra@crchh327.rich.bnr.ca>, debaker@bnr.ca (David Baker)
wrote:

> Greetings,
>
> I just got WISP configured, but I get the error message
> "Error - Unknown KISS data type 10" in the upper right hand
> corner as data is received. I selected the option to log
> KISS data to disk, and it is definately getting data from
> the sats (KO-23, KO-25, UO-22), but never "recognises" it.
>
> Can anyone help???? I am using a 486DX4-100/PK-900/FT-736R.
> PK-900 firmware is 05.MAR.93. WISP release 9603.
>
> Thanks in advance for any help.
> David - AB5PI

Nothing (much) to worry about. This in an indication of data overrun from
the TNC to the computer. So the bytes got shifted in the packet and the
KISS data type was the wrong byte.

Ron W5RKN

--
Ron W5RKN

1218. Satellite's

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: dcwright@webstar.net
Message-ID: <N.062596.125856.59@apache.webstar.net.webstar.net>
Source record: 22086

Does anyone have a listing of the current active FLTSATCOMS in the western hemisphere? Would appreciate any help you could provide.

Dave Wright
San Angelo, TX
dcwright@webstar.net

1219. How To Work AO-27 from Brazil!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: kleite@summer.COM.BR
Message-ID: <199606252137.SAA15091@summer.com.br>
Source record: 22087

Dear Fellows:

Since very long time ago I am trying to use AO-27 but, no luck!
And, I never heard that satellite, here in Natal, Brazil.

Also, I don't known anyone who operated via AO-27 from southern
hemisphere. I heard rumor: AO-27 works in northern hemisphere only.

What is wrong for us in southern hemisphere??? I looking to hear
any coments about this matter.

I would like to thank in advance for all replys and if possible,
please, E-mail to below address.

Vy best wishes & 73 de PS7KM,
=-=
Karl M Leite E-mails: kleite@summer.com.br
Rua Estacio de Sa 1838 karl.leite@seasun.com.br
59054-580 Natal, RN, Brasil Fone/Fax: 084-213-2933
=-=

1220. Re: Q: Is there a LINUX driver for the KCT/T card ?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DtJytu.M5E@pe1chl.ampr.org>
Source record: 22088

In <1996Jun24.193321.590@nosc.mil> feistjf@mork.nosc.mil@ writes:

> I think the Subject line states the full question. I am very curious on this issue
>as I would be nice to work with LINUX and my satellite suite.

I don't think there is a KCT driver yet, but you can write it.

>I guess that I
>am asking for a WISP version for LINUX OS.

When you are looking for a tracking program, get sattrack. It has
been often mentioned in this group. It comes as source, so you can
quite easily add drivers for tracking hardware.
(I added the driver for the AMSAT-DL interface and a specialized driver
for my own doppler tracking)

http://www.primenet.com/~bester/sattrack.html

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1221. ARLK045 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk045.1996@arrl.org>
Source record: 22089
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK045
ARLK045 Keplerian data

ZCZC SK45
QST de W1AW
Keplerian Bulletin 45 ARLK045
From ARRL Headquarters
Newington, CT June 25, 1996
To all radio amateurs

SB KEP ARL ARLK045
ARLK045 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 23931U 96036A 96177.25000000 .00000995 54308-5 45918-5 0 192
2 23931 39.0167 338.9502 0007359 304.4300 185.5309 16.01590811 748
Mir
1 16609U 86017A 96177.09930501 .00000262 00000-0 10000-4 0 5701
2 16609 51.6506 84.1085 0005581 106.8928 253.2708 15.58253394591238
HST
1 20580U 90037B 96177.08457901 .00000270 00000-0 11486-4 0 08293
2 20580 28.4684 167.7876 0005913 256.0349 103.9578 14.91067803139766
AO-10
1 14129U 83058B 96165.06999368 -.00000011 00000-0 10000-3 0 04316
2 14129 26.1674 204.9170 6008172 23.3305 355.4069 2.05881143069782
RS-10/11
1 18129U 87054A 96176.99767963 .00000030 00000-0 16001-4 0 02561
2 18129 82.9253 142.7660 0012451 126.3480 233.8825 13.72366602451248
UO-11
1 14781U 84021B 96176.96360996 .00000087 00000-0 22542-4 0 8930
2 14781 97.8005 167.3407 0012903 67.1671 293.0901 14.69460754658798
RS-12/13
1 21089U 91007A 96177.12330925 -.00000003 00000-0 -18672-4 0 8983
2 21089 82.9228 183.4556 0027907 209.6163 150.3411 13.74070895270128
AO-13
1 19216U 88051B 96176.33504584 .00001310 00000-0 61824-3 0 2253
2 19216 57.2258 108.8911 7428633 43.0553 355.2246 2.09866955 29997
```

```
UO-14
1 20437U 90005B 96176.88695964 .00000014 00000-0 22326-4 0 02036
2 20437 98.5438 259.7594 0010857 176.0337 184.0919 14.29924153335153
RS-15
1 23439U 94085A 96176.99240597 -.00000039 00000-0 10000-3 0 01451
2 23439 64.8188 10.4614 0160882 197.7817 161.7438 11.27526596061662
AO-16
1 20439U 90005D 96176.77449376 .00000018 00000-0 23970-4 0 00061
2 20439 98.5578 261.8815 0010766 177.9749 182.1479 14.29978007335153
DO-17
1 20440U 90005E 96176.72602010 .00000005 00000-0 18591-4 0 00041
2 20440 98.5608 262.4779 0010797 177.0084 183.1170 14.30119802335175
WO-18
1 20441U 90005F 96176.78599584 .00000000 00000-0 16977-4 0 00006
2 20441 98.5603 262.4757 0011524 177.2289 182.8958 14.30089301335186
LO-19
1 20442U 90005G 96176.78123122 .00000023 00000-0 25491-4 0 00082
2 20442 98.5627 262.9689 0011718 176.7498 183.3763 14.30198269335200
FO-20
1 20480U 90013C 96177.10413149 .00000011 00000-0 88195-4 0 09021
2 20480 99.0258 200.4577 0541113 106.5318 259.5916 12.83234052298908
AO-21
1 21087U 91006A 96177.45273116 .00000094 00000-0 82657-4 0 7165
2 21087 82.9365 315.5839 0034955 181.1480 178.9601 13.74569483271143
UO-22
1 21575U 91050B 96177.12725066 .00000007 00000-0 16559-4 0 07146
2 21575 98.3495 243.2758 0006750 244.4429 115.6060 14.37027735259204
KO-23
1 22077U 92052B 96177.10444137 -.00000037 00000-0 10000-3 0 05913
2 22077 66.0768 172.8798 0013513 297.2664 62.6976 12.86297385181821
KO-25
1 22828U 93061F 96176.13006903 -.00000043 00000-0 17089-6 0 04727
2 22828 98.5761 251.7761 0009190 195.5147 164.5710 14.28144081111101
IO-26
1 22826U 93061D 96177.13166307 -.00000027 00000-0 64741-5 0 04820
2 22826 98.5794 252.7039 0008327 207.0299 153.0431 14.27806170143136
AO-27
1 22825U 93061C 96176.71545550 .00000017 00000-0 24416-4 0 04960
2 22825 98.5807 252.1295 0008025 206.1668 153.9109 14.27697887143069
PO-28
1 22829U 93061G 96177.12766761 .00000023 00000-0 26839-4 0 04787
2 22829 98.5782 252.8207 0009392 191.3717 168.7254 14.28125369143161

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
June 29, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1222. Re: STS-78 contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-06-25 00:00:00 UTC
From: frenchy@travel-net.com
Message-ID: <4qo11q$pai@reaper.uunet.ca>
Source record: 22090

I have a scanner and I was wondering what mode the transmissions were?
AM, WFM or NFM?

"John R. Moore" <w5huq@pobox.com> wrote:

>Heard a carrier keying up on 145.550 this afternoon. Listened a
>few minutes and heard KC7NHZ Susan work a WA3? and then I called
>her one time and she came right back then my wife N4TAE called her
>one time and worked her. Very easy contact this time. Hope everyone
>has as good of luck as we did.
>John W5HUQ

1223. Re: Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4qpvae$t2n@news.mhv.net>
Source record: 22091

In article <4qn877$8l3@sloth.swcp.com>, n5zgt@swcp.com wrote:
> Well, I have been listening to about 5 passes, including one 70
>degree pass today, and have heard nothing from STS-78. Not even the
>packet robot!
> Has anybody heard anything?
>73,
>Brian, N5ZGT

I FINALLY heard Charlie (N4BQW) working stations at the 1600 hour pass
today. I tried to work him to no avail. Better luck next time!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1224. Helix Antenna Analysis for Mars Observer

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: mwcook@cris.com
Message-ID: <4qqgkd$rlk@tribune.concentric.net>
Source record: 22092
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

Helix Antenna Analysis

Given the interest in the use of a bay of Helix Antennas for the Mars Observer experiments, I tried modeling an array of 10 foot helix antennas using the NEC based professional AO program. The model was based on the following design:

21 Turn, 12.5 degree pitch
Wire Dia = 0.1875"
Helix Length = 127.5"
Helix Dia = 8.672"

This turned into a formidable task requiring 884 wire elements for the two stack model.

The single helix had a gain of 12.5 dBdc

The optimum stacking distance appeared to be 58 inches and resulted in a 2.9 dB gain. A four bay array of these antennas would provide a total gain of 20.4 dBic. The first and second side lobes were -11 and -12 db at 20 and 35 degrees. Judging by the pattern, I would expect little G/T performance difference between the helix and a dual polarity yagi array of the same boom length. It should also be noted that the helix was modeled with a perfect ground plane.

I have posted details of the analysis and pattern plots on my webpage at:

http://www.webcom.com/af9y

de Mike, AF9Y

1225. Mailing List Available?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: sco@sco-inc.com
Message-ID: <4qqi7d$3c76@mule2.mindspring.com>
Source record: 22093

Is there an email mailing list reflector for hams interested in working via satellites?

1226. Re: Can't compile SatTrack

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4qr0lv$mnq@bbcnews.rd.bbc.co.uk>
Source record: 22094

Manfred Bester (manfred) wrote:
: Please email the error messages to bester@primenet.com and we'll work it out.

I did this and found Manfred very very helful. SatTrack works very well
both on my Linux pc t home and my real Xterminal at work.

J.

1227. WEFAX over c-band?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4qralr$2jr6@ns1-1.CC.Lehigh.EDU>
Source record: 22095

Hello, what kind of WEFAX transmissions can i get with a C-band sat. reciver?

thanks

DAvid

|---|
| David Roseman | c002@lehigh.edu OUTTA ORDER!
SysOp of NODE 3 BBS	The Flying HAm - BBS	
Running OBV/2 Software	Technomage - BBS	
610.838.2989	N3SQE/1 - HAm V
(Parttime system)	N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1228. ICOM info please

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: Norm Hammar <nhammar@cqg.com>
Message-ID: <31D12648.11FD@cqg.com>
Source record: 22096

I am considering either an Icom 275H or an 821H for satellite work.
Which rig would provide the most satellite coverage? Is power a
problem with the 821H? What are your general comments please?

1229. Radioheart

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: Valery Filin <FP_FAGOT@opu.opu.odessa.ua>
Message-ID: <19960626110702.aaaa002iA@babyblue.cs.yale.edu>
Source record: 22097

Hello!

Greetings for everybody who lives in this big and various World.
Greetings for all who likes music or radio.
I am writing my message from Odessa.
It's interesting town, intercity near Black Sea
and here i'm making the tiny musical radiostation.
Even a small station begin to live when she has a pulsing heart.
Yeah, it's a transmitter.
Step by step i save up means for the transmitter.
Anyway i need your help.
You can write me a letter:

Valery V. Filin
Visotckogo str. 12, fl.24
Odessa, 270025
Ukraine

I'll glad to read your advices, opinions and simply good words.
Peoples who want help me are interesting for myself.
Maybe you have a records which must be on a radio.
Please, send your ideas.
And at last you can support me by small sum:

Commerzbank AG, Frankfurt/Main acc.no.4008869901USD
in favour of Imexbank, Odessa in favour of
Valery Victorovich Filin acc.no.001139619.44

Or the way trough the american bank:

The Bank Of New York, N.Y. acc.no.890-0054-808 in favour of
Dialogbank in favour of Imexbank acc.no.02000090088 in favour of
Valery Victorovich Filin acc.no.001139619.44

Thank you.
Warmest regards,
Valery

1230. Re: Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4qritt$e6h@sloth.swcp.com>
Source record: 22098

I wonder why I'm not hearing anything! I listened during 3 good
passes (70-80 degree passes), and I still hear nothing from them! I
thought I would at least hear their packet robot sending beacons or
making contacts.
I'm using a 2 meter groundplane up 50 feet and a 50 watt mobile rig.
I have had no problems making contacts with past missions, but this
one is wierd!
Where is everybody getting their Keps from? I am getting mine from
NASA, as well as using the SatTrack web page for times, and I have
heard nothing using both of them!
Maybe later on...
Best of 73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1231. Re: ICOM info please

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <31D223EC.49A@wco.com>
Source record: 22099

Norm Hammar wrote:
>
> I am considering either an Icom 275H or an 821H for satellite work.
> Which rig would provide the most satellite coverage? Is power a
> problem with the 821H? What are your general comments please?

norm,i have a ts-790a with 1.2 and it is a great radio.i also hve icoms
and like them also,but the kenwood is a good radio.
73 steve cm88ll

1232. OrbiTrack Software for the Mac

Newsgroup: rec.radio.amateur.space
Date: 1996-06-26 00:00:00 UTC
From: Timothy Parker <tparker@newrock.com>
Message-ID: <31D20C7E.7E20@newrock.com>
Source record: 22100

Does anyone have any info on this program? I have tried using it and like it a lot but could use some documentation and there was none in the download?

Thanks,

Tim

1233. Re: "NASA" Tracking Software Wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: mouse@ag.net
Message-ID: <4qsv6k$jlh@news.esrin.esa.it>
Source record: 22101

sco@sco-inc.com wrote:

>Anyone know where I can get a PC software program named "NASA" for
>tracking sats?

I don't know where to get it, but may I suggest a new program out recently called NOVA for windows. I seen it at the Rochester Ham fest in Rochester, NY and I can say that it's awesome to say the least. The e-mail address for more info is w9ip@webcom.com. His web page is http://www.webcom.com/w9ip. Check it out.

Jim N2ETE

1234. I want an Amateur Radio Operator's License

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: jhuddle@earthlink.net
Message-ID: <4qubp4$ilk@bolivia.it.earthlink.net>
Source record: 22102
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

I would like to become a licensed radio operator. Where do I begin. I am in the Los Angeles area and would like to take the exams toward the later part of August 1996.
Thanks
JH

1235. Re: Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <Dto6BL.KEu@icon.rose.hp.com>
Source record: 22103

Brian Mileshosky, N5ZGT (n5zgt@swcp.com) wrote:
: Well, I have been listening to about 5 passes, including one 70
: degree pass today, and have heard nothing from STS-78. Not even the
: packet robot!
: Has anybody heard anything?

Only once, last sunday. I think it was around lunch time (Noon-ish PDT),
I heard Susan ID. I tried returning the call, but apparently she wasn't
listening on the particular uplink I used (144.97). Then the pass was over.
No packet at all; I even tried connecting, just in case it needed a little
proding to make some noise - nothing.

Greg KO6TH

1236. Uplink from Israel

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: rrcom@netvision.NET.IL
Message-ID: <Chameleon.4.01.2.960627231509.rrcom@rrcom.netvision.net.il>
Source record: 22104

Israeli Ministry of Communication grants to R.R.Computers and
Communication Ltd. company from Beer-Sheva, Israel a special
license to provide video and audio uplink and dowlink services to satellites.

This is a new policy in Israel after monopoly of 49 years
of Israeli Government in this field of services.

R.R.Computers and Communication Ltd. provide uplink and downlink
services via INTELSAT, PANAMSAT and EUTELSAT satellites
with Flyaway and Transportable systems.

Our local Teleport is connected to all Israeli News Agencies,
Television stations and Cable Operators.

For more information and for any service you need from Israel please contact:
David Rivel - General Manager
R.R. Computers and Communication Ltd.
49-51 Haatzmauth St.
Beer-Sheva 84200 ISRAEL
Tel: +972-7-6277012 972-50-319347
Fax: +972-7-6271427
E-Mail: rrcom@netvision.net.il
http://www.mandy.com/rrc001.html

1237. STS-78 heard in Duncanville,TX

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: bshaw@connect.net
Message-ID: <4quo0i$jq9@dallas1.connect.net>
Source record: 22105

Today I heard STS-78 voice on 145.55Mhz as they passed over

1238. 435 Amp for Sale

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: duffield@indirect.com
Message-ID: <4qutbc$5si@globe.indirect.com>
Source record: 22106

I have RF Concepts 4-110, 10W in 100W out, with preanp for sale.
Like new $200.00. Works great for satellite and ATV.

Gary N7NQM
(602) 843-7724

1239. Re: Wanted: general and detailed info about amateur space systems

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DtoHII.53r@pe1chl.ampr.org>
Source record: 22107

In <ABXtGqnuUA@ascom.kiev.ua> igor@ascom.kiev.ua (Igor Matveyev) writes:

I don't know if Russian info is online, but info about US and other
systems can be found on www.amsat.org.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

1240. Re: Yeasu FT-290

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: albert@unknown.address.com
Message-ID: <4quqcv$1kre@CT1.SNET.Net>
Source record: 22108

In article <4mdv1c$hhr@newsbf02.news.aol.com>, lewiss3@aol.com (LewisS3) wrote:
> I am considering this readio, an all mode for 2 meters. Can it be used to
> work satellites?
>
> Lewis KC5PSX

Yes & no. You need a second receiver to work satellites that receive on
2 meters and transmit on another band. For example with a "short-wave"
or 10 meter radio, you can work the RS-10.

To work sats that operate on 2 meters and 440, you need a radio like the
FT-736 which allows you to work those two bands in duplex.

With the FT-290 alone you can work MIR and SAREX on the Shuttle.

Al/AA1DO

1241. Re: Whats the best first sat

Newsgroup: rec.radio.amateur.space
Date: 1996-06-27 00:00:00 UTC
From: albert@unknown.address.com
Message-ID: <4quqng$15218@CT1.SNET.Net>
Source record: 22109

In article <4m2r3n$47k$2@mhafn.production.compuserve.com>, Mike Lynn
<100135.2612@CompuServe.COM> wrote:
>
> What would be the best first satellite to work on in the 2 meter

With a 2 meter handi-talkie, if you're lucky, you can work MIR and
the Space Shuttle.

With a 2 meter CW/SSB rig and a 10 meter receiver you can work
RS-10 and RS-15. The RS-10 is by far the easiest sat to work. I
live in a condo and using a 2 meter whip and a random wire
on 10 I work RS-10 on CW any time it's above the horizon.

Al/AA1DO

1242. RE: a question about FT736R

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: Jim.Hansen@stpete.honeywell.COM
Message-ID: <31D41A97@vax-flcgr.stpete.honeywell.com>
Source record: 22018

I also have a FT736R. However, your question is more general than
specific to the FT736R.
I am assuming your question pertains to SSB operation.

The function of the ALC is to prevent overloading the RF section of the
transmitter. When in SSB you can reduce your power output by reducing
the audio drive or the RF drive. When the RF power output is reduced and
the ALC is not activated since the RF output is bellow the threshold of
peak output. Therefore, the ALC meter will not fluctuate.

So how should you adjust the mic gain? The answer is don't. Just leave
it in the position you had it in when you were working SSB with RF output
control set to maximum. Or, just leave it in the position you normally
use when working FM. This assumes you do not move the mike or talk
louder than normal.

I hope this helps.

73
Jim Hansen
WD0DIA
jim.hansen@stpete.honeywell.com

Date: Fri, 14 Jun 1996 14:28:24 +0200
From: Michel Soldevila <sol@soleil.serma.cea.fr>
Subject: a question about FT736R

Hi everybody,
Just a question about the FT736R : When using reduced power, say 10 W,
the ALC
meter doesn't deviate. How can I adjust the mic gain ?
Thanks for helping me
73 de F1GOC

1243. Re: STS-78 heard in Duncanville,TX

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4qvh4i$kbl@news.mhv.net>
Source record: 22110

In article <4quo0i$jq9@dallas1.connect.net>, bshaw@connect.net (Bradley Shaw) wrote:
>Today I heard STS-78 voice on 145.55Mhz as they passed over
>

I heard Charlie today at the 1600 pass. It was a lower altitude pass here
and I thought I had him but no go. Now I have 3 days off to try again!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1244. Re: ICOM info please

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <Dtp4MA.3ov@cix.compulink.co.uk>
Source record: 22111

I think the IC-821 is FAR better suited for satellite work. You do not need power, you need controllability. I use a Yaesu FT736 with 2m/70cms and the 6m module. I should get a 23cm module to cover every eventuality.

Satellite users/supporter are not very keen when you blast their satellite with 100+Watt+10/15db antenna gain. 10-25watts is really all you need (unless you want to do moon bounce too).

Steve g7vf7.

1245. Re: HELP! - WISP MSPE problem

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DtpD05.6DE@pe1chl.ampr.org>
Source record: 22112
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

In <rparsons-2506961318090001@jake-6l.ip.realtime.net> rparsons@bga.com (Ronald G. Parsons) writes:

>In article <4qor5m$6ra@crchh327.rich.bnr.ca>, debaker@bnr.ca (David Baker) >wrote:

>> Greetings,
>>
>> I just got WISP configured, but I get the error message
>> "Error - Unknown KISS data type 10" in the upper right hand
>> corner as data is received. I selected the option to log
>> KISS data to disk, and it is definately getting data from
>> the sats (KO-23, KO-25, UO-22), but never "recognises" it.
>>
>> Can anyone help???? I am using a 486DX4-100/PK-900/FT-736R.
>> PK-900 firmware is 05.MAR.93. WISP release 9603.
>>
>> Thanks in advance for any help.
>> David - AB5PI

>Nothing (much) to worry about. This in an indication of data overrun from >the TNC to the computer. So the bytes got shifted in the packet and the >KISS data type was the wrong byte.

I don't know WISP, but when I would see an error like that in a KISS based program I would think about a problem with multi-channel KISS. type 10 (hex) is the type used for data received from the second channel of the TNC. Maybe WISP cannot cope with it, or has to be configured for it.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

1246. Re: HELP! - WISP MSPE problem

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: Bob Smith <bob.smith@mci.com>
Message-ID: <01bb64fc.00e58a80$6eecbdcc@rsmith>
Source record: 22113
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc

>>>I don't know WISP, but when I would see an error like that in a KISS
based program I would think about a problem with multi-channel KISS.
type 10 (hex) is the type used for data received from the second channel
of the TNC. Maybe WISP cannot cope with it, or has to be configured
for it.

Good point - I get the same error from my PK900/DSP93 combo.

1247. Re: WEFAX over c-band?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: Rick Bates <rbates@wco.com>
Message-ID: <31D41965.5E12@wco.com>
Source record: 22114

c002@Lehigh.EDU wrote:
>
> Hello, what kind of WEFAX transmissions can i get with a C-band sat. reciver?
>
> thanks
>
> DAvid
> |---|
> | David Roseman | c002@lehigh.edu OUTTA ORDER!
> | SysOp of NODE 3 BBS | The Flying HAm - BBS | |
> | Running OBV/2 Software | Technomage - BBS | |
> | 610.838.2989 | N3SQE/1 - HAm V |
> | (Parttime system) | N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet |
> |-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|

None anymore. They converted the format and went scrambled. >:

It used to be on S3/17 at ~1.8 MHz. FM2

Rick

1248. Re: Nothing from STS-78 yet... (SAREX)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: ACE <aceflock@erinet.com>
Message-ID: <31D47756.2573@erinet.com>
Source record: 22115

Yesterday starting at 13:36 EDT I started hearing Shannon on the MIR station. She was chatting with what appeared to be a school group. The pass lasted 9 minutes and I was able to hear her on most of the pass.

After the MIR station cleared the Eastern horizon I started hearing STS-78. This pass started at 13:45 EDT and lasted 7 minutes. I was able to hear most of the call that they were acknowledging from the shuttle.

I tried to make contact wih both MIR and STS-78, but no joy. I am operating a Kenwood TM-742A, with a Commet tri-band vertical at 40 ft..

Back on 3 June 1996 I did manage to contact Shannon on a pass that took place at 8:10 EDT.. This pass lasted 8 minutes.

I get my keps from this newsgroup and also retrieve them from the Celestial WWW sight.

I will be checking this newsgroup often, just to see how many more of us make contact.

Ace

1249. STS-78 HF coverage

Newsgroup: rec.radio.amateur.space
Date: 1996-06-28 00:00:00 UTC
From: frenchy@travel-net.com
Message-ID: <4qvkst$gsb@reaper.uunet.ca>
Source record: 22116

I used to be able to receive shuttle transmissions from the goddard space center. On this mission I haven't heard anything. Anyone know why??

1250. Re: I want an Amateur Radio Operator's License

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: kb6ojs@earthlink.net
Message-ID: <4r1u07$lki@chile.it.earthlink.net>
Source record: 22019
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

jhuddle@earthlink.net (Joseph Huddleston) wrote:

>I would like to become a licensed radio operator. Where do I begin. I am in the Los
>Angeles area and would like to take the exams toward the later part of August 1996.

LA is a big area -- where specifically are you? Drop me a reply in
Email and I'll try to steer you toward a club in your area where you
can get started.

-- //Steve//

Steve Silverwood (Formerly of Computer Associates)
CompuServe: 76703,3035 Internet: kb6ojs@earthlink.net
America Online: KB6OJS Homepage: http://www.earthlink.net/~kb6ojs

1251. Re: HamSats... HELP

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: Timothy Parker <tparker@newrock.com>
Message-ID: <31D56E51.74C3@newrock.com>
Source record: 22020

Dylan,

Check out the AMSAT web site at

http://www.amsat.org/amsat

I got a pretty good FAQ off of it that covers Ham satellite operation.
Plus there is other good stuff there as well.

Tim

1252. SAREX Contact!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: Ronalee Fitch <hammster@earthlink.net>
Message-ID: <4r429u$18n@peru.it.earthlink.net>
Source record: 22021

On today's (06/29/96) 12:14 P.M. PDT pass, I contacted VA3CSA, Robert Thiesk! Heard other contacts (one in AZ). They do listen, and they DO answer. Did anyone else get a contact on this pass? Please post.

1253. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4r418q$j4v@blackbird.afit.af.mil>
Source record: 22022

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1254. NORAD Two-Line Orbital Element Sets (TLE830)

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4r416b$j4k@blackbird.afit.af.mil>
Source record: 22023

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #830 -
Alouette 1
1 00424U 62049A 96179.24296473 .00000092 00000-0 97959-4 0 2098
2 00424 80.4629 273.8213 0023730 10.5523 349.6115 13.67871187683711
ATS 1
1 02608U 66110A 96174.85244027 -.00000322 00000-0 10000-3 0 9711
2 02608 14.6186 352.7715 0009230 85.2275 274.8695 1.00333582 24920
ATS 3
1 03029U 67111A 96175.41534678 -.00000112 00000-0 10000-3 0 5070
2 03029 14.9128 359.7316 0008671 271.1951 45.0812 1.00273160104828
Starlette
1 07646U 75010A 96177.21229364 -.00000151 00000-0 -83779-5 0 9791
2 07646 49.8256 117.0418 0205978 257.0053 100.7769 13.82190792 80071
LAGEOS
1 08820U 76039A 96178.15625348 .00000029 00000-0 10000-3 0 2031
2 08820 109.8513 29.0905 0043648 127.9009 232.5755 6.38664604214408
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96178.41416666 .00000060 00000-0 10000-3 0 6884
2 10061 12.3766 36.9919 0010547 123.3709 88.6829 1.00265003 14535
IUE
1 10637U 78012A 96168.49745209 -.00000284 00000-0 10000-3 0 2582
2 10637 35.7447 83.1505 1366793 56.7909 263.5492 1.00239446 19923
GPS BI-01
1 10684U 78020A 96171.81955848 -.00000054 00000-0 10000-3 0 4560
2 10684 64.9862 23.8090 0059454 162.5605 197.7011 1.98069443119461

```
GPS BI-02
1 10893U 78047A 96176.24723160 -.00000011 00000-0 10000-3 0 2531
2 10893 63.1996 260.7719 0231460 15.2326 345.5188 2.01627833132950
GOES 3
1 10953U 78062A 96178.17048839 -.00000131 00000-0 10000-3 0 6719
2 10953 11.3681 39.8559 0007211 331.9682 223.1833 1.00272107 19149
SeaSat 1
1 10967U 78064A 96178.54566336 -.00000057 00000-0 25554-4 0 4967
2 10967 107.9926 194.1139 0001379 259.6589 100.4397 14.38109845942799
GPS BI-03
1 11054U 78093A 96178.27627137 .00000002 00000-0 10000-3 0 4120
2 11054 62.8423 259.8656 0046775 179.9827 180.0796 1.93505240128833
Nimbus 7
1 11080U 78098A 96177.59376561 -.00000037 00000-0 37398-5 0 5963
2 11080 98.9444 39.4299 0008543 308.5604 51.4772 13.83692902892336
GPS BI-04
1 11141U 78112A 96175.03522661 -.00000041 00000-0 10000-3 0 508
2 11141 65.0054 26.1559 0050185 28.5983 331.7312 1.92894651 17993
GPS BI-05
1 11690U 80011A 96177.82366958 -.00000020 00000-0 10000-3 0 341
2 11690 65.3170 25.0938 0144529 189.3184 170.4632 2.00572814134377
GPS BI-06
1 11783U 80032A 96177.21617665 .00000007 00000-0 10000-3 0 1529
2 11783 62.3244 253.3923 0227112 29.5054 331.8043 2.03456504118999
GOES 5
1 12472U 81049A 96175.74265047 .00000056 00000-0 10000-3 0 9378
2 12472 8.1909 50.0855 0006615 42.8037 317.2020 1.00222085 13166
Cosmos 1383
1 13301U 82066A 96175.90826558 .00000016 00000-0 15860-5 0 5067
2 13301 82.9321 128.8735 0026082 219.8941 140.0292 13.68075152698291
LandSat 4
1 13367U 82072A 96176.65106571 .00000017 00000-0 13659-4 0 9401
2 13367 98.0728 227.3410 0007885 111.9764 248.2266 14.57180163741628
DMSP B5D2-1
1 13736U 82118A 96178.13874193 -.00000006 00000-0 16001-4 0 324
2 13736 98.6249 6.3802 0009469 7.3171 352.8141 14.25790337702347
IRAS
1 13777U 83004A 96178.58527630 .00000222 00000-0 18245-3 0 3563
2 13777 98.9650 3.8812 0014029 73.8873 286.3835 13.99251024354685
Cosmos 1447
1 13916U 83021A 96178.53812321 .00000030 00000-0 15013-4 0 6006
2 13916 82.9451 184.1223 0038672 123.7335 236.7515 13.74342265665027
TDRS 1
1 13969U 83026B 96178.06544058 -.00000291 00000-0 10000-3 0 6006
2 13969 8.9934 43.5599 0002142 11.2316 194.3138 1.00273564 21472
GOES 6
1 14050U 83041A 96176.24026743 -.00000243 00000-0 10000-3 0 5229
2 14050 7.0259 53.5510 0004186 39.3201 188.6863 1.00250185106268
OSCAR 10
1 14129U 83058B 96178.18336377 .00000099 00000-0 10000-3 0 4313
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2 14129 26.1433 202.7922 6011593 26.8603 354.6276 2.05880481 70053
LandSat 5
1 14780U 84021A 96176.22460381 -.00000014 00000-0 72478-5 0 4826
2 14780 98.3283 234.0373 0001541 279.3538 80.7486 14.57055483654959
UoSat 2
1 14781U 84021B 96176.96360996 .00000087 00000-0 22542-4 0 8930
2 14781 97.8005 167.3407 0012903 67.1671 293.0901 14.69460754658798
GPS BI-09
1 15039U 84059A 96170.81284232 -.00000058 00000-0 10000-3 0 4181
2 15039 64.6481 20.5945 0082931 19.0710 341.2914 1.92301991 87469
Cosmos 1574
1 15055U 84062A 96176.60878396 .00000038 00000-0 25078-4 0 8000
2 15055 82.9560 240.4603 0027422 324.5508 35.3830 13.73636159602005
GPS BI-10
1 15271U 84097A 96168.45528970 -.00000002 00000-0 10000-3 0 1690
2 15271 62.0106 254.2769 0153789 358.2442 1.8077 2.00613544 85257
Cosmos 1602
1 15331U 84105A 96175.85809457 .00000229 00000-0 24133-4 0 4833
2 15331 82.5334 106.7858 0018792 289.3296 70.5890 14.84761275633962
NOAA 9
1 15427U 84123A 96179.82453825 .00000038 00000-0 43918-4 0 7488
2 15427 98.9449 244.7547 0014159 285.8965 74.0645 14.13788447595136
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96179.08737985 .00001257 00000-0 22877-4 0 5725
2 16609 51.6494 74.1356 0005342 115.6645 244.4899 15.58262621591543
SPOT 1
1 16613U 86019A 96178.23621479 .00000089 00000-0 62356-4 0 9517
2 16613 98.7305 246.3833 0000856 335.8301 24.2835 14.20023437221591
Cosmos 1766
1 16881U 86055A 96177.48573899 .00000221 00000-0 23812-4 0 3989
2 16881 82.5190 162.9730 0018496 315.2357 44.7365 14.83741815535074
EGP
1 16908U 86061A 96178.56941207 -.00000083 00000-0 10000-3 0 964
2 16908 50.0102 328.1583 0011425 37.8704 322.2933 12.44414378117579
NOAA 10
1 16969U 86073A 96179.73244821 .00000050 00000-0 39786-4 0 6751
2 16969 98.5235 176.4961 0013068 329.1615 30.8798 14.24990406508102
MOS-1
1 17527U 87018A 96179.22932505 -.00000043 00000-0 00000+0 0 4279
2 17527 98.9332 241.0067 0019772 302.3964 57.5287 14.00393337476397
GOES 7
1 17561U 87022A 96157.45277443 -.00000180 00000-0 10000-3 0 9504
2 17561 3.0382 69.5670 0005652 4.5241 248.2095 1.00356380 17188
Kvant-1
1 17845U 87030A 96177.80475126 .00000134 00000-0 83321-5 0 6678
2 17845 51.6494 80.5706 0005282 110.0150 250.1375 15.58254873525460
DMSP B5D2-3
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1 18123U 87053A 96179.55657232 -.00000028 00000-0 81647-5 0 4925
2 18123 98.7684 9.6845 0013253 223.3910 136.6220 14.15445286465965
RS-10/11
1 18129U 87054A 96178.38292847 .00000049 00000-0 37014-4 0 2321
2 18129 82.9252 141.7419 0012465 122.6265 237.6097 13.72366841451432
Meteor 2-16
1 18312U 87068A 96175.89881917 .00000057 00000-0 38060-4 0 4890
2 18312 82.5538 346.7572 0011226 197.2674 162.8107 13.84080292447108
Meteor 2-17
1 18820U 88005A 96179.15705755 .00000040 00000-0 22650-4 0 9732
2 18820 82.5422 39.1796 0015164 260.7532 99.1913 13.84758727424904
DMSP B5D2-4
1 18822U 88006A 96178.53586853 -.00000026 00000-0 68318-5 0 2855
2 18822 98.3831 10.1504 0006187 347.6234 12.4791 14.23193217435905
Glonass 34
1 19163U 88043A 96173.28057464 -.00000012 00000-0 10000-3 0 882
2 19163 65.2636 85.7014 0008213 150.3200 209.7446 2.13102179 62321
Glonass 36
1 19165U 88043C 96178.96867434 -.00000024 00000-0 10000-3 0 4966
2 19165 65.2404 85.4693 0003287 347.0115 13.0015 2.13101885 63065
METEOSAT 3
1 19215U 88051A 96177.81427699 -.00000069 00000-0 10000-3 0 2663
2 19215 3.2858 67.6608 0002142 116.9842 242.7232 0.96947615 17264
AO-13
1 19216U 88051B 96178.71742334 .00001723 00000-0 65034-3 0 2271
2 19216 57.2197 108.3940 7429069 43.2906 355.1799 2.09872593 30049
OKEAN 1
1 19274U 88056A 96178.23258553 .00000182 00000-0 19659-4 0 990
2 19274 82.5132 263.1233 0021443 92.4371 267.9301 14.82490550430717
Meteor 3-2
1 19336U 88064A 96178.12795373 .00000051 00000-0 10000-3 0 4913
2 19336 82.5395 160.0990 0015985 211.0759 148.9415 13.16978079380659
Glonass 39
1 19503U 88085C 96176.65228149 -.00000030 00000-0 10000-3 0 3838
2 19503 65.5672 324.4738 0005019 150.3527 209.6831 2.13101704 60509
NOAA 11
1 19531U 88089A 96179.78313585 -.00000007 00000-0 21434-4 0 5615
2 19531 99.1865 198.1752 0010901 209.0550 151.0008 14.13095721399946
TDRS 2
1 19548U 88091B 96177.01819826 -.00000184 00000-0 10000-3 0 2168
2 19548 2.5059 72.1623 0003494 91.9487 200.7819 1.00279419 15601
Glonass 40
1 19749U 89001A 96178.56684267 -.00000025 00000-0 10000-3 0 6048
2 19749 65.2138 85.0427 0007466 260.0510 99.8879 2.13101597 58057
Glonass 41
1 19750U 89001B 96173.92932146 -.00000014 00000-0 10000-3 0 5099
2 19750 65.2264 85.2689 0006574 232.0934 127.8776 2.13101834 57971
GPS BII-01
1 19802U 89013A 96176.12088932 .00000007 00000-0 10000-3 0 2504
2 19802 55.3431 110.3594 0020500 178.3843 181.6180 2.00578089 53852
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Akebono
1 19822U 89016A 96178.80328093 .00008123 00000-0 46666-3 0 7421
2 19822 75.0724 118.3570 3741963 99.0858 304.2466 7.91940674167451
Meteor 2-18
1 19851U 89018A 96177.23017487 .00000054 00000-0 35267-4 0 4870
2 19851 82.5204 274.6604 0013930 319.5243 40.4881 13.84412906369943
MOP-1
1 19876U 89020B 96172.57136188 -.00000122 00000-0 10000-3 0 2010
2 19876 1.9943 71.1697 0020157 286.4400 72.7574 0.97110273 6658
TDRS 3
1 19883U 89021B 96173.46173410 -.00000264 00000-0 10000-3 0 2238
2 19883 0.0335 230.2193 0001793 293.6993 231.2370 1.00270437199161
GPS BII-02
1 20061U 89044A 96177.46266223 -.00000048 00000-0 10000-3 0 2322
2 20061 54.1889 286.0580 0158094 219.2596 139.6080 2.00562151 51629
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2 20103 82.9622 100.8255 0038963 25.3485 334.9570 13.73867070350140
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2 20217 1.8134 75.0746 0001247 196.7654 146.0464 1.00274966 25515
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2 20261 82.5934 266.8410 1242357 27.8837 338.3507 12.47340875306661
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2 20302 53.2521 225.9692 0023407 190.8495 169.1740 2.00566187 48953
Meteor 3-3
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2 20305 82.5571 117.2700 0006120 283.7302 76.3642 13.04415386319581
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Meteor 3-5
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2 21655 82.5502 313.6268 0013707 141.4200 218.7902 13.16847898233947
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2 21701 56.9859 69.9845 0004831 109.8177 250.3378 14.96520320261857
DMSP B5D2-6
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Glonass 53
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Glonass 54
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Glonass 55
1 21855U 92005C 96179.44125361 .00000086 00000-0 10000-3 0 2963
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2 21987 28.4313 131.1052 0009808 139.8054 220.3267 15.19807688224854
SAMPEX
1 22012U 92038A 96175.23942051 .00000278 00000-0 21723-4 0 7267
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2 22014 54.8498 168.1994 0094850 326.6162 32.7975 2.00576124 22597
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1 22056U 92047A 96176.99302135 -.00000033 00000-0 10000-4 0 2162
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2 22057 64.7790 323.2980 0006512 331.0789 28.8890 2.13103291 30328
Glonass 58
1 22058U 92047C 96179.57513007 .00000091 00000-0 10000-3 0 1164
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Glonass 59
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Meteor 2-21
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UFO F2
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Glonass 64
1 23045U 94021C 96178.05064602 -.00000035 00000-0 00000+0 0 3446
2 23045 64.6277 323.5934 0011498 35.3162 324.7595 2.13102294 17197
GOES 8
1 23051U 94022A 96178.18183214 -.00000247 00000-0 10000-3 0 5430
2 23051 0.0471 94.4245 0004529 47.2946 123.6879 1.00267850 15455
MSTI 2
1 23101U 94028A 96178.55933078 .00003332 00000-0 52901-4 0 3289
2 23101 97.0819 11.9488 0009822 292.4837 67.5378 15.54017901120754
STRV-1A
1 23125U 94034B 96177.45457297 .00002571 00000-0 49747-3 0 2954
2 23125 7.0183 236.1606 7256508 67.8519 350.7424 2.32094377 16310
STRV-1B
1 23126U 94034C 96174.95400723 -.00004266 00000-0 -62632-3 0 2604
2 23126 7.0143 237.3726 7262188 65.4066 351.1991 2.31960262 16290
Nadezhda 4
1 23179U 94041A 96177.62311501 .00000064 00000-0 50217-4 0 1990
2 23179 82.9460 230.3402 0037715 98.5396 262.0037 13.75682276 97957
Glonass 65
1 23203U 94050A 96178.18824387 .00000112 00000-0 00000+0 0 3054
2 23203 64.7718 203.8169 0006419 164.1215 195.9691 2.13102308 14593
Glonass 66
1 23204U 94050B 96177.48340303 .00000106 00000-0 00000+0 0 3264
2 23204 64.7590 203.8647 0015182 340.4784 19.5354 2.13102559 14573
Glonass 67
1 23205U 94050C 96179.24307918 .00000117 00000-0 00000+0 0 3022
2 23205 64.7671 203.7954 0003361 278.4569 81.5776 2.13102754 14610
DMSP B5D2-7
1 23233U 94057A 96179.70413499 .00000110 00000-0 82857-4 0 8273
2 23233 98.8265 238.3217 0012948 146.5619 213.6370 14.12715971 94312
OKEAN 1-7
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1 23317U 94066A 96179.14971721 .00000120 00000-0 14721-4 0 1630
2 23317 82.5444 49.8707 0027785 49.2873 311.0749 14.74026571 92005
ELEKTRO
1 23327U 94069A 96176.40173032 -.00000096 00000-0 00000+0 0 1700
2 23327 0.1039 170.7679 0006613 292.7474 30.1999 1.00271216 6074
RESURS 1-3
1 23342U 94074A 96177.24818618 .00000045 00000-0 15455-4 0 5074
2 23342 97.9656 234.1157 0001346 70.0764 290.0586 14.69843325 87997
Glonass 68
1 23396U 94076A 96178.61744975 -.00000026 00000-0 00000+0 0 2769
2 23396 65.0811 83.9579 0028112 191.2876 168.6752 2.13102623 12441
Glonass 69
1 23397U 94076B 96176.91639299 -.00000024 00000-0 00000+0 0 2693
2 23397 65.0743 84.0234 0013524 321.1234 38.8121 2.13102295 12408
Glonass 70
1 23398U 94076C 96178.67716551 -.00000026 00000-0 00000+0 0 2867
2 23398 65.0610 83.9417 0003546 298.7637 61.2292 2.13102328 12453
LUCH (Altair-2)
1 23426U 94082A 96177.02778830 -.00000267 00000-0 00000+0 0 3387
2 23426 1.4506 267.4906 0002121 198.7370 272.2727 1.00280250 5585
RS-15
1 23439U 94085A 96176.54893709 -.00000039 00000-0 10000-3 0 1428
2 23439 64.8185 11.1787 0160933 197.8618 161.6615 11.27526561 61618
NOAA 14
1 23455U 94089A 96179.84572096 .00000012 00000-0 31371-4 0 6520
2 23455 98.9453 125.2899 0008553 209.0895 150.9802 14.11594730 76956
Glonass 71
1 23511U 95009A 96175.82065956 -.00000032 00000-0 00000+0 0 1980
2 23511 64.6624 323.9424 0005887 205.2507 154.7252 2.13103723 10119
Glonass 72
1 23512U 95009B 96177.81660297 -.00000034 00000-0 00000+0 0 2175
2 23512 64.6568 323.8757 0005085 329.5648 30.4076 2.13101985 10157
Glonass 73
1 23513U 95009C 96179.04734150 -.00000038 00000-0 00000+0 0 2278
2 23513 64.6639 323.8477 0013074 196.5746 163.3827 2.13103084 10189
GMS 5
1 23522U 95011B 96178.78296297 .00000000 00000-0 10000-3 0 1256
2 23522 0.4365 337.3014 0000707 115.2615 244.7493 1.00270099 5220
DMSP B5D2-8
1 23533U 95015A 96179.84738375 -.00000010 00000-0 18243-4 0 5689
2 23533 98.8395 182.1720 0008195 31.9934 328.1732 14.12742875 65135
Microlab 1
1 23547U 95017C 96178.91723874 .00000187 00000-0 70061-4 0 1160
2 23547 69.9785 147.4885 0013499 175.5516 184.5746 14.45546732 65074
OFEQ 3
1 23549U 95018A 96177.13592787 .00011582 00000-0 28520-3 0 2684
2 23549 143.3641 276.5169 0223329 205.6342 153.3082 15.15917555 67577
GFZ-1
1 23558U 86017JE 96177.15130482 .00001575 00000-0 23461-4 0 1360
2 23558 51.6524 73.1972 0005007 253.6912 106.3532 15.62257905591251
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ERS-2
1 23560U 95021A 96179.20075163 -.00000019 00000-0 90000-5 0 2481
2 23560 98.5439 253.1305 0001075 84.9604 275.1702 14.32247627 62009
Spektr
1 23579U 95024A 96177.80475989 .00000134 00000-0 83328-5 0 3739
2 23579 51.6494 80.5705 0005282 110.0150 250.1858 15.58254873 62787
GOES 9
1 23581U 95025A 96167.40430022 .00000077 00000-0 00000+0 0 2046
2 23581 0.2011 82.4729 0000778 279.4890 272.5312 1.00281681 3909
Helios 1A
1 23605U 95033A 96178.30414421 .00000076 00000-0 23494-4 0 2358
2 23605 98.1213 113.8787 0001356 68.3009 291.8354 14.63846130 51899
UPM SAT 1
1 23606U 95033B 96178.86485427 .00000169 00000-0 38498-4 0 1794
2 23606 98.1019 115.5179 0007678 143.5857 216.5871 14.67256662 52133
CERISE
1 23607U 95033C 96177.63567763 .00000071 00000-0 21274-4 0 989
2 23607 98.1023 114.1759 0006134 145.1162 215.0445 14.66947922 51978
TDRS 6
1 23613U 95035B 96164.42597162 -.00000066 00000-0 10000-3 0 1741
2 23613 0.5850 82.5156 0003337 226.6902 277.4964 1.00024421 3337
Glonass 74
1 23620U 95037A 96178.36214783 .00000113 00000-0 00000+0 0 1516
2 23620 64.8253 203.6698 0018435 173.5880 186.5053 2.13102994 7208
Glonass 75
1 23621U 95037B 96178.53938805 .00000114 00000-0 00000+0 0 1548
2 23621 64.8435 203.6711 0018529 183.4255 176.6304 2.13102762 7209
Glonass 76
1 23622U 95037C 96177.18986701 .00000103 00000-0 00000+0 0 1545
2 23622 64.8331 203.7191 0036597 168.0562 192.0983 2.13102547 7175
Prognoz-M2
1 23632U 95039A 96172.29100520 -.00000806 00000-0 00000+0 0 632
2 23632 70.1900 250.0080 8330225 322.1180 316.8460 0.26343000 859
SICH-1
1 23657U 95046A 96176.66916125 .00000102 00000-0 12111-4 0 884
2 23657 82.5336 193.6719 0029269 28.4510 331.8290 14.73479108 43935
RADARSAT
1 23710U 95059A 96177.59603677 -.00000018 00000-0 10000-4 0 1520
2 23710 98.5751 184.1607 0001516 122.1814 237.9516 14.29976813 33446
Glonass 77
1 23734U 95068A 96178.24606346 .00000112 00000-0 00000+0 0 1321
2 23734 64.8271 203.5870 0019307 317.9694 41.9524 2.13101900 4166
Glonass 78
1 23735U 95068B 96177.05031239 .00000102 00000-0 00000+0 0 1243
2 23735 64.8267 203.6233 0008300 224.5419 135.4582 2.13125287 4139
Glonass 79
1 23736U 95068C 96178.48057541 .00000114 00000-0 00000+0 0 1092
2 23736 64.8147 203.5903 0008460 207.0082 153.0188 2.13102307 4168
XTE
1 23757U 95074A 96175.04681339 .00000578 00000-0 19388-4 0 669
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2 23757 22.9848 11.8726 0013321 130.8246 229.3423 14.97660095 26345
1996010D
1 23797U 96010D 96179.38730367 .00192971 64466-6 11592-2 0 1075
2 23797 48.0879 247.2042 7309317 31.9282 357.0259 2.30096332 2890
Soyuz TM-23
1 23798U 96011A 96177.80475989 .00000134 00000-0 83328-5 0 1096
2 23798 51.6494 80.5705 0005282 110.0150 250.1858 15.58254873 19546
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96178.08251336 .00000460 00000-0 18266-2 0 709
2 23824 47.6959 249.8172 7261095 30.0219 356.6099 2.21670565 2812
GPS BIIA-25
1 23833U 96019A 96175.87910332 -.00000057 00000-0 10000-3 0 410
2 23833 54.6819 347.7793 0038847 146.2273 214.0279 2.00565221 1817
Priroda
1 23848U 96023A 96177.80475989 .00000134 00000-0 83328-5 0 623
2 23848 51.6494 80.5705 0005282 110.0150 250.1858 15.58254873 9877
MSX
1 23851U 96024A 96178.48328989 -.00000047 00000-0 00000+0 0 400
2 23851 99.3779 157.9202 0006898 135.7073 224.4638 13.97710737 8796
Progress M-31
1 23860U 96028A 96177.80475989 .00000134 00000-0 83328-5 0 543
2 23860 51.6494 80.5705 0005282 110.0150 250.1858 15.58254873 8049
MSTI 3
1 23868U 96031A 96176.03528757 .00001030 00000-0 22711-4 0 321
2 23868 97.1214 6.3627 0012814 144.9795 215.2300 15.46145918 5880
Gorizont 32
1 23880U 96034A 96176.84741794 .00000103 00000-0 00000+0 0 260
2 23880 1.4294 283.6782 0015123 332.2441 15.0721 1.00272976 303
1996034E
1 23886U 96034E 96175.33538749 .00001334 00000-0 46216-3 0 106
2 23886 47.2769 275.5071 7322901 7.5044 359.1890 2.22665589 656
1996034F
1 23887U 96034F 96176.28611730 .00000104 00000-0 22168-3 0 96
2 23887 47.3265 275.3939 7302716 7.6810 359.1478 2.22251148 670
1983063A
1 23906U 83063E 96175.54624443 .00000536 00000-0 19272-3 0 45
2 23906 82.0249 198.4033 0042585 159.9774 200.3097 14.31849178677446
1996035A
1 23915U 96035A 96179.22402704 -.00000284 00000-0 00000+0 0 182
2 23915 0.0696 286.9191 0000364 289.6329 82.6706 1.00274293 143
1996035B
1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
STS 78
1 23931U 96036A 96179.58333333 .00001083 54364-5 46366-5 0 265
2 23931 39.0149 323.2952 0006902 319.0054 325.9736 16.01983738 1115
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1255. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: Jim Brown <starman@conterra.com>
Message-ID: <31D5E32B.70B3@conterra.com>
Source record: 22024

This is supposed to be a SAREX flight but I haven't heard a peep out
of them on voice or packet. The last half dozen SAREX flights have
been like this. I don't know what their problem is or perhaps they
are using the 2-meter radios for personal (family) contacts
and school contacts only. I've been pretty dissapointed in the
SAREX program for the past year as I used to be able to work them
regularly; but I haven't been able to in at least a year. I support
the SAREX program and participated in the SAREX antenna test as well
as hosting a SAREX school contact from my planetarium a few years
ago. I just wish the folks would at least turn the robot on if they
don't have time for voice!
--
~~~~~~
The most exciting phrase to hear in science, the one that heralds new
discoveries, is not "Eureka!" (I found it!) but "That's funny ..."
-- Isaac Asimov
~~~~~~
starman@conterra.com
starman@scsu.scsu.edu
brow3600@spacelink.msfc.nasa.gov
http://www.conterra.com/starman/sbp.html

1256. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4r4r5i$su0@shellx.best.com>
Source record: 22025

In article <31D5E32B.70B3@conterra.com>,
Jim Brown <starman@conterra.com> wrote:
>This is supposed to be a SAREX flight but I haven't heard a peep out
>of them on voice or packet.

There have been several reports in this newsgroup of people working them. I personally have heard Chuck Brady almost daily since Friday the 21st; usually multiple times per day. The packet robot came on for about a day last Tuesday (I caught it on Wednesday morning), then disappeared for a few days, but I heard it again today.

I'm in the SF Bay Area, btw. Perhaps the passes over Jim's location have been at times when the astronauts are asleep or working, because they've been very active on this mission.

Patty

================================ N6BIS ================================
Support "Due South"! If you're a fan, let CBS know ASAP!
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1257. AO-27: info, please!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: karl.leite@seasun.COM.BR
Message-ID: <8C372A2.000C00C116.uuout@seasun.com.br>
Source record: 22026

```
=====================================================================
MY APOLOGIZE IF THIS MESSAGE IS NOT APPROPRIATE HERE
=====================================================================

From: Karl M Leite, PS7KM <kleite@summer.com.br>
Subject: How To Work AO-27 from Brazil!!!

Dear Fellows:

Since very long time ago I am trying to use AO-27 but, no luck!
FYI, I never heard that satellite, here in Natal, Brazil.

Also, I don't know if anybody operated via AO-27 from southern
hemisphere. I heard rumor: AO-27 works in northern hemisphere only.

What is wrong for us in southern hemisphere??? I looking to hear
any comments about this matter.

I would like to thank in advance for all replys and if possible,
please, E-mail to below address.

Vy best wishes & 73 de PS7KM,
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Karl M Leite E-mails: kleite@summer.com.br
Rua Estacio de Sa 1838 karl.leite@seasun.com.br
59054-580 Natal, RN, Brasil Fone/Fax: 084-213-2933
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
--
* UniQWK #1812* Ensinar e aprender duas vezes. Joe Joubert
aka 7J3YAD (Konsai
International Radio Club)
A |July 17-19 Maui KH6/K8AQM, KH6/KG8CO, NH6/N8CC

---
* UniQWK #1812* Ensinar e aprender duas vezes. Joe Joubert
```

1258. ARLK046 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-06-29 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk046.1996@arrl.org>
Source record: 22027
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK046
ARLK046 Keplerian data

ZCZC SK46
QST de W1AW
Keplerian Bulletin 46 ARLK046
From ARRL Headquarters
Newington, CT June 29, 1996
To all radio amateurs

SB KEP ARL ARLK046
ARLK046 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 23931U 96036A 96180.58333333 .00001017 54423-5 44356-5 0 289
2 23931 39.0156 316.5857 0006804 325.1376 336.4631 16.02338754 1279
Mir
1 16609U 86017A 96180.56239996 .00000997 00000-0 19500-4 0 5740
2 16609 51.6505 66.7361 0005421 121.0691 239.0824 15.58266320591772
AO-10
1 14129U 83058B 96180.12612982 .00000134 00000-0 10000-3 0 4320
2 14129 26.1391 202.4717 6012242 27.4268 354.5303 2.05880097 70098
RS-10/11
1 18129U 87054A 96180.05980830 .00000055 00000-0 43681-4 0 02441
2 18129 82.9252 140.5026 0012563 118.2456 241.9962 13.72367022451661
UO-11
1 14781U 84021B 96180.02780764 .00000099 00000-0 24574-4 0 09134
2 14781 97.8007 170.2687 0012900 57.8716 302.3739 14.69461614659246
RS-12/13
1 21089U 91007A 96180.18165015 .00000011 00000-0 -39794-5 0 09202
2 21089 82.9228 181.1880 0028105 200.7663 159.2372 13.74070916270545
AO-13
1 19216U 88051B 96180.14681317 .00002092 00000-0 64828-3 0 02285
2 19216 57.2175 108.0980 7429539 43.4233 355.1449 2.09876150030071
UO-14
1 20437U 90005B 96180.17573053 .00000015 00000-0 22723-4 0 01948
2 20437 98.5436 262.9860 0010891 166.4878 193.6599 14.29924551335628
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RS-15
1 23439U 94085A 96180.00799416 -.00000039 00000-0 10000-3 0 01592
2 23439 64.8185 5.5827 0160533 197.2954 162.2462 11.27526879062006
AO-16
1 20439U 90005D 96179.78325533 .00000017 00000-0 23258-4 0 09981
2 20439 98.5578 264.8396 0010917 168.7139 191.4289 14.29978288335589
DO-17
1 20440U 90005E 96180.15426832 .00000017 00000-0 23293-4 0 00025
2 20440 98.5610 265.8504 0010939 166.6896 193.4577 14.30120249335660
WO-18
1 20441U 90005F 96179.79452317 .00000014 00000-0 22242-4 0 09952
2 20441 98.5602 265.4342 0011620 168.1619 191.9841 14.30089719335614
LO-19
1 20442U 90005G 96179.78953012 .00000009 00000-0 20353-4 0 00002
2 20442 98.5624 265.9279 0012007 167.3815 192.7670 14.30198479335637
FO-20
1 20480U 90013C 96180.06688436 -.00000060 00000-0 -70562-4 0 08937
2 20480 99.0255 202.8560 0541164 99.8278 266.4329 12.83233463299280
AO-21
1 21087U 91006A 96179.85484602 .00000094 00000-0 82657-4 0 07323
2 21087 82.9362 313.8035 0034883 175.1906 184.9555 13.74569734271475
UO-22
1 21575U 91050B 96180.12127151 -.00000004 00000-0 12823-4 0 07116
2 21575 98.3496 246.1810 0006716 234.2622 125.7942 14.37027806259637
KO-23
1 22077U 92052B 96180.05895476 -.00000037 00000-0 10000-3 0 06121
2 22077 66.0762 166.6935 0013507 295.4599 64.5020 12.86297126182206
KO-25
1 22828U 93061F 96180.12354353 -.00000017 00000-0 10598-4 0 04712
2 22828 98.5762 255.6989 0009470 181.5346 178.5804 14.28144303111672
IO-26
1 22826U 93061D 96180.14499494 .00000013 00000-0 22628-4 0 05003
2 22826 98.5799 255.6642 0008344 197.6190 162.4705 14.27806706143566
AO-27
1 22825U 93061C 96180.07942952 .00000035 00000-0 31879-4 0 04917
2 22825 98.5807 255.4329 0007943 196.8392 163.2528 14.27698533143541
PO-28
1 22829U 93061G 96180.14032770 .00000025 00000-0 27468-4 0 04959
2 22829 98.5783 255.7807 0009505 182.0196 178.0948 14.28125731143598

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
July 2, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1259. Re: STS-78 HF coverage

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4r4j3v$ouu@news.mhv.net>
Source record: 22028

In article <4qvkst$gsb@reaper.uunet.ca>, frenchy@travel-net.com wrote:
>I used to be able to receive shuttle transmissions from the goddard
>space center. On this mission I haven't heard anything. Anyone know
>why??
>

They've been on the air, I've been listening. Heard them on 3.860 and 7.185
SSB. This morning the propagation must have stunk because they came in fairly
lousy.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1260. Re: Is there Amiga s/w for sat track?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: John Boudreau <ve8ev@cancom.net>
Message-ID: <31D60D97.F9A@cancom.net>
Source record: 22029

D. Swan wrote:
>
> Hi,
>
> Does anyone know of any (functional) software for the Amiga that
> performs satellite tracking?
>
> Any help appreciated.
>
> VE1DMS (David)

Amsat-NA has a program called "Amiga Orbits" which does tracking
on an Amiga. Contact martha@amsat.org for pricing and info.
73
John - VE8EV
ve8ev@amsat.org

1261. AO-27: info, please!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: karl.leite@seasun.com.br
Message-ID: <19960630015744.aaaa006Kh@babyblue.cs.yale.edu>
Source record: 22030

```
=====================================================================
MY APOLOGIZE IF THIS MESSAGE IS NOT APPROPRIATE HERE
=====================================================================

From: Karl M Leite, PS7KM <kleite@summer.com.br>
Subject: How To Work AO-27 from Brazil!!!

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I would like to thank in advance for all replys and if possible,
please, E-mail to below address.

Vy best wishes & 73 de PS7KM,
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
Karl M Leite E-mails: kleite@summer.com.br
Rua Estacio de Sa 1838 karl.leite@seasun.com.br
59054-580 Natal, RN, Brasil Fone/Fax: 084-213-2933
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
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* UniQWK #1812* Ensinar e aprender duas vezes. Joe Joubert
nsai International
Radio Club)
A |July 17-19 Maui KH6/K8AQM, KH6/KG8CO, NH6/N8CC

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* UniQWK #1812* Ensinar e aprender duas vezes. Joe Joubert
```

1262. Re: Motorola Visar RIB sw needed

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: Radioactive Communications <radio3@village.ios.com>
Message-ID: <31D6201B.6A0F@village.ios.com>
Source record: 22031
Cross-posted to: rec.radio.swap,rec.radio.noncomm,rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space

Nino Cvetkovic wrote:
>
> I can offer RIB software for almost every other Motorola in exchange.
>
> Nino
Nino I'm sure that the Motorola people over in Plantation Florida are
thrilled to know that you are offering illegally pirated copies of their
RSS over the net!!! Really smart!!!

1263. STS-78 robot beacon

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4r5p7d$1f4@news.monad.net>
Source record: 22032

From the shuttle first thing sunday morning, yesterday I heard Robert Thirsk va3csa s9+40 in New Hampshire he wanted to talk to
some Canadian Hams, but there weren't any answering him, so I talked to him a moment and he said he had been to NH and thought it
was a beautiful state.. 73 all// DAVE N1PPP

W5RRR-1>QRZ [06/30/96 07:25:51]: <UI>:
#718-KA3HPP VE2ZAZ K0UWO WB2YLR WR2F W5HUQ VE3OQZ K2OWE VE3HIR N4ENV N8IGJ KF9WW N1PPP N9BMT
WB4FIN WB9AOU N9NBD KB0MGA N2THO KB5GON KA0DJR WA5NOM WB9UGX WB6UCD VK2YLO VK3YIC VK1ZQR VK5ZBR
VK6KCH N1RDN N1JDU N1UZN N2UME WA2IWW KA3HPQ

W5RRR-1>QSL [06/30/96 07:25:52]: <UI>:
W5HUQ/730 KA3HPQ/722 N1PPP/714 N9BMT/712 W4JXM/701 N5TD/699 N5SRY/664 ZL1AKJ/661 VK3KOS/658 IK0YUJ/651
F6AIU/648 7M1QOP/645 JF1AJE/644 PU3VHQ/639 ZP6RO/636

W5RRR-1>SAREX [06/30/96 07:25:53]: <UI>:
This is STS-78 SAREX Robot station W5RRR-1
onboard the Space Shuttle Columbia.

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

This country, with its institutions, belongs to the people who
inhabit. Whenever they shall grow weary of the existing Government,
they can exercise their constitutional right of amending it, or
their revolutionary right to dismember or overthrow it.
-- Abraham Lincoln (1809-1865)

1264. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4r5s6c$4ij@news.mhv.net>
Source record: 22033

In article <31D5E32B.70B3@conterra.com>, starman@conterra.com wrote:
>This is supposed to be a SAREX flight but I haven't heard a peep out
>of them on voice or packet. The last half dozen SAREX flights have
>been like this. I don't know what their problem is or perhaps they
>are using the 2-meter radios for personal (family) contacts
>and school contacts only.

They've been working stations left and right. I've heard them MANY times so far. Haven't worked them yet however. Charlie sounds the most active, I've heard him the most.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1265. Q: KCT doc and cables

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: Karen Tadewosyan <karen@ra3apw.ampr.demos.su>
Message-ID: <AAwQWrneH4@ra3apw.ampr.demos.su>
Source record: 22034
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.equipment

Hi and Thanks in advance for your help.

Does anyone out there know Internet site for find Kansas City Tracker's documentaions and shematic for make cable between KCTT and FT790A + rotor G5400.

Karen Tadewosyan, RA3APW Email: sysop@ampr.demos.su
Moscow, Russia AMPR: ra3apw@gw.ra3apw.ampr.org
Phone: 474-62-83 Packet: RA3APW@RA3APW.MSK.RUS.EU
Satellite: KO-23, KO-25, UO-22

1266. Re: MIR Voice Uplink Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <4r67ik$oqe@newsbf02.news.aol.com>
Source record: 22035

Far as i know, it's still 145.550, unless Shannon has a sked w/ something different. She chats w/ her son-in-law alot, and a few close friends in friendswood, TX. (near JSC)
george

1267. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: jay@west.net
Message-ID: <4r6f1p$h0o@acme.sb.west.net>
Source record: 22036

Jim Brown (starman@conterra.com) wrote:
: This is supposed to be a SAREX flight but I haven't heard a peep out
: of them on voice or packet. The last half dozen SAREX flights have
: been like this. I don't know what their problem is or perhaps they
: are using the 2-meter radios for personal (family) contacts
: and school contacts only. I've been pretty dissapointed in the
: SAREX program for the past year as I used to be able to work them
: regularly; but I haven't been able to in at least a year.

They've been on. I worked them with 25 watts and a Rat Shack discone,
also assisted in a scheduled school contact with Monroe Elementary in
Santa Barbara, which went very well. Heard them working a mobile on
another occasion, as well as packet. The northern passes seem to
be more favorable, probably due to the window chosen for the antenna.

Due to the "belly-first" attitude, don't expect to hear them during the
first one-third or so of the pass. They seem to be favoring the 144.95
voice uplink, that's where I worked them and where others I know have
worked them.

--

WestNet: Internet service to Santa Barbara, Ventura and the world.
805-892-2133 805-289-1000 805-578-2121

1268. Re: STS-78 robot beacon

Newsgroup: rec.radio.amateur.space
Date: 1996-06-30 00:00:00 UTC
From: james.mollica@compudata.com
Message-ID: <8C38500.1511000170.uuout@compudata.com>
Source record: 22037

DD>From the shuttle first thing sunday morning, yesterday I heard Robert Thirs
>a3csa s9+40 in New Hampshire he wanted to talk to
>some Canadian Hams, but there weren't any answering him, so I talked to him
>oment and he said he had been to NH and thought it
>was a beautiful state.. 73 all// DAVE N1PPP

Hello Dave. Heard the contact on that pass.
What uplink freq. were you on?
Most contacts seem to be on 144.950 uplink.
Also saw your packet connect. Congrats on STS-78.
See you during the next mission.
73 es gl, Jim

* 1st 2.00 #1439 * N2NRD @ AMSAT.ORG

1269. WTB book titled: Instrumentation and Techniques for Radio Astronomy

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: rein0zn@ix.netcom.com
Message-ID: <4r7km1$n70@dfw-ixnews2.ix.netcom.com>
Source record: 22038

Greetings,

I am looking for a title:

Instrumentation and Techniques for Radio Astronomy,

by Paul F Goldsmith, ISBN 0879422408 IEEE press

73 Rein W6/PA0ZN

http://www.nitehawk.com/rasmit/

1270. SAT dish for EME? how!?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4r8nt5$3via@ns4-1.CC.Lehigh.EDU>
Source record: 22039

Hello
I have a Clark Belt rotor system on a 9ft sat TV dish
is there a way i can get a ele/az system on it EASILY for sat and EME work?

thanks

DAvid
|---|
| David Roseman | c002@lehigh.edu OUTTA ORDER!
SysOp of NODE 3 BBS	The Flying HAm - BBS	
Running OBV/2 Software	Technomage - BBS	
610.838.2989	N3SQE/1 - HAm V
(Parttime system)	N3SQE@Nxxxx.FNxxxx.PA.USA.NA - Packet
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1271. RF/Microwave CAE Site

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: "Kathryn J. Goerg" <kgoerg@webblabs.com>
Message-ID: <31D819E4.762D@webblabs.com>
Source record: 22040

The Webb Laboratories RF/Microwave CAE Site is at:

http://www.webblabs.com

Please inspect our receiver engineering, structure synthesis
and active filter design capabilities.

Kathy Goerg
Webb Laboratories
kgoerg@webblabs.com

1272. A hint for SAREX/Mir contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4r9al3$9b1@shellx.best.com>
Source record: 22041

As the reports of voice contacts with the shuttle come in,
I'm spurred to suggest to anyone who's trying to get a
SAREX contact (or a Mir contact, for that matter), that
you have an audio tape recorder running when you call.

I have both of my voice contacts on tape (Susan Helms on
STS-64, Don Thomas on STS-70), and believe me, they're prized
possessions. (In fact, I keep a dub in my safe deposit box.)

Although it might seem obvious to get the audio feed directly
from the speaker jack of the radio, remember that it will be
muted while you're talking. (And if you jostle the connector
and it goes in too far, it will mute the built-in speaker of
the radio while the astronaut is talking!) So to get both sides
of the conversation, I just use an inexpensive microphone pointed
at the radio's speaker; I'm close enough that it picks up my
voice, too.

So dig into your storage closet, find that cheapo cassette
recorder you haven't used in years, set it up near your 2m radio,
and be sure to put it in record just before you start calling the
shuttle. And good luck!

73,
Patty

================================ N6BIS ================================
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1273. Crossed yagi - linear polarization ?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <31D8319D.777D@vogon.rain.com>
Source record: 22042
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.antenna

I have been playing with satellite communications on AO-20,
using a rather unsuitable antenna: a GP9.

I have been considering buying a much better setup, with crossed
yagis for 2m and 70cm. However, I don't want to spend *that* much
on something just for satellite work.

So, how much power loss would I get using circular polarization
where horizontal or vertical would normally be used ?
(I tend to think its 3db ..).

Also, is it possible to feed a crossed yagi to produce (switchable)
LHC, RHC, Hoizontal and Vertical polarizations ?

Philip, KC7FWB

1274. Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: Francisco Costa <fcosta@mail.telepac.pt>
Message-ID: <4r9o59$78j@vivaldi.telepac.pt>
Source record: 22043
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

Hi

I'm looking for a tracking program
(like NASA DEMOS), with 3 dimension
display capability.

Is it avaliable? Where?

Many thanks in advance.

73's F.Costa CT1EAT

1275. NORAD Two-Line Orbital Element Set: Space Shuttle (96183.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-01 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4r9gdl$rij@blackbird.afit.af.mil>
Source record: 22044

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 78
1 23931U 96036A 96183.25000000 .00001334 54571-5 46601-5 0 379
2 23931 39.0139 298.6751 0006585 342.4241 250.0840 16.03372654 1701
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1276. Re: Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: wallnerw@cts.com
Message-ID: <4r9s4i$c3d@newsfeed.cts.com>
Source record: 22045
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

Francisco Costa (fcosta@mail.telepac.pt) wrote:
: Hi

: I'm looking for a tracking program
: (like NASA DEMOS), with 3 dimension
: display capability.

: Is it avaliable? Where?

: Many thanks in advance.

: 73's F.Costa CT1EAT

MicroOrbit, available as shareware, does some very nice 3D.

If you can't find it, email me. I am in the wrong program to give you
the URL.

Bill

1277. 18" Satellite Dish Dealer Wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: dbuds3@aol.com
Message-ID: <4ravkb$kgi@newsbf02.news.aol.com>
Source record: 22046

Brand new manufacture and service provider needs dealers in your area.
Call 1-888-TV DISH8 for more info.
E-mail your interest for more information: Dbuds3@aol.com.

1278. Re: Crossed yagi - linear polarization ?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dtwsqx.LJF@pe1chl.ampr.org>
Source record: 22047
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.antenna

In <31D8319D.777D@vogon.rain.com> Philip Peake <philip@vogon.rain.com> writes:

>So, how much power loss would I get using circular polarization
>where horizontal or vertical would normally be used ?
>(I tend to think its 3db ..).

Yes. But only when the other station's polarization is perfectly
aligned with the linear polarization you otherwise would have used.

I have used circular polarization in my station for quite some time
and it turns out it works very well. Fading with mobile stations
tends to be less, and this may even be the case with fixed stations
when working DX.

>Also, is it possible to feed a crossed yagi to produce (switchable)
>LHC, RHC, Hoizontal and Vertical polarizations ?

Sure. You will need a couple of relays and the proper feedline (delay
line) arrangements for the different polarizations. Basically you need
to have a switchable 0/ï¿½/ï¿½ lambda delay in one and 0/ï¿½ lambda delay in
the other feedline.
This is no problem on 2m, but on 70cm it starts becoming tricky...

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1279. 2m crossed yagi

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: Matthew Halsey <matthew.halsey@intelsat.int>
Message-ID: <4rb4pq$ufp@intelsat2.intelsat.int>
Source record: 22048

I am looking for an inexpensive, easy to build, crossed yagi (or other circularly polarized)
antenna design which I can use as a satellite mode B downlink antenna,

Any help would be appreciated.

Matt W3/G0IHG

matthew.halsey@intelsat.int
--
INTELSAT

--
INTELSAT

1280. Re: Crossed yagi - linear polarization ?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jul2.143932.22379@ke4zv.atl.ga.us>
Source record: 22049
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.antenna

In article <31D8319D.777D@vogon.rain.com> Philip Peake <philip@vogon.rain.com> writes:
>I have been considering buying a much better setup, with crossed
>yagis for 2m and 70cm. However, I don't want to spend *that* much
>on something just for satellite work.
>
>So, how much power loss would I get using circular polarization
>where horizontal or vertical would normally be used ?
>(I tend to think its 3db ..).

That's correct.

>Also, is it possible to feed a crossed yagi to produce (switchable)
>LHC, RHC, Hoizontal and Vertical polarizations ?

Yes, that can be done. You can do it with coax relays on the tower,
or you can run dual feedlines down to the shack and do it there with
manual (cheaper) switches or with a coax patchboard (cheapest). Of
course the price of the second feedline might exceed the cost of the
high quality coax relays in some cases.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1281. AO-27 report from Boston, Mass.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: mts@usa1.COM
Message-ID: <31D951C1.56F@usa1.com>
Source record: 22050

The last information I received for AO-27 was this.

When the satellite enters sunlight area, it waits approx 20 minutes,
then the repeater turns on. It is on for only 18 minutes and turns off.

This is true for both Northern and Southern hemisphere.
I have tried to work this satellite before it developed problems and
could be heard on it in most of the U.S. and Canada.

I have yet to have a qso with enough information for qsl though.
Keep trying, it is there and working.... ..

--=20
Myrton T. Smith II | 42=F8 24' 68"N -71=F8 05' 19"W - =
FN42kj
(mts@usa1.com) (n1gke@amsat.org) | Net Control - S.P.O.T. - =
=20
Medford, Massachusetts United States | Satellite Net Friday @0130z =
=20
Mystic Valley Amateur Radio Group | 145.230 Boston Amateur Radio Club=
=20
| =
=20
No matter where you go, there you are.... ..

1282. DOVE report from Boston, Mass.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: mts@usa1.COM
Message-ID: <31D952A1.7C9F@usa1.com>
Source record: 22051

I have been listening for the DOVE or DO-17 satellite again so I can
receive and decode more telemetry using the program from Joe Kasser (G3ZC=
Z)
called Whats-Up. This is an awesome program for most amateur radio satell=
ites
and especially handy when working multi satellites.

Unfortunately all I have heard from the DO-17 lately is a single burst of=
1200
baud packet data and nothing else, not like its old self anyway. This is =
with
passes which are very good elevation for my location and with omni antenn=
a and
decent receiver.=20

On the single burst of data I get no telemetry nor any information.

--=20
Myrton T. Smith II | 42=F8 24' 68"N -71=F8 05' 19"W - =
FN42kj
(mts@usa1.com) (n1gke@amsat.org) | Net Control - S.P.O.T. - =
=20
Medford, Massachusetts United States | Satellite Net Friday @0130z =
=20
Mystic Valley Amateur Radio Group | 145.230 Boston Amateur Radio Club=
=20
| =
=20
No matter where you go, there you are.... ..

1283. AO-10 contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: mts@usa1.COM
Message-ID: <31D95340.3206@usa1.com>
Source record: 22052

I have been able to get a signal to the Oscar 10 satellite for the
past few nights now with a good return signal while using only 25
watts into a circular polarized antenna for two meteres and seventy
centimeteres.=20

Return signal strength has been good and I can hear many stations.
I have yet to complete a qso though as I don't wish to interupt a
qso in progress for my first contact, so I just listen and call CQ
from time to time in a clear spot.=20

--=20
Myrton T. Smith II | 42=F8 24' 68"N -71=F8 05' 19"W -=20
FN42kj
(mts@usa1.com) (n1gke@amsat.org) | Net Control - S.P.O.T. - =20
=20
Medford, Massachusetts United States | Satellite Net Friday @0130z =20
=20
Mystic Valley Amateur Radio Group | 145.230 Boston Amateur Radio Club=
=20
=20
| =20
=20
No matter where you go, there you are.... ..

1284. RS-10 / RS-15 report from Boston

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: mts@usa1.COM
Message-ID: <31D95550.6C9C@usa1.com>
Source record: 22053

Having borrowed some nice equipment, FT-736r and FT-900 transceivers,
I have been working the RS-10 & RS-15 satellites rather regular. The
only sad part is the 06:00utc passes, I end up performing antenna and
signal tests only as there are not other stations on during this time
period. Too bad some of our stations in the satellite service do not
operate there stations in robot mode and in c.w.=20

Using omni directional antenna for both the uplink and downlink and
power levels down to one watt on s.s.b. I have worked several stations
on these two satellites with ease.=20

If you have not tried this, and you have a ten meteres transceiver or
receiver, listen for the RS-10 beacon signal, 20 wpm c.w., on 29.358
and pf course that is =B1 doppler shift which is generally around 1.5 kcs=
=20
higher when the satellite is just coming over your horizon.

--=20
Myrton T. Smith II | 42=F8 24' 68"N -71=F8 05' 19"W - =
FN42kj
(mts@usa1.com) (n1gke@amsat.org) | Net Control - S.P.O.T. - =
=20
Medford, Massachusetts United States | Satellite Net Friday @0130z =
=20
Mystic Valley Amateur Radio Group | 145.230 Boston Amateur Radio Club=
=20
| =
=20
No matter where you go, there you are.... ..

1285. satellite tracking and freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: jeff_griffin_at_aos500@admin.tc.faa.gov
Message-ID: <4rbkdrlNN1j1@faatcrl.faa.gov>
Source record: 22054

I'm just getting started in satellite comunications. I have an Icom 2350, an Alinco 150T, a KPC3, A 9612, and a Cushcraft 270B up about 42'. What will I need to try to contact the shuttle and hit some satellite voice or packet repeaters. Also I could use a copy of some tracking software (shareware if possible) that will allow manual Keplerian input, to enter the daily shuttle data. Thanks for reading this.

Jeff KB2WQM

1286. Re: KCT doc and cables

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb683c.5d34f9e0$068067ce@ns.netwide.net>
Source record: 22055
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.equipment
Body handling: Inline uuencoded payload not displayed: kct.gif

Karen,

You can email the KCT guys at: n2rec@amsat.org
I'm also attaching a page you might use.

73s,
Roberto ik8sqi

> Karen Tadewosyan <karen@ra3apw.ampr.demos.su> wrote in article
<AAwQWrneH4@ra3apw.ampr.demos.su>...
>
> Hi and Thanks in advance for your help.
>
> Does anyone out there know Internet site for find Kansas City Tracker's
> documentaions and shematic for make cable between KCTT and FT790A +
rotor
> G5400.
>
>

> Karen Tadewosyan, RA3APW Email: sysop@ampr.demos.su
> Moscow, Russia AMPR: ra3apw@gw.ra3apw.ampr.org
> Phone: 474-62-83 Packet: RA3APW@RA3APW.MSK.RUS.EU
> Satellite: KO-23, KO-25, UO-22
>
>

[Inline uuencoded payload not displayed: kct.gif]

1287. Re: satellite tracking and freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb683e.454484c0$068067ce@ns.netwide.net>
Source record: 22056

Jeff,

If you go to http://www.logsat.com I've placed a short tutorial on what
you need to track satellites. There you will also be able to download a
demo of Logsat, the tracking software.

There are also several shareware trackers available. The best resource to
find them is the following ftp site:
ftp.funet.fi in the directory /pub/ham/satellite/tracking
If you're no too familiar with the ftp protocol you may point your www
browser to: (note that the line begins with ftp:// NOT http://...)
ftp://ftp.funet.fi/pub/ham/satellite/tracking

I personally like STSOrbit and PCTrack (file names SOP96xx.ZIP and
PCTRKxx.ZIP). However, if you're willing to spend the $50, Logsat beats
them all by far...!! :-)

73s,
Roberto

> jeff_griffin_at_aos500@admin.tc.faa.gov (jeff griffin) wrote in article
<4rbkdrINN1j1@faatcrl.faa.gov>...
> I'm just getting started in satellite comunications. I have an Icom
2350, an
> Alinco 150T, a KPC3, A 9612, and a Cushcraft 270B up about 42'. What
will I
> need to try to contact the shuttle and hit some satellite voice or
packet
> repeaters. Also I could use a copy of some tracking software (shareware
> if possible) that will allow manual Keplerian input, to enter the daily
> shuttle data. Thanks for reading this.
>
> Jeff KB2WQM
>
>
>
>
>

1288. Re: WTB book titled: Instrumentation and Techniques for Radio Astronomy

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: Bill Black <BillBlackDC@postoffice.worldnet.att.net>
Message-ID: <4rbvap$l3q@mtinsc01-mgt.ops.worldnet.att.net>
Source record: 22057

rein0zn@ix.netcom.com(Rein A. Smit) wrote:
>
> Greetings,
>
> I am looking for a title:
>
> Instrumentation and Techniques for Radio Astronomy,
>
> by Paul F Goldsmith, ISBN 0879422408 IEEE press
>
> 73 Rein W6/PA0ZN
>

Rein, I checked the amazon online book service, and they list it in their catalog, http://www.amazon.com. I've ordered several books from the service, and have been satisfied so far; they sell something like a million different books.

--Bill Black, Washington, DC
BillBlackDC@worldnet.att.net

1289. Re: DOVE report from Boston, Mass.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4rbv7v$nb0@news.mhv.net>
Source record: 22058

In article <31D952A1.7C9F@usa1.com>, mts@usa1.COM (Myrton T. Smith II) wrote:

>Unfortunately all I have heard from the DO-17 lately is a single burst of=
> 1200
>baud packet data and nothing else, not like its old self anyway. This is =
>with
>passes which are very good elevation for my location and with omni antenn=
>a and
>decent receiver.=20
>
>On the single burst of data I get no telemetry nor any information.

They have been having problems with Dove for quite a while now. I'm not
sure but I think it's software related. They are working on it as far as I
know. I hope they can get her going again or put up another like her.
I forget what they call the signal she's sending is at the moment. Let's keep
our fingers crossed.

73,

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1290. Re: Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: Peter Armstrong <psstech@infocom.net>
Message-ID: <4rc4oa$872@news.infocom.net>
Source record: 22059
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

Francisco Costa <fcosta@mail.telepac.pt> wrote:
>Hi
>
>I'm looking for a tracking program
>(like NASA DEMOS), with 3 dimension
>display capability.
>
>Is it avaliable? Where?
>
>Many thanks in advance.
>
>73's F.Costa CT1EAT
>
>

Yes! The software is called Micro Orbiter. You can download a full-featured, fully functioning demo from http://www.infocom.net/~pss. Micro Orbiter has 9 different map projections, including orthographic (which looks like DEMOS, complete with the actual star background) and the oblique aspect vertical perspective. This projection shows the Earth from the satellite's point of view, complete with stars, country boundaries, the terminator, and so on. Everyone says that the graphics are very impressive.

Peter Armstrong
Houston, Texas

1291. ARLK047 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk047.1996@arrl.org>
Source record: 22060
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK047
ARLK047 Keplerian data

ZCZC SK47
QST de W1AW
Keplerian Bulletin 47 ARLK047
From ARRL Headquarters
Newington, CT July 2, 1996
To all radio amateurs

SB KEP ARL ARLK047
ARLK047 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-78
1 23931U 96036A 96184.25000000 .00001404 54639-5 46505-5 0 422
2 23931 39.0138 291.9477 0006401 350.6143 263.6309 16.03797918 1861
Mir
1 16609U 86017A 96184.53849871 .00006417 00000-0 87521-4 0 5763
2 16609 51.6510 46.8022 0002262 147.8396 212.6810 15.58909618592394
HST
1 20580U 90037B 96184.44748643 .00000305 00000-0 14931-4 0 08823
2 20580 28.4682 120.4509 0005863 333.6857 26.3431 14.91069753140868
AO-10
1 14129U 83058B 96181.09750413 .00000126 00000-0 10000-3 0 04331
2 14129 26.1353 202.3042 6012945 27.7105 354.4743 2.05880123070119
RS-10/11
1 18129U 87054A 96184.36136942 .00000044 00000-0 31705-4 0 02482
2 18129 82.9254 137.3241 0012893 107.9353 252.3211 13.72367168452253
UO-11
1 14781U 84021B 96183.97721483 .00000103 00000-0 25201-4 0 09105
2 14781 97.8017 174.0460 0012820 46.4507 313.7753 14.69462477659825
RS-12/13
1 21089U 91007A 96184.40507218 .00000053 00000-0 40216-4 0 09212
2 21089 82.9225 178.0561 0028363 188.4725 171.5958 13.74071425271128
AO-13
1 19216U 88051B 96183.00552837 .00003146 00000-0 79613-3 0 2297
2 19216 57.2175 107.5266 7430044 43.7180 355.1254 2.09890424 30130
```

```
UO-14
1 20437U 90005B 96184.23421331 -.00000013 00000-0 11676-4 0 1933
2 20437 98.5436 266.9679 0011240 154.0630 206.1116 14.29924598336209
RS-15
1 23439U 94085A 96184.44268212 -.00000039 00000-0 10000-3 0 01601
2 23439 64.8189 358.4128 0160545 196.4677 163.0995 11.27527065062503
AO-16
1 20439U 90005D 96184.26141103 -.00000001 00000-0 16276-4 0 09985
2 20439 98.5584 269.2433 0011157 155.2341 204.9375 14.29978513336229
DO-17
1 20440U 90005E 96184.28215910 -.00000007 00000-0 14188-4 0 00052
2 20440 98.5611 269.9109 0011278 154.0366 206.1383 14.30120330336251
WO-18
1 20441U 90005F 96184.27233060 -.00000009 00000-0 13145-4 0 09972
2 20441 98.5603 269.8380 0011883 154.5769 205.5996 14.30089890336255
LO-19
1 20442U 90005G 96184.26699697 -.00000004 00000-0 15022-4 0 00033
2 20442 98.5626 270.3339 0012307 153.9869 206.1930 14.30198731336270
FO-20
1 20480U 90013C 96184.12114588 -.00000031 00000-0 -69957-5 0 08935
2 20480 99.0260 206.1403 0541176 90.6354 275.6753 12.83233702299803
AO-21
1 21087U 91006A 96184.44070380 .00000094 00000-0 82657-4 0 07418
2 21087 82.9370 310.4096 0035350 161.7783 198.4648 13.74569903272100
UO-22
1 21575U 91050B 96184.22934597 -.00000008 00000-0 11719-4 0 07107
2 21575 98.3496 250.1669 0006740 219.9467 140.1222 14.37028064260224
KO-23
1 22077U 92052B 96184.41297286 -.00000037 00000-0 10000-3 0 06108
2 22077 66.0766 157.5783 0013507 293.2182 66.7412 12.86297134182763
KO-25
1 22828U 93061F 96184.25713840 -.00000008 00000-0 14188-4 0 04708
2 22828 98.5770 259.7623 0009644 168.3301 191.8105 14.28144585112268
IO-26
1 22826U 93061D 96184.06933388 -.00000021 00000-0 91237-5 0 04960
2 22826 98.5803 259.5196 0008548 184.5808 175.5272 14.27806654144125
AO-27
1 22825U 93061C 96184.21431529 -.00000034 00000-0 39382-5 0 04918
2 22825 98.5808 259.4932 0008171 183.3745 176.7379 14.27698231144137
PO-28
1 22829U 93061G 96184.13385359 .00000004 00000-0 19056-4 0 04946
2 22829 98.5782 259.7034 0009816 169.1804 190.9590 14.28125950144163

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
July 6, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1292. Re: Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: jimf@zoinks.corp.sgi.com
Message-ID: <4rc7qn$kgo@murrow.corp.sgi.com>
Source record: 22061
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

In article <4rc4oa$872@news.infocom.net>, Peter Armstrong <psstech@infocom.net>
writes:
|> Organization: InfoCom Networks, Houston, Tx
|> Lines: 26
|> Message-ID: <4rc4oa$872@news.infocom.net>
|> References: <4r9o59$78j@vivaldi.telepac.pt>
|> NNTP-Posting-Host: ip29.infocom.net
|> Mime-Version: 1.0
|> Content-Type: text/plain; charset=us-ascii
|> Content-Transfer-Encoding: 7bit
|> X-Mailer: Mozilla 1.22 (Windows; I; 16bit)
|> To: fcosta@mail.telepac.pt,pss@infocom.net
|> Xref: news.corp.sgi.com rec.radio.amateur.space:7711 sci.space.shuttle:44705
|>
|> Francisco Costa <fcosta@mail.telepac.pt> wrote:
|> >Hi
|> >
|> >I'm looking for a tracking program
|> >(like NASA DEMOS), with 3 dimension
|> >display capability.
|> >
|> >Is it avaliable? Where?
|> >
|> >Many thanks in advance.
|> >
|> >73's F.Costa CT1EAT
|> >
|> >
|>
|> Yes! The software is called Micro Orbiter. You can download a
|> full-featured,
|> fully functioning demo from http://www.infocom.net/~pss. Micro Orbiter has
|> 9 different map projections, including orthographic (which looks like DEMOS,
|> complete with the actual star background) and the oblique aspect vertical
|> perspective. This projection shows the Earth from the satellite's point of
|> view, complete with stars, country boundaries, the terminator, and so on.
|> Everyone says that the graphics are very impressive.
|>
|> Peter Armstrong
|> Houston, Texas
|>

Peter,

I looked at the web pages and the SoftWare looks very impressive. But I have one very important question, does it interface with control boxes like the Kansas City Tracker? If it does not, will that be available soon? If it is available with a later release, what is the upgrade path cost projection? I see that the software does compute Doppler and AZ-EL angles, but no mention of interfacing to controls is mentioned

Jim
KF6AGJ

1293. Re: Any STS-78/SAT during FD?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: greg@core.rose.hp.com
Message-ID: <Dtxtt3.ECq@icon.rose.hp.com>
Source record: 22062

I was able to make a Packet contact last Sunday just after Noon. It was a low pass, and only visible for a few minutes, but that was all it took.

Voice activity has also picked up considerably, but it seems that they have a hard time hearing us (or picking out one call from the pile up). I have heard a number of back-to-back "QRZ, this is Columbia" calls. I've tried sending my call in between, but no luck. And that's with 50-ish watts into a 8-element beam. FM is not a friendly mode for working pileups.

Good luck,

Greg KO6TH (STS-78 SAREX packet QSO #765)

1294. HF Propagation Forecast Web Site

Newsgroup: rec.radio.amateur.space
Date: 1996-07-02 00:00:00 UTC
From: efk0490@best.com
Message-ID: <31D9ECFA.5A2D@best.com>
Source record: 22063

For those who haven't found it yet, a WWW site which offers HF propagation forecasts can be found at http://www.sel.noaa.gov/index.html

When the homepage comes up, select the gopher server button, select the "Latest Solar-Geophysical Data" folder, and select the "USAF High Frequency Radio Propagation Report" file. There's a section at the end of the file which explains the codes used in the forecast.

There's a lot of interesting stuff at this site, especially through the gopher server. An interesting link is to the North Western Research Institute RF Scintillation forecast...may be useful to the satellite and meteor scatter communities.

Explore and enjoy!

73's

Gene KC4NMK

1295. NORAD Two-Line Orbital Element Sets (TLE833)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4renth$7nn@blackbird.afit.af.mil>
Source record: 21968

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #833 -
Alouette 1
1 00424U 62049A 96183.26590432 .00000027 00000-0 21822-4 0 2103
2 00424 80.4627 269.8514 0023529 0.8099 359.3080 13.67870889684262
ATS 1
1 02608U 66110A 96174.85244027 -.00000322 00000-0 10000-3 0 9711
2 02608 14.6186 352.7715 0009230 85.2275 274.8695 1.00333582 24920
ATS 3
1 03029U 67111A 96183.54179050 -.00000123 00000-0 10000-3 0 5096
2 03029 14.9118 359.6339 0008789 273.5661 96.3615 1.00273347104912
Starlette
1 07646U 75010A 96181.26113701 -.00000146 00000-0 -41268-5 0 9801
2 07646 49.8269 101.0669 0205983 270.3762 87.3532 13.82190822 80631
LAGEOS
1 08820U 76039A 96182.54081398 .00000030 00000-0 10000-3 0 2043
2 08820 109.8500 30.5863 0043728 126.2915 234.1949 6.38664566214681
ETS-2
1 09852U 77014A 96144.29788450 .00000122 00000-0 10000-3 0 710
2 09852 13.2121 33.2352 0001161 167.8158 192.2040 1.00002229 17393
GOES 2
1 10061U 77048A 96183.39519017 .00000048 00000-0 10000-3 0 6900
2 10061 12.3835 36.9387 0010789 124.9482 85.1189 1.00266769 14580
IUE
1 10637U 78012A 96176.00000000 -.00000242 00000-0 10000-3 0 2596
2 10637 35.8165 83.0262 1368520 56.8479 91.0890 1.00237880 20000
GPS BI-01
1 10684U 78020A 96171.81955848 -.00000054 00000-0 10000-3 0 4560
2 10684 64.9862 23.8090 0059454 162.5605 197.7011 1.98069443119461

```
GPS BI-02
1 10893U 78047A 96176.24723160 -.00000011 00000-0 10000-3 0 2531
2 10893 63.1996 260.7719 0231460 15.2326 345.5188 2.01627833132950
GOES 3
1 10953U 78062A 96182.64566969 -.00000140 00000-0 10000-3 0 6748
2 10953 11.3840 39.8380 0005055 348.5335 22.0757 1.00271903 19190
SeaSat 1
1 10967U 78064A 96182.85834023 -.00000050 00000-0 28008-4 0 4978
2 10967 107.9938 203.0387 0001278 272.0267 88.0730 14.38110357943419
GPS BI-03
1 11054U 78093A 96181.37697119 .00000026 00000-0 10000-3 0 4139
2 11054 62.8397 259.7730 0046662 180.2687 179.7997 1.93505215128895
Nimbus 7
1 11080U 78098A 96181.64309322 -.00000049 00000-0 -66709-5 0 5978
2 11080 98.9440 43.2830 0008352 296.6834 63.3466 13.83692883892897
GPS BI-04
1 11141U 78112A 96179.70102618 -.00000013 00000-0 10000-3 0 512
2 11141 65.0067 26.0258 0050206 28.6312 331.7150 1.92894664 18088
GPS BI-05
1 11690U 80011A 96183.80656767 -.00000027 00000-0 10000-3 0 354
2 11690 65.3200 24.9152 0144401 189.5690 170.2373 2.00572923134494
GPS BI-06
1 11783U 80032A 96180.16523090 .00000031 00000-0 10000-3 0 1533
2 11783 62.3223 253.2920 0227095 29.5806 331.7732 2.03456897119054
GOES 5
1 12472U 81049A 96175.74265047 .00000056 00000-0 10000-3 0 9378
2 12472 8.1909 50.0855 0006615 42.8037 317.2020 1.00222085 13166
Cosmos 1383
1 13301U 82066A 96184.31896317 .00000030 00000-0 18322-4 0 5085
2 13301 82.9325 122.7094 0026371 195.8993 164.1333 13.68075612699449
LandSat 4
1 13367U 82072A 96183.17437999 .00000005 00000-0 10921-4 0 9425
2 13367 98.0725 233.6647 0007947 93.3672 266.8436 14.57180670742570
DMSP B5D2-1
1 13736U 82118A 96182.13879110 .00000003 00000-0 19765-4 0 330
2 13736 98.6251 10.3161 0009256 356.4180 3.6931 14.25790781702919
IRAS
1 13777U 83004A 96184.59176368 .00000375 00000-0 28828-3 0 3612
2 13777 98.9652 9.7607 0014028 56.7333 303.5173 13.99256496355523
Cosmos 1447
1 13916U 83021A 96182.54230103 .00000039 00000-0 24487-4 0 6019
2 13916 82.9447 181.1604 0038991 112.8832 247.6448 13.74342430665577
TDRS 1
1 13969U 83026B 96179.32153419 -.00000293 00000-0 10000-3 0 6016
2 13969 9.0099 43.6022 0002265 359.8778 299.0757 1.00273617 21487
GOES 6
1 14050U 83041A 96184.08757431 -.00000256 00000-0 10000-3 0 5230
2 14050 7.0409 53.5606 0004655 35.3189 144.8214 1.00248365106343
OSCAR 10
1 14129U 83058B 96181.09750413 .00000126 00000-0 10000-3 0 4331
```

```
2 14129 26.1353 202.3042 6012945 27.7105 354.4743 2.05880123 70119
LandSat 5
1 14780U 84021A 96182.74844653 .00000001 00000-0 10585-4 0 4845
2 14780 98.3287 240.5604 0001465 249.0874 111.0165 14.57056176655902
UoSat 2
1 14781U 84021B 96184.99861329 .00000078 00000-0 20948-4 0 8958
2 14781 97.8017 175.0220 0012831 43.1495 317.0710 14.69462528659975
GPS BI-09
1 15039U 84059A 96182.77323041 -.00000025 00000-0 10000-3 0 4208
2 15039 64.6505 20.2602 0083034 19.4930 340.8792 1.92302253 87692
Cosmos 1574
1 15055U 84062A 96184.69406055 .00000039 00000-0 26062-4 0 8024
2 15055 82.9567 234.4994 0026709 301.1471 58.7064 13.73636384603116
GPS BI-10
1 15271U 84097A 96168.45528970 -.00000002 00000-0 10000-3 0 1690
2 15271 62.0106 254.2769 0153789 358.2442 1.8077 2.00613544 85257
Cosmos 1602
1 15331U 84105A 96184.21476367 .00000200 00000-0 20674-4 0 4850
2 15331 82.5333 98.9562 0018356 259.5998 100.3152 14.84763960635204
NOAA 9
1 15427U 84123A 96184.84929800 .00000050 00000-0 50208-4 0 7537
2 15427 98.9456 249.7821 0013957 270.6991 89.2577 14.13789393595841
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96185.24358254 .00001434 00000-0 24577-4 0 5780
2 16609 51.6521 43.2619 0002226 151.4371 208.6742 15.58901052592486
SPOT 1
1 16613U 86019A 96184.78907948 .00000089 00000-0 62356-4 0 9534
2 16613 98.7319 252.8487 0000257 270.4621 89.6526 14.20025668222521
Cosmos 1766
1 16881U 86055A 96181.86925672 .00000149 00000-0 15155-4 0 3997
2 16881 82.5188 158.8638 0017892 299.7210 60.2229 14.83742326535727
EGP
1 16908U 86061A 96182.82603173 -.00000083 00000-0 10000-3 0 976
2 16908 50.0097 315.0709 0011540 48.6828 311.4999 12.44414321118102
NOAA 10
1 16969U 86073A 96184.92841481 .00000074 00000-0 49909-4 0 6814
2 16969 98.5237 181.5429 0012708 313.5101 46.5026 14.24991601508844
MOS-1
1 17527U 87018A 96183.23039398 -.00000043 00000-0 00000+0 0 4284
2 17527 98.9346 244.9186 0019614 290.9004 69.0060 14.00393460476954
GOES 7
1 17561U 87022A 96157.45277443 -.00000180 00000-0 10000-3 0 9504
2 17561 3.0382 69.5670 0005652 4.5241 248.2095 1.00356380 17188
Kvant-1
1 17845U 87030A 96185.05156752 .00005038 00000-0 70122-4 0 6745
2 17845 51.6518 44.2258 0002355 151.4463 210.3531 15.58902452526590
DMSP B5D2-3
```

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1 18123U 87053A 96184.85823210 .00000009 00000-0 26892-4 0 4989
2 18123 98.7693 14.8991 0013315 207.6094 152.4376 14.15445963466716
RS-10/11
1 18129U 87054A 96182.39285840 .00000058 00000-0 47078-4 0 2334
2 18129 82.9254 138.7788 0012727 112.3343 247.9162 13.72367228451980
Meteor 2-16
1 18312U 87068A 96184.50144292 .00000069 00000-0 48726-4 0 4912
2 18312 82.5534 339.9314 0011900 171.3609 188.7757 13.84080861448293
Meteor 2-17
1 18820U 88005A 96184.57622063 .00000052 00000-0 32950-4 0 9786
2 18820 82.5420 34.8681 0015157 244.1531 115.8078 13.84758917425656
DMSP B5D2-4
1 18822U 88006A 96185.07419314 .00000016 00000-0 25259-4 0 2909
2 18822 98.3828 16.3766 0005976 328.4471 31.6349 14.23194079436836
Glonass 34
1 19163U 88043A 96182.66579256 -.00000010 00000-0 10000-3 0 903
2 19163 65.2672 85.3832 0007920 158.1531 201.9316 2.13102203 62522
Glonass 36
1 19165U 88043C 96178.96867434 -.00000024 00000-0 10000-3 0 4966
2 19165 65.2404 85.4693 0003287 347.0115 13.0015 2.13101885 63065
METEOSAT 3
1 19215U 88051A 96177.81427699 -.00000069 00000-0 10000-3 0 2663
2 19215 3.2858 67.6608 0002142 116.9842 242.7232 0.96947615 17264
AO-13
1 19216U 88051B 96184.91123177 .00003079 00000-0 92108-3 0 2300
2 19216 57.2146 107.1305 7429906 43.9553 355.1378 2.09906677 30178
OKEAN 1
1 19274U 88056A 96182.28232485 .00000186 00000-0 20088-4 0 1001
2 19274 82.5133 259.3328 0021839 79.9928 280.3747 14.82491669431319
Meteor 3-2
1 19336U 88064A 96182.45834008 .00000051 00000-0 10000-3 0 4924
2 19336 82.5384 157.0349 0015382 200.2988 159.7522 13.16977652381225
Glonass 39
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2 22828 98.5766 258.3157 0009533 173.2448 186.8863 14.28144716112052
PO-28
1 22829U 93061G 96185.18478127 .00000002 00000-0 18353-4 0 4765
2 22829 98.5783 260.7357 0009825 166.1546 193.9909 14.28126028144315
KO-25
1 22830U 93061H 96182.16409042 .00000074 00000-0 46944-4 0 4948
2 22830 98.4684 246.4662 0012272 146.3057 213.8832 14.28111813143887
GPS BIIA-23
1 22877U 93068A 96183.14417107 -.00000039 00000-0 10000-3 0 4367
2 22877 55.6635 48.6000 0040332 304.3469 55.3267 2.00576408 19670
METEOSAT 6
1 22912U 93073B 96185.00747412 -.00000099 00000-0 00000+0 0 4962
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2 22912 0.1082 342.4965 0000778 102.8125 188.4200 1.00273063 8017
HST Array
1 22920U 90037C 96183.04525854 .00003769 00000-0 24888-3 0 4818
2 22920 28.4656 43.9195 0003692 262.3380 97.6802 15.04760244141510
Meteor 3-6
1 22969U 94003A 96181.60662730 .00000051 00000-0 10000-3 0 2655
2 22969 82.5610 251.7292 0014581 203.2864 156.7599 13.16736707116689
TUBSAT-B
1 22970U 94003B 96181.69388002 .00000051 00000-0 10000-3 0 2563
2 22970 82.5566 251.5608 0015003 202.6056 157.4413 13.16827601116706
GPS BIIA-24
1 23027U 94016A 96184.21832266 -.00000071 00000-0 10000-3 0 3764
2 23027 55.1110 349.2386 0065054 203.2875 156.4025 2.00555270 17008
Glonass 62
1 23043U 94021A 96183.62204399 -.00000048 00000-0 10000-4 0 3723
2 23043 64.6456 323.3964 0006274 178.8260 181.1656 2.13103169 17312
Glonass 63
1 23044U 94021B 96183.03528731 -.00000048 00000-0 00000+0 0 3395
2 23044 64.6427 323.4110 0029785 201.7723 158.0920 2.13102924 17301
Glonass 64
1 23045U 94021C 96181.33545691 -.00000046 00000-0 00000+0 0 3478
2 23045 64.6286 323.4775 0011074 34.8757 325.1890 2.13102320 17264
GOES 8
1 23051U 94022A 96185.07223413 -.00000265 00000-0 10000-3 0 5443
2 23051 0.0597 96.0936 0004523 44.3278 92.1858 1.00265539 15526
MSTI 2
1 23101U 94028A 96185.06281305 .00004456 00000-0 70123-4 0 3309
2 23101 97.0821 18.3774 0009630 265.2702 94.7448 15.54073009121765
STRV-1A
1 23125U 94034B 96185.20757764 .00003248 00000-0 61779-3 0 3017
2 23125 7.0435 232.3217 7257309 74.8987 349.2261 2.32140156 16491
STRV-1B
1 23126U 94034C 96184.00112937 .00003121 00000-0 54099-3 0 2636
2 23126 6.9973 233.6533 7259846 73.0020 349.3360 2.32084143 16505
Nadezhda 4
1 23179U 94041A 96181.62338784 .00000043 00000-0 28554-4 0 2006
2 23179 82.9461 227.3760 0037708 87.9057 272.6417 13.75682428 98509
Glonass 65
1 23203U 94050A 96184.75785730 .00000072 00000-0 00000+0 0 3080
2 23203 64.7715 203.5944 0006313 163.8195 196.2513 2.13102045 14735
Glonass 66
1 23204U 94050B 96184.05300713 .00000080 00000-0 00000+0 0 3289
2 23204 64.7635 203.6475 0015053 340.3324 19.6667 2.13102507 14713
Glonass 67
1 23205U 94050C 96182.99713389 .00000093 00000-0 00000+0 0 3035
2 23205 64.7680 203.6693 0003328 280.0512 79.9722 2.13102690 14698
DMSP B5D2-7
1 23233U 94057A 96184.80355053 .00000029 00000-0 39040-4 0 8322
2 23233 98.8268 243.3475 0013254 132.5863 227.6426 14.12716332 95033
OKEAN 1-7
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1 23317U 94066A 96183.15480164 .00000054 00000-0 47238-5 0 1649
2 23317 82.5439 46.1841 0027730 37.9563 322.3592 14.74026824 92594
ELEKTRO
1 23327U 94069A 96176.40173032 -.00000096 00000-0 00000+0 0 1700
2 23327 0.1039 170.7679 0006613 292.7474 30.1999 1.00271216 6074
RESURS 1-3
1 23342U 94074A 96183.05064437 .00000079 00000-0 21211-4 0 5122
2 23342 97.9656 239.7813 0001224 79.9780 5.0107 14.69844584 88844
Glonass 68
1 23396U 94076A 96182.84078979 -.00000010 00000-0 00000+0 0 2799
2 23396 65.0856 83.8139 0028568 191.3819 168.5952 2.13102750 12536
Glonass 69
1 23397U 94076B 96183.95532190 -.00000007 00000-0 00000+0 0 2711
2 23397 65.0771 83.7828 0013425 321.5917 38.3593 2.13102138 12556
Glonass 70
1 23398U 94076C 96184.30831447 -.00000007 00000-0 00000+0 0 2898
2 23398 65.0649 83.7486 0003517 321.4012 38.5682 2.13098364 12575
LUCH (Altair-2)
1 23426U 94082A 96185.02135272 -.00000286 00000-0 00000+0 0 3418
2 23426 1.4315 267.5994 0002533 204.2508 272.3932 1.00277191 5662
RS-15
1 23439U 94085A 96184.70876342 -.00000039 00000-0 10000-3 0 1441
2 23439 64.8187 357.9822 0160602 196.4187 163.1498 11.27527041 62532
NOAA 14
1 23455U 94089A 96184.87828567 .00000085 00000-0 71231-4 0 6570
2 23455 98.9462 130.3080 0008699 193.2460 166.8485 14.11596530 77660
Glonass 71
1 23511U 95009A 96182.85950415 -.00000048 00000-0 00000+0 0 2005
2 23511 64.6616 323.6949 0006083 205.0575 154.9044 2.13103599 10269
Glonass 72
1 23512U 95009B 96184.85551329 -.00000047 00000-0 00000+0 0 2198
2 23512 64.6491 323.6338 0004940 326.7800 33.1827 2.13101848 10302
Glonass 73
1 23513U 95009C 96182.80140612 -.00000048 00000-0 00000+0 0 2293
2 23513 64.6611 323.7178 0013172 196.5048 163.4424 2.13102844 10266
GMS 5
1 23522U 95011B 96180.60473498 -.00000281 00000-0 10000-3 0 1263
2 23522 0.3995 346.8913 0001438 141.0796 146.9186 1.00267455 4560
DMSP B5D2-8
1 23533U 95015A 96184.87586284 .00000033 00000-0 41275-4 0 5739
2 23533 98.8403 187.1360 0008063 19.1486 340.9985 14.12744160 65843
Microlab 1
1 23547U 95017C 96182.93064655 .00000215 00000-0 77843-4 0 1170
2 23547 69.9783 138.1751 0013440 170.0618 190.0784 14.45549045 65658
OFEQ 3
1 23549U 95018A 96182.47057606 .00009835 00000-0 23758-3 0 2735
2 23549 143.3638 309.0557 0223926 250.4901 107.1518 15.16013709 68388
GFZ-1
1 23558U 86017JE 96184.18763032 .00002126 00000-0 29549-4 0 1382
2 23558 51.6517 37.6962 0005257 281.7811 78.2593 15.62291537592359
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ERS-2
1 23560U 95021A 96185.20873749 -.00000019 00000-0 90000-5 0 2507
2 23560 98.5448 259.0500 0001270 96.5732 263.5595 14.32248155 62861
Spektr
1 23579U 95024A 96185.05155626 .00005038 00000-0 70122-4 0 3799
2 23579 51.6518 44.2258 0002355 151.4462 210.2899 15.58902451 63917
GOES 9
1 23581U 95025A 96167.40430022 .00000077 00000-0 00000+0 0 2046
2 23581 0.2011 82.4729 0000778 279.4890 272.5312 1.00281681 3909
Helios 1A
1 23605U 95033A 96182.74715072 .00000209 00000-0 49111-4 0 2371
2 23605 98.1215 118.2587 0001384 76.6440 283.4919 14.63847396 52542
UPM SAT 1
1 23606U 95033B 96185.20701248 .00000094 00000-0 25208-4 0 1828
2 23606 98.1026 121.7928 0008138 125.5117 234.6851 14.67258013 53067
CERISE
1 23607U 95033C 96181.86467224 .00000059 00000-0 19158-4 0 995
2 23607 98.1027 118.3552 0006288 132.3522 227.8215 14.66948770 52594
TDRS 6
1 23613U 95035B 96178.80000000 .00000102 00000-0 00000+0 0 1754
2 23613 0.7180 81.4550 0000042 16.6180 294.0390 1.00263259 3484
Glonass 74
1 23620U 95037A 96182.58546571 .00000098 00000-0 00000+0 0 1521
2 23620 64.8264 203.5285 0018276 173.8038 186.2836 2.13102890 7292
Glonass 75
1 23621U 95037B 96182.76272063 .00000096 00000-0 00000+0 0 1566
2 23621 64.8398 203.5257 0018299 184.3688 175.6771 2.13102227 7297
Glonass 76
1 23622U 95037C 96183.29021343 .00000090 00000-0 00000+0 0 1563
2 23622 64.8259 203.5087 0036752 168.2101 191.9354 2.13102564 7304
Prognoz-M2
1 23632U 95039A 96172.29100520 -.00000806 00000-0 00000+0 0 632
2 23632 70.1900 250.0080 8330225 322.1180 316.8460 0.26343000 859
SICH-1
1 23657U 95046A 96185.02183295 .00000033 00000-0 17092-5 0 908
2 23657 82.5334 185.9843 0028548 2.0871 358.0450 14.73479614 45160
RADARSAT
1 23710U 95059A 96182.49401199 -.00000018 00000-0 10000-4 0 1553
2 23710 98.5811 188.9912 0000851 75.5629 284.5669 14.29977865 34143
Glonass 77
1 23734U 95068A 96184.81567996 .00000072 00000-0 00000+0 0 1345
2 23734 64.8360 203.3709 0019622 318.3983 41.5041 2.13101981 4305
Glonass 78
1 23735U 95068B 96184.55762756 .00000074 00000-0 00000+0 0 1272
2 23735 64.8281 203.3773 0008559 223.9348 136.0479 2.13125316 4293
Glonass 79
1 23736U 95068C 96184.58091955 .00000074 00000-0 00000+0 0 1115
2 23736 64.8105 203.3850 0008635 208.6752 151.3308 2.13102332 4293
XTE
1 23757U 95074A 96184.57384829 .00000329 00000-0 -13800-5 0 682
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2 23757 22.9891 307.0454 0013425 242.5690 117.3429 14.97662323 27776
1996010D
1 23797U 96010D 96184.55388617 .00219084 -18445-6 79615-3 0 1160
2 23797 48.0769 245.6074 7277358 33.3989 356.7416 2.34573332 3014
Soyuz TM-23
1 23798U 96011A 96185.05155626 .00005038 00000-0 70122-4 0 1157
2 23798 51.6518 44.2258 0002355 151.4462 210.2899 15.58902451 20676
Polar
1 23802U 96013A 96106.86263936 .00000098 00000-0 00000+0 0 222
2 23802 85.9670 26.8051 6631391 289.5093 13.3680 1.36949782 706
1996010E
1 23824U 96010E 96181.24023129 .00000361 00000-0 13467-2 0 717
2 23824 47.6838 248.9944 7261926 30.8105 356.5267 2.21672148 2882
GPS BIIA-25
1 23833U 96019A 96182.36060817 -.00000065 00000-0 10000-3 0 437
2 23833 54.6815 347.5129 0037735 145.4966 214.7146 2.00564422 1945
Priroda
1 23848U 96023A 96185.05155626 .00005038 00000-0 70122-4 0 683
2 23848 51.6518 44.2258 0002355 151.4462 210.2899 15.58902451 11009
MSX
1 23851U 96024A 96184.49641021 -.00000047 00000-0 00000+0 0 447
2 23851 99.3808 164.0627 0006238 123.4665 236.7075 13.97703908 9635
Progress M-31
1 23860U 96028A 96185.05155626 .00005038 00000-0 70122-4 0 604
2 23860 51.6518 44.2258 0002355 151.4462 210.2899 15.58902451 9178
MSTI 3
1 23868U 96031A 96184.51352144 .00001209 00000-0 26343-4 0 343
2 23868 97.1213 14.6922 0013546 116.2042 244.0661 15.46161812 7196
Gorizont 32
1 23880U 96034A 96184.36553360 .00000086 00000-0 00000+0 0 299
2 23880 1.4101 283.6939 0015306 329.7010 211.6014 1.00276035 387
1996034E
1 23886U 96034E 96184.31679414 .00001426 00000-0 45665-3 0 120
2 23886 47.2608 273.0365 7323781 10.0124 359.0002 2.22691265 858
1996034F
1 23887U 96034F 96183.03500265 .00000117 00000-0 18728-3 0 100
2 23887 47.3094 273.5860 7304668 9.4107 358.9651 2.22253864 824
1983063A
1 23906U 83063E 96184.49094218 .00000574 00000-0 20650-3 0 66
2 23906 82.0255 190.1827 0043424 133.3161 227.1681 14.31858849678725
1996035A
1 23915U 96035A 96183.36642815 -.00000296 00000-0 00000+0 0 218
2 23915 0.0549 283.4267 0000555 294.8086 136.3551 1.00272560 180
1996035B
1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
STS 78
1 23931U 96036A 96185.25000000 .00001438 54680-5 46131-5 0 454
2 23931 39.0124 285.2187 0005944 358.9496 278.5269 16.04119382 2026
1996037A
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1 23940U 96037A 96185.11372120 .00030451 00000-0 90588-3 0 75
2 23940 97.3712 90.9484 0428798 161.2334 200.5265 14.75978788 117
1996037B
1 23941U 96037B 96185.18129275 -.00017522 00000-0 -52073-3 0 77
2 23941 97.3887 91.0138 0426427 160.6726 201.1233 14.76338714 138
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1296. NOAA/METEOR out of order?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: ag381@FreeNet.Carleton.CA
Message-ID: <4rekln$o5i@freenet-news.carleton.ca>
Source record: 21969

In the last few days I can't get any NOAA or METEOR weather sat.Are they
(temporarily) out of order or is my station down?
Just wondering...
Herb.

1297. NORAD Two-Line Orbital Element Set: Space Shuttle (96184.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4rchfr$3mg@blackbird.afit.af.mil>
Source record: 22064

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 78
1 23931U 96036A 96184.25000000 .00001404 54639-5 46505-5 0 422
2 23931 39.0138 291.9477 0006401 350.6143 263.6309 16.03797918 1861
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1298. WRC-97 Information

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: Tim <tim@futureone.com>
Message-ID: <01bb68b2.d7ecac20$d3b667ce@observer>
Source record: 22065
Cross-posted to: rec.ham-radio,rec.radio.amateur,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Keep up to date with the latest informaiton on WRC-97 and the Amateur
Radio Ham Bands at Web Site:

http://www.futureone.com/~tim/wrc/

73's
Tim

1299. KU band dish size

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: Rick Harkins <rharkins@qni.com>
Message-ID: <31DA98CB.3BD5@qni.com>
Source record: 22066

This isn't an amateur question, but I couldn't think of a better group to find expertise in...

We need to receive critical business data from Galaxy 4 on KU-band. The vendor wants to install a 1.2 meter dish. I'm sure that a good ole Missouri thunderstorm will kill the signal occasionally. If we installed a larger dish (3 meter?), would the additional gain prevent at least some of the weather fade? Is there a point of diminishing return on dish size?

Thanks in advance for the help...

Rick Harkins N0MRJ
Kansas City, MO
rharkins@qni.com
Rick_Harkins@twentieth-century.com

1300. NORAD Two-Line Orbital Element Set: Space Shuttle (96185.25000000)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4remuo$7n0@blackbird.afit.af.mil>
Source record: 22067

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 78
1 23931U 96036A 96185.25000000 .00001438 54680-5 46131-5 0 454
2 23931 39.0124 285.2187 0005944 358.9496 278.5269 16.04119382 2026
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1301. Re: NOAA/METEOR out of order?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <4rfob7$sro@bbcnews.rd.bbc.co.uk>
Source record: 21970

Herb Dieben (ag381@FreeNet.Carleton.CA) wrote:
:
: In the last few days I can't get any NOAA or METEOR weather sat.Are they
: (temporarily) out of order or is my station down?
: Just wondering...
: Herb.
:

No problem with noaa 12 & 14 and Meteor 3-5 in the UK.
Also Sich-1 and Okean 1-7 transmit occasionally.

J.

1302. Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: back@maine.maine.edu
Message-ID: <4rf5r4$2jd@service-2.agate.net>
Source record: 21971

Hello all,
WHat are the 2 meter freqs that are being used to contact the shuttle?
Is there any 440 activity going on as well?

TNX, Jason N1RWY

FN54kd

1303. Re: Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4rf6vu$av5@host-3.cyberhighway.net>
Source record: 21972

back@maine.maine.edu (Jason Baack) wrote:

>Hello all,
>WHat are the 2 meter freqs that are being used to contact the shuttle?
>Is there any 440 activity going on as well?
>
>
>TNX, Jason N1RWY
>
>FN54kd
>

Hi Jason,

Hope you have better luck than I have had in trying to contact STS-78,
I have tried for them on EVERY pass since launch, no luck. They now
use multiple uplink frequencies and don't favor any particular one,
making a contact just about impossible, I have very mixed feelings
about this new policy. Anyway, here are the freq's you requested and
good luck to you. I should clarify, the crew of STS-78 are very
active on the SAREX, it's just that "I" have not been able to make a
contact or choose the correct uplink freq on any pass thus far.

HAM's on board are:

Susan Helms KC7NHZ
Charles Brady N4BQW
Robert Thirsk VA3CSA

They will all answer a call for W5RRR

Worldwide FM voice downlink is 145.550
FM voice uplinks are 144.91 - 144.93 - 144.95 - 144.97 - 144.99MHz
FM voice uplinks (Europe only) 144.70 - 144.75 - 144.80MHz
Packet Radio Downlink 145.55MHz
Packet Radio Uplink 144.49MHz

Again, good luck and 73's

John Jordan KB7VZL
rb@cyberhighway.net
www.cyberhighway.net/~rb

(Oh how I miss the days of Dr. Norm Thaggard on board the MIR, he was
on constantly, and always used 145.550 simplex)

1304. USA QSL BUREAU UPDATE

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: aa1mf@aol.com
Message-ID: <4rgmo4$2ag@newsbf02.news.aol.com>
Source record: 21973

******* U.S.A. QSL BUREAU **********
****ANNOUNCES NEW LOWER RATES****
ANNOUNCES EXPANDED DX QSL SERVICE

NOW "QSL VIA USBURO"
A QSL BUREAU FOR DOMESTIC U.S.A. QSL CARDS, ALL 10
DISTRICTS, TERRITORIES AND TRUSTEESHIPS OF THE U.S.A.
NOW A QSL BUREAU FOR ALL YOUR OUTGOING DX CARDS TOO!

DEAR FELLOW HAM,
"THE FINAL COURTESY OF A QSO IS A QSL", BESIDES BEING
ONE OF THE OLDEST QUOTES IN AMATEUR RADIO, IT IS ALSO
OUR TRADITION!

AS POSTAGE COSTS HAVE CLIMBED TO THE CURRENT 20/32 CENTS
FOR CARDS/LETTERS, THE USA QSL BUREAU WAS CREATED BY HAMS
FOR HAMS, TO PROVIDE AN INEXPENSIVE ALTERNATIVE TO THE
HIGH COST OF POSTAGE! ALLOWING ALL OF US THE ABILITY
TO CARRY ON THE TRADITION OF SENDING A QSL CARD FOR ALL
OUR STATESIDE QSO'S.

TO BE SUCCESSFUL, AND FUNCTION PROPERLY, ALL OF US MUST
PARTICIPATE. IT IS OUR SINCERE HOPE AND THE SINCERE HOPE
OF THE HUNDREDS OF YOUR FELLOW HAMS THAT ARE CURRENT USERS,
THAT YOU WILL COME ONBOARD AND FURTHER HELP ALL OF US MAKE
THIS A SUCCESS. THE SAVINGS AND BENEFITS ARE YOUR!!

YOUR PARTICIPATION WILL HELP EVERY U.S. HAM TO ENJOY THE
ABILITY TO CARRY ON THE TRADITION OF BEING ABLE TO TO QSL
EVERY QSO WITH AN INEXPENSIVE ALTERNATIVE, WHILE SAVING
YOU AND EVERYONE OF US BIG BUCKS IN POSTAGE!

AFTER MANY REQUESTS FROM OUR CURRENT USERS WHO WANTED TO BE
ABLE TO "ONE STOP SHOP" AND MANY HAMS THAT ARE NOT ARRL
MEMBERS, WE NOW OFFER YOU THE ABILITY TO SEND ALL YOUR
OUTGOING DX QSL CARDS VIA THE USA QSL BUREAU.

THANK YOU
73'S
BILL-AA1MF-, YOUR FELLOW USERS, & USA QSL BUREAU STAFF

SEND ALL YOUR OUTGOING USA QSL CARDS VIA THE BUREAU
NEW LOW RATE FOR YOUR OUTGOING CARDS;
JUST $0.05 EACH REGUARDLESS OF QUANTITY,
THAT'S JUST $5.00 PER 100 CARDS, A REAL BARGIN!!

PRESORT ALL CARDS BY DISTRICT AND SUFFIX
(IE: W1A, W1B, W4A, W4F, W4G, W4H, W5A, W5C, ETC.)

PLEASE PUT CALLSIGN OF STATION YOU ARE SENDING CARD TO IN
THE ADDRESS SECTION (BACK OF CARD) IN 3/4 INCH LETTERS!!

NO CHARGE FOR CARDS SENT TO YOU BY THE BUREAU - PLEASE KEEP AT LEAST
ONE SASE ON FILE - BUREAU WILL NOTIFY STATIONS THAT HAVE CARDS WAITING
BUT DO NOT HAVE SASE'S ON FILE - ALL CARDS GET DELIVERED!!!

YOU MAY NOW SEND ALL YOUR OUTGOING DX QSL CARDS VIA THE USA QSL BUREAU
RATES FOR YOUR OUTGOING CARDS; $0.05 EACH REGARDLESS OF QUANTITY
YOUR ONLY REQUIREMENT; ALL OUTGOING DX QSL CARDS MUST BE
ALPHABETICALLY SORTED BY CALL-SIGN PREFIX (IE: AM, CE, CO, DL1, DL7,
EA, LH, OA, 3A, 5A, 7JA ETC.)
WE HANDLE CARDS GOING TO ALL IARU BUREAU S & COUNTRIES WITHOUT A
BUREAU BUT HAVE A QSL MANAGER OR OTHER ORGANIZATION AVAILABLE FOR THE
CALL-SIGNS BEING SENT.
A LIST OF COUNTRIES SERVED IS AVAILABLE FOR A SASE, OR BY E-MAIL.
YOU MAY USE -QSL VIA AA1MF- IF YOU PREFER TO HAVE ALL CARDS COME THROUGH
THE USA QSL BUREAU, OTHERWISE YOU WILL RECEIVE YOUR INCOMING DX CARDS
VIA YOUR CALL DISTRICT INCOMING DX QSL BUREAU. BE SURE YOU HAVE SASE S
ON FILE THERE.
A LIST OF INCOMING DX DISTRICT BUREAU S IS AVAILABLE BY SASE OR E-MAIL.

START ENJOYING THE SAVINGS AND BENEFITS TODAY!!
SEND US UP TO -4- #6-3/4(3-5/8 X 6-1/2) SASE's (ONE STAMP EACH)
PLEASE PUT YOUR CALLSIGN IN THE UPPER LEFTHAND CORNER OR SEND US $5.00,
YOUR CORRECT RETURN ADDRESS, & WE SUPPLY 10 SASE's FOR YOU.

SEND YOUR CHECK AND OUTGOING CARDS ALONG WITH YOUR SASE'S TO:
USA QSL BUREAU
P.O. BOX 814
BREWER, ME 04412-0814

DON'T DELAY! DO IT TODAY!
ENJOY THE SAVINGS & BENEFITS TODAY!
THE QSL CARD - THE FINAL COURTESY OF A QSO!!!

THE USA QSL BUREAU IS A NOT FOR PROFIT ORGANIZATION!
OPERATED BY AA1MF & CREW
E-MAIL TO:
AA1MF@AOL.COM
102452.2315@COMPUSERVE.COM

SHOULD YOU HAVE ANY QUESTIONS, PLEASE LET US KNOW!!
WE ARE HERE TO SERVE YOUR DOMESTIC & DX QSL CARD NEEDS!!
>END<

1305. Re: Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4rglrl$iq8@news.mhv.net>
Source record: 21974

In article <4rf6vu$av5@host-3.cyberhighway.net>, rb@cyberhighway.net (John Jordan) wrote:

>Hi Jason,
>
>Hope you have better luck than I have had in trying to contact STS-78,
>I have tried for them on EVERY pass since launch, no luck..

John,
Don't feel bad, I've yet to have any luck myself. Frustrating isn't the
word for it! I hear them CLEAR as a bell but no luck. Many tries, many no
joys. Good luck though!

73!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1306. Yeee Haw! I worked the Columbia!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4rgjol$nv@host-3.cyberhighway.net>
Source record: 21975
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

At 07:01:00UTC on 07:04:96 I picked up the mic to try (for the millionth time) to make a voice contact with STS-78, the only difference with this try was that it was answered! Robert Thirsk (VA3CSA), Payload Specialist, answered my call to W5RRR on an uplink of 144.950MHz and a down of 145.550MHz. I asked how the mission was going and he told me that theyu had just completed muscle strength tests and that the mission was going great, he confirmed my call and QTH and told me that he was logging our QSO. I'm floating about a foot above the ground right now! Just thought I'd share this with someone, before I burst with excitement.. When I get the time, I'm going to make a .wav of my contact with MIR and Columbia (I recorded them) and put them on my web page..

73's all and good luck with your contact attempts, I hope you get'em!

John KB7VZL
rb@cyberhighway.net
www.cyberhighway.net/~rb
KB7VZL@KC7KFE.#SALEM.OR.USA.NOAM

1307. I SAW COLUMBIA!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4rgv38$of6@sloth.swcp.com>
Source record: 21976

Hello Everybody,
This has nothing to do with Amateur Radio, but it is worth posting.
I saw Space Shuttle Columbia this morning! I woke up at 4:40 AM MDT,
and caught its 5:06 AM MDT pass over Albuquerque, New Mexico!
It was VERY BRIGHT, and it seemed like it was at about 80 degrees,
even though the tracking software said it was at 59 degrees.
If you have never seen the Shuttle, DO IT! It is a great experience
and you will not forget it. I have seen the Shuttle and Mir about 5
or 6 times and they are all like the first time - AWESOME!
Still haven't worked STS-78...I'll keep trying before time runs out.
Happy 4th of July, everybody!
Best of 73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1308. Re: Yeee Haw! I worked the Columbia!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: lewis@phoenix.net
Message-ID: <lewis-0407961413040001@news.phoenix.net>
Source record: 21977
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

Contrats!! This must be the most active amateur radio mission yet. I am going to have to get a 2 meter rig back in here before the next mission.

Lewis

In article <4rgjol$nv@host-3.cyberhighway.net>, rb@cyberhighway.net (John Jordan) wrote:

>At 07:01:00UTC on 07:04:96 I picked up the mic to try (for the
>millionth time) to make a voice contact with STS-78, the only
>difference with this try was that it was answered! Robert Thirsk
>(VA3CSA), Payload Specialist, answered my call to W5RRR on an uplink
>of 144.950MHz and a down of 145.550MHz. I asked how the mission was
>going and he told me that theyu had just completed muscle strength
>tests and that the mission was going great, he confirmed my call and
>QTH and told me that he was logging our QSO. I'm floating about a
>foot above the ground right now! Just thought I'd share this with
>someone, before I burst with excitement.. When I get the time, I'm
>going to make a .wav of my contact with MIR and Columbia (I recorded
>them) and put them on my web page..
>
>73's all and good luck with your contact attempts, I hope you get'em!
>
>John KB7VZL
>rb@cyberhighway.net
>www.cyberhighway.net/~rb
>KB7VZL@KC7KFE.#SALEM.OR.USA.NOAM

--
Lewis P. Stephens Jr. KM5BH (Amateur Radio Callsign)
Amber, Inc. CLARC (Clear Lake Amateur Radio Club)
lewis@phoenix.net NAMU (NASA Area Macintosh Users)
LewisS3@AOL.com
73404.1403.compuserve.com

1309. Re: Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: Stan Vandiver <kd9be@pla-net.net>
Message-ID: <31DC4076.53D9@pla-net.net>
Source record: 21978

Jason Baack wrote:
>
> Hello all,
> WHat are the 2 meter freqs that are being used to contact the shuttle?
> Is there any 440 activity going on as well?
>
> TNX, Jason N1RWY
>
> FN54kd

On NON-Mir docking missions such as the current STS-78, the shuttle transmits on 145.550 worldwide. The packet uplink (where YOU transmit) is 144.490. There are 5 voice uplinks: 144.91, .93, .95, .97 and .99. 144.95 makes the standard 600 kHz offset for older radios, but the shuttle will listen to any or all... you just have to be "lucky!"

On Mir docking flights, which are VOICE ONLY... the shuttle transmits on 145.840. There are 2 uplinks: 144.45 and 144.47.

Watch for bulletins on packet radio, or you can subscribe to a mailing list at sarex@amsat.org for more current info.

Good luck es 73,
Stan/KD9BE
kd9be@pla-net.net

1310. Radio Meteor Obs. Bull. June 1996: Arietids, zeta Perseids

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.71.31DC3259@vvs.innet.be>
Source record: 21979

Radio Meteor Observation Bulletin No. 35 July 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

June 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

June	UT										
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	29	29	60	59	68	86	109	90	109	128	86
2- 3	-	-	-	-	-	-	-	-	-	-	-
3- 4	-	-	-	-	-	-	-	-	-	-	-
4- 5	-	-	-	-	-	-	-	-	-	-	-
5- 6	-	-	-	-	-	-	-	-	-	-	-
6- 7	-	-	-	-	-	-	-	-	-	-	-
7- 8	-	-	-	-	-	-	-	-	-	-	-
8- 9	-	-	-	-	-	-	-	-	-	-	-
9-10	-	53	41	55	72	80	116	130	138	99	154

```
10-11 | - - - - - - - - - - -
11-12 | - - - - - - - - - - -
12-13 | 27 46 53 49 68 76 75 119 83 56 77
13-14 | 31 95 52 81 102 99 123 141 128 145 102
14-15 | 29 36 45 80 61 81 76 91 83 66 -
15-16 | 16 59 66 83 87 89 102 116 100 96 91
16-17 | 72 77 73 50 52 69 79 86 67 105 73
17-18 | 42 72 71 45 42 61 70 77 59 82 66
18-19 | 23 30 52 44 82 93 68 38 46 101 59
19-20 | - - - - - - - - - - -
20-21 | 47 59 57 80 116 109 177 156 125 111 86
21-22 | 35 35 45 76 89 106 96 114 105 120 77
22-23 | 37 56 61 61 117 99 127 138 115 109 123
23-24 | 49 38 56 86 96 104 99 126 115 113 88
24-25 | 40 66 71 90 112 120 159 186 161 132 124
25-26 | 23 65 89 107 98 78 76 100 93 71 65
26-27 | 49 50 67 77 96 111 146 112 89 111 78
27-28 | 54 70 63 101 105 118 133 124 114 110 80
28-29 | 51 55 70 89 69 109 133 129 113 129 126
29-30 | - - - - - - - - - - -
30- 1 | 35 48 58 87 76 124 103 130 113 102 66
------|-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
June | UT
```

Notes:

. local time = UT + 2 hours.
. Arietids activity on June 9-10.

Maurice De Meyere / Chris Steyaert

```
Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were
recorded on a pen-recorder chart.
```

```
1996 | UT
May | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----|---------------------------------------------|-----------
1 | 15 18 18 20 13 21 20 28 31 27 24 | 16.8 25.2
2 | 9 14 21 19 15 | 15.6
3 | 12 17 22 15 15 19 19 28 33 39 42 56 | 16.7 36.2
4 | 10 20 16 30 22 20 21 17 25 40 41 38 | 19.7 30.3
5 | 10 16 20 16 25 22 25 33 38 45 48 59 | 18.2 41.3
6 | 10 12 19 25 22 18 44 40 58 40 | 17.7 45.5
7 | 8 22 27 16 18 25 27 26 31 39 40 41 | 19.3 34.0
```

```
8 | 13 20 23 24 27 16 21 23 29 29 34 30 | 20.5 27.7
9 | 16 18 15 21 17 18 23 21 29 34 34 24 | 17.5 27.5
10 | 9 13 15 16 20 17 21 13 29 35 36 29 | 15.0 27.2
11 | 11 22 32 23 28 19 21 31 26 36 29 31 | 22.5 29.0
12 | 9 11 19 21 19 17 17 24 30 25 45 44 | 16.0 30.8
13 | 9 18 14 27 25 21 26 25 40 42 | 19.0 33.3
14 | 14 20 11 16 30 19 27 24 28 47 34 39 | 18.3 33.2
15 | 13 20 25 33 30 19 14 19 36 28 34 41 | 23.3 28.7
16 | 12 18 25 27 22 25 23 29 22 27 38 32 | 21.5 28.5
17 | 12 20 23 24 24 30 23 23 26 29 39 33 | 22.2 28.8
18 | 13 14 29 25 21 25 20 24 29 33 31 30 | 21.2 27.8
19 | 13 15 17 19 21 31 22 24 22 28 38 29 | 19.3 27.2
20 | 7 13 19 19 28 20 23 34 25 | 17.7 27.3
21 | 16 17 19 25 21 25 18 20 28 36 35 25 | 20.5 27.0
22 | 13 12 21 20 25 21 25 21 21 29 36 28 | 18.7 26.7
23 | 10 14 17 26 22 22 14 20 17 31 39 31 | 18.5 25.3
24 | 14 21 19 31 24 26 20 18 27 33 26 31 | 22.5 25.8
25 | 18 14 22 30 17 20 24 30 23 33 33 31 | 20.2 29.0
26 | 9 11 14 31 31 24 17 19 27 33 43 27 | 20.0 27.7
27 | 15 10 20 16 16 18 17 26 22 28 27 30 | 15.8 25.0
28 | 12 12 23 25 29 23 22 20 35 28 29 25 | 20.7 26.5
29 | 10 14 17 29 17 24 27 21 33 24 23 32 | 18.5 26.7
30 | 6 23 20 27 20 22 20 22 23 31 28 24 | 19.7 24.7
31 | 10 13 21 23 13 24 19 20 31 31 33 29 | 17.3 27.2
-----|-----------------------------------------------|-----------
May | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

1996 | UT
June | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----|-----------------------------------------------|-----------
1 | 16 31 30 20 16 22 27 23 41 36 30 | 22.6 29.8
2 | 11 26 21 27 25 22 19 23 28 36 40 40 | 22.0 31.0
3 | 13 18 19 20 25 25 31 29 38 42 42 36 | 20.0 36.3
4 | 9 23 18 21 27 20 23 31 41 49 45 42 | 19.7 38.5
5 | 13 18 31 26 28 22 28 29 34 53 54 47 | 23.0 40.8
6 | 9 19 28 31 24 24 36 37 39 51 66 50 | 22.5 46.5
7 | 18 27 22 27 21 24 32 30 34 60 65 52 | 23.2 45.5
8 | 13 21 29 23 33 32 28 37 43 54 65 55 | 25.2 47.0
9 | 8 20 30 28 33 26 24 37 54 59 76 57 | 24.2 51.2
10 | 14 14 28 24 24 33 29 44 47 60 55 49 | 22.8 47.3
11 | 10 18 21 36 36 20 22 46 53 55 62 61 | 23.5 49.8
12 | 16 23 20 32 25 31 36 32 40 66 65 52 | 24.5 48.5
13 | 12 22 25 28 28 26 24 38 51 53 51 42 | 23.5 43.2
14 | 13 16 33 30 20 37 25 28 41 50 48 45 | 24.8 39.5
15 | 14 21 21 22 37 26 28 22 49 48 67 33 | 23.5 41.2
16 | 11 22 14 22 17 23 24 30 41 44 46 41 | 18.2 37.7
17 | 14 12 21 24 29 19 18 28 30 44 51 39 | 19.8 35.0
18 | 13 21 20 20 26 21 26 30 41 49 54 49 | 20.2 41.5
19 | 19 24 28 22 24 26 43 43 46 62 44 | 23.4 44.0
```

```
20 | 16 14 22 28 22 22 22 27 34 41 55 39 | 20.7 36.3
21 | 10 19 38 23 33 24 25 28 29 36 46 46 | 24.5 35.0
22 | 16 26 36 28 27 21 27 37 31 39 47 48 | 25.7 38.2
23 | 13 10 27 25 24 22 18 23 32 47 45 31 | 20.2 32.7
24 | 15 22 25 23 31 23 36 40 37 26 | 23.2 34.8
25 | 11 13 21 25 21 27 26 30 34 37 52 36 | 19.7 35.8
26 | 11 14 24 30 29 30 34 28 45 31 35 47 | 23.0 36.7
27 | 11 16 14 25 23 22 28 27 30 42 32 32 | 18.5 31.8
28 | 10 19 22 20 22 21 25 25 37 39 40 33 | 19.0 33.2
29 | 10 16 22 29 28 27 28 26 30 28 29 32 | 22.0 28.8
30 | 6 20 12 26 24 25 32 24 22 30 41 42 | 18.8 31.8
-----|-----------------------------------------------|-----------
June | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT
```

* (1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

- local time = JST = UT + 9 hours.
- Arietids and zeta Perseids activity between June 5 and June 11.

Chikara Shimoda

Observer: Kazuhiro SUZUKI
Location: Toyokawa Meteor Observatory (137.32 deg.E, 34.81 deg.N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
Frequency: 89.1 MHz
Transmitter Locations: FEN-OKINAWA (89.1 MHz, 10 kW) located about 1,300 km
south-west from receiving station.
Antenna: 3 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (Japan made)
Observing method: Meteor echoes outputted from center-tuning meter were
recorded on the chart of pen-recorder.

```
1996 | UT
June | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------|------------------------------------------------------------------------
1- 2 | 8 8 6
2- 3 | 13 20 21 30 29 30 33 19 15 11 14 13 12 17 19 17 9 12 6 14 4 15 19
3- 4 | 18 10 11 16 32 40 35 25 22 27 30 29 34 26 13 8 6 14 6 8 7
4- 5 | 13 9 11 23 31 45 29 23 13 11 35 18 26 11 18 28 25
5- 6 | 21 17 25 29 55 83 55 42 52 85 89 78 77 54 30 19 15 14
6- 7 | 25 49 68 76 81 44 70 37 34 17 22 26 32 21
7- 8 | 28 43 34 56 57 76 69 54 35 40 75 82 89 92 68 26 26 25 19 31
8- 9 | 31 31 32 43 79 93 74 54 92 87 35 17 5 19 19 18 18
9-10 | 25 28 38 40 61 68 63 41 39 27 36 48 63 68 77 64 40 24 16 15 15 13 9
10-11 | 14 16 19 35 55 50 30 22 15 19 6 10 28 35 26 37 18 11 9 12 9 9 6 1
11-12 | 10 15 12 33 42 39 44 29 23 11 21 41 51 39 19 11 12 11 6 14
12-13 | 6 12 25 49 52 64 63 38 26 17 23 34 55 47 47 37 24 13 16 25 16
13-14 | 22 30 26 52 72 78 68 51 34 51 13 20
14-15 | 21 26 35 40 61 62 58 48 42 26 58 69 49 64 49 22 26 12 17 16 13 14
```

```
15-16 | 11 31 31 46 57 51 29 29 19 36 18 10 10 14 14 15 15
16-17 | 26 29 29 43 36 39 38 33 10 17
17-18 | 19 23 29 35 37 30 21 5 13
18-19 | 9 20 22 23 35 45 35 22 27 24 16 16 18 13
19-20 | 21 21 19 33 37 50 49 30 21 29 40 30 16 14 8 14 14 16 18
20-21 | 21 14 31 29 44 40 53 17 13 17 20 23 39 30 22 15 7 13 6 3 13 10
21-22 | 17 14 23 22 28 35 33 26 12 15 12 25 16 11 15 7 3 3 12 5 3
22-23 | 8 10 14 26 35 37 34 23 15 7 13 22 25 17 13 8 7 3
23-24 | 8 10 16 19 31 21 24 18 18 13 15 9 14 20 22 16 18 9 4 2 4 2
24-25 | 3 5 8 9 13 14 3 5 5
25-26 | 10 9 15 11 15 25 17 10 9 6 10 4 6 8 10 14 8 7 3 4 5 6 5 3
26-27 | 6 9 7 12 19 30 20 9 6 7 18 14 16 10 10 3 5 8 10 12 11
27-28 | 12 15 17 19 26 40 33 26 14 20 12 10 12 10 15 9 8 9 4 5 6
28-29 |
------|------------------------------------------------------------------------
June | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT
```

- local time = JST = UT + 9 hours.

Kazuhiro SUZUKI

```
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora, SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)
```

Arietids, zeta Perseids 1996

Counts in one hour intervals starting at:

```
| June 1996
UT | 05 06 07 08 09 10 11 12
-----------------------------------------------------------
0 | 229 266 301 235 326 290 290 265
1 | 301 407 357 335 350 397 406 394
2 | 437 387 576 444 429 480 468 526
3 | 498 462 459 605 603 550 532 505
4 | 507 572 578 600 648 570 577 562
5 | 713 561 736 541 656 607 656 621
6 | 730 620 716 536 661 676 646 645
7 | 609 572 721 637 646 634 606 565
```

8 | 557 500 493 518 525 540 500 463
9 | 385 367 395 387 384 342 365 371
10 | 434 305 300 325 298 312 256 306
11 | 401 239 376 320 293 352 305 391
12 | 414 448 514 548 455 552 350 402
13 | 539 392 431 605 376 475 352 472
14 | 323 255 461 411 297 360 370 321
15 | 242 198 263 302 284 242 330 253
16 | 143 133 180 150 176 166 162 226
17 | 82 119 115 89 126 331& 110 99
18 | 86 103 103 97 104 114 112 63
19 | 55 80 77 94 84 114 68 85
20 | 129 93 133 114 110 149 100 133
21 | 159 161 148 146 95 144 124 171
22 | 174 182 175 172 135 164 169 144
23 | 192 221 204 203 187 240 220 222

UT | 05 06 07 08 09 10 11 12
| June 1996

. & Jun 10, 17h: sporadic E.

Ilkka Yrlola / via M. De Meyere

2. ANNOUNCEMENT

The World Radio TV Handbook 1996 (WRTH, 608 pages) celebrates its 50th anniversary. Besides the usual frequency lists and station data, it reviews also equipment. New is the Internet section with URL's of broadcasters and shortwave listening resources.
Edited by Billboard books. Costs $24.95 in the US.

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and has gradually been expanded.

Typically it contains: summaries of recent observations, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list,
please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge
from J. Van Wassenhove (current or back-issues).

4. CONTRIBUTORS / USEFUL ADDRESSES

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--
Christian Steyaert (RMOB9606) 4 July 1996
--

1311. AMSAT mailing lists (was Re: Freq's for the sts-78 mission)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4rhlv0$dj9@shellx.best.com>
Source record: 21980

In article <31DC4076.53D9@pla-net.net>,
Stan Vandiver <kd9be@pla-net.net> wrote:
>
>Watch for bulletins on packet radio, or you can subscribe to a mailing
>list at sarex@amsat.org for more current info.

Just in case anyone reading this is not familiar with how Internet
mailing lists operate, do NOT send your subscription request to
that address. It will go to the hundreds of subscribers on the list,
who will not be amused. :-)

Subscription requests and other administrative messages for all the
AMSAT mailing lists go to listserv@amsat.org. In addition to the SAREX
list, there are ones for AMSAT news bulletins, general discussion of
amateur radio space activities, and Keplerian elements.

Patty N6BIS

================================ N6BIS ================================
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1312. FT-790RII

Newsgroup: rec.radio.amateur.space
Date: 1996-07-04 00:00:00 UTC
From: "Robin E. Midgett" <rmidgett@edge.net>
Message-ID: <31DCAF71.382E@edge.net>
Source record: 21981

Does anyone know of a mod for the Yaesu FT-790RII that allows
finer tuning than 12.5KHz in the FM mode? I am trying to hear AO-27;
12.5KHz tuning doesn't cut it for 436.797Mhz.
--
73, Robin KB4IDC

1313. Re: I SAW COLUMBIA!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: brunel@hugo.rz.fh-ulm.de
Message-ID: <brunel.172.00082945@hugo.rz.fh-ulm.de>
Source record: 21982

>Hello Everybody,

> If you have never seen the Shuttle, DO IT! It is a great experience
>and you will not forget it. I have seen the Shuttle and Mir about 5
>or 6 times and they are all like the first time - AWESOME!

That s right! It is a great feeling to have a contact on 560 THz (hi). I saw MIR- space station twice, disappearing in the earth s shaddow. Unfortunately never had a contact on 144MHz.
Good luck to everybody, Roman (DL2SFE)

1314. Kansas City Tracker:- Info required.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: vk7kob@ozemail.com.au
Message-ID: <31db077b.1529287@news.ozemail.com.au>
Source record: 21983

Hi Folks!
I am just getting into Satellites and would like to know where I get either a manufactured one or PCB's for a Kansas City Tracker and any relevant data for it.

Are they in a kit form or does one have to make up the thing from scratch....

Many thanks, Robert.
****
-- My very own musings.
From:
Robert W. Walker, J.P. B.A. (Syd.) VK7KOB, ZL3TJP.
My saltmine= Advertising Contractor & Publisher
P.O. Box 514,
DRUMMOYNE, N.S.W. 2047.
AUSTRALIA.
Phone 018 287 199 (Cellular Phone)
vk7kob@ozemail.com.au
"Success is the progressive realisation of a worthy ideal"
- Professor William James.
****

1315. STS-78 packet beacons.7/05/95

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4ritn5$lbu@news.monad.net>
Source record: 21984

Hi all I heard these about 7:00 am est thought you might like to see them....73 N1PPP

W5RRR-1>QRZ [07/05/96 07:04:21]: <UI>:
#1135-N4ENV N2VHL VE3EFX KB2VBI N2YGH N1VQR KW4T W2UH VA3HOI N2NRD W4JXM WB8TIF
KE4HJV W2RS WG0I KD4UPF KC7CO WA5DJJ WB9AWX KE6ZYS VK2XCI VK2THU N1ERY K1JKS W8Z
CF N2UME N3OWA K1RMA VE3OQZ N8QNO N8TPX N2THO NR9A WA4HEI KC4YEJ

W5RRR-1>QSL [07/05/96 07:04:22]: <UI>:
K1RMA/1332 W2UH/1331 WG0I/1322 N1ERY/1297 KD1SM/1292 VK2CM/1267 F6KSY/1232 KE4LQ
F/1211 ZS6RSW/1207 JH0ISW/1194 WA5MYI/1182 WB9TPN/1157 KK4NW/1150 WD4KPG/1120 KB
2UVQ/1119

W5RRR-1>QST [07/05/96 07:05:49]: <I00>:
Happy Fourth of July! The crew of STS-78 would like to honor those who
have given their lives in defence of our country. My God bless every
American and their families.

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

This country, with its institutions, belongs to the people who
inhabit. Whenever they shall grow weary of the existing Government,
they can exercise their constitutional right of amending it, or
their revolutionary right to dismember or overthrow it.
-- Abraham Lincoln (1809-1865)

1316. Re: I SAW COLUMBIA!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4rje79$skl@sloth.swcp.com>
Source record: 21985

brunel@hugo.rz.fh-ulm.de (PE Roman Brunel) wrote:

>>Hello Everybody,

>> If you have never seen the Shuttle, DO IT! It is a great experience
>>and you will not forget it. I have seen the Shuttle and Mir about 5
>>or 6 times and they are all like the first time - AWESOME!

I saw Columbia again this morning! Not as high as yesterday, and it
faded a little after it reached its peak. Ladies and Gents...check it
out! It is an experience and is worth waking up a few hours earlier!
73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1317. Re: Kansas City Tracker:- Info required.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb6a97$e1a7d820$068067ce@ns.netwide.net>
Source record: 21986

Robert,

The KCT comes out of the box already built. Try going to
http://www.logsat.com/KCT.htm for more info on the card. You'll find
their email address as well in case you want to contact them directly.

Roberto ik8sqi

Robert W. Walker <vk7kob@ozemail.com.au> wrote in article
<31db077b.1529287@news.ozemail.com.au>...
> Hi Folks!
> I am just getting into Satellites and would like to know where I get
> either a manufactured one or PCB's for a Kansas City Tracker and any
> relevant data for it.
>
> Are they in a kit form or does one have to make up the thing from
> scratch....

1318. HELP (tnc)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: gzluhuih@public1.guangzhou.gd.CN
Message-ID: <31DD4E65.683C@public1.guangzhou.gd.cn>
Source record: 21987

hello everybody, here is BD7IX(Lu Hui-Hua) from P.R.CHINA.
somedays ago, i send a mail at here , said want to know how
to made a modem(tnc) myself, my plan is use TCM3105 or
AM7910(7911) chip to do it, but unfortunate, the chip is
not produce. soi think maybe motorola's MC145442 OR MC145443
can replace it. but mc145442(3) only can use 300 baud
(CCITT V.21 OR BELL 103).
who can tell me the alternative else?
and if i use MC145442(3), who can give the circuit design about it?
please tell me via e-mail bd7ix@amsat.org
thanks

Lu Hui-Hua*bd7ix*

1319. Re: Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: jaminge@pb2esac.esac.pacbell.com
Message-ID: <4rjoin$bq4@gw.PacBell.COM>
Source record: 21988

In article <4rf6vu$av5@host-3.cyberhighway.net>,
John Jordan <rb@cyberhighway.net> wrote:
>back@maine.maine.edu (Jason Baack) wrote:
>
>>Hello all,
>>WHat are the 2 meter freqs that are being used to contact the shuttle?

[edited for brevity]
>
>HAM's on board are:
>
>Susan Helms KC7NHZ
>Charles Brady N4BQW
>Robert Thirsk VA3CSA
>
>They will all answer a call for W5RRR
>
>Worldwide FM voice downlink is 145.550
>FM voice uplinks are 144.91 - 144.93 - 144.95 - 144.97 - 144.99MHz
^^^^^^ ^^^^^^ ^^^^^^ ^^^^^^
>FM voice uplinks (Europe only) 144.70 - 144.75 - 144.80MHz
>Packet Radio Downlink 145.55MHz
>Packet Radio Uplink 144.49MHz
>
It's interesting to note the VOICE frequency list here.

According to the Southern California digital bandplan,
four of these are packet frequencies:

144.910 Keyboard
144.930 TCP/IP
144.950 Sarex
144.990 9600 Baud and Up...Experimental

(see http://www.ccnet.com/~rwilkins/socal.html)

Note the Sarex PACKET assignment of 144.950. I can vouch for
the fact that 144.910 is used here as digital. Since we are
making all this racket on those frequencies, the astronauts may
be inclined to listen elsewhere for voice contacts. Hmmmmmm.

-John, AC6VV
--

John A MINGER, Los Angeles
<jaminge@pacbell.com> radio amateur AC6VV (was KE6DTC)

1320. Re: Freq's for the sts-78 mission

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4rjthj$qjo@shellx.best.com>
Source record: 21989

In article <4rjoin$bq4@gw.PacBell.COM>,
John Minger <jaminge@pb2esac.esac.pacbell.com> wrote:
>
>According to the Southern California digital bandplan,
>four of these are packet frequencies:
>
>144.910 Keyboard
>144.930 TCP/IP
>144.950 Sarex
>144.990 9600 Baud and Up...Experimental
>
> Since we are
>making all this racket on those frequencies, the astronauts may
>be inclined to listen elsewhere for voice contacts. Hmmmmmm.

Up here in the Bay Area, 144.95 has a PacketCluster node on it.
Given that the astronauts can hear a goodly portion of the
country at any given time, it would probably be impossible for
them to find an uplink frequency that's completely clear.

Somehow it all seems to work out, as many, many hams in Northern
California have gotten voice contacts on 144.95 despite the
packet transmissions. (I've had two myself, with a mere 25-30
watts into a 1/4-wave whip on the roof.)

73,
Patty

================================ N6BIS ================================
Support "Due South"! If you're a fan, let CBS know ASAP!
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1321. Re: Kansas City Tracker:- Info required.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: "Jack E. Davis" <jedavis@mail.pacbell.net>
Message-ID: <NEWTNews.836612273.16678.pacmail@PacBell.pacbell.net>
Source record: 21990

> X-Newsreader: Forte Agent .99d/16.182
>
> Hi Folks!
> I am just getting into Satellites and would like to know where I get
> either a manufactured one or PCB's for a Kansas City Tracker and any
> relevant data for it.
>
> Are they in a kit form or does one have to make up the thing from
> scratch....
>
>
> Many thanks, Robert.
> **
> -- My very own musings.
> From:
> Robert W. Walker, J.P. B.A. (Syd.) VK7KOB, ZL3TJP.
> My saltmine= Advertising Contractor & Publisher
> P.O. Box 514,
> DRUMMOYNE, N.S.W. 2047.
> AUSTRALIA.
> Phone 018 287 199 (Cellular Phone)
> vk7kob@ozemail.com.au
> "Success is the progressive realisation of a worthy ideal"
> - Professor William James.
> **

Robert don't overlook the TrakBox standalone controller. Visit
www.tapr.org

73 de WA4EJR, TAPR TrakBox Manager

wa4ejr@tapr.org

1322. Re: Kansas City Tracker:- Info required.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-05 00:00:00 UTC
From: "Jack E. Davis" <jedavis@mail.pacbell.net>
Message-ID: <NEWTNews.836622977.18865.pacmail@PacBell.pacbell.net>
Source record: 21991

>
> Robert,
>
> The KCT comes out of the box already built. Try going to
> http://www.logsat.com/KCT.htm for more info on the card. You'll find
> their email address as well in case you want to contact them directly.
>
> Roberto ik8sqi
>
> Robert W. Walker <vk7kob@ozemail.com.au> wrote in article
> <31db077b.1529287@news.ozemail.com.au>...
> > Hi Folks!
> > I am just getting into Satellites and would like to know where I get
> > either a manufactured one or PCB's for a Kansas City Tracker and any
> > relevant data for it.
> >
> > Are they in a kit form or does one have to make up the thing from
> > scratch....
>

Robert don't overlook the "TrakBox" for your needs.
Visit www.tapr.org

The manuals and current firmware is there on the TrakBox (T_B).
Check it out.

--

73 de WA4EJR

1323. Rare Opportunity for FM, TV, 2-m, and 6-m DXers

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: Mark Gingrich <grinch@rahul.net>
Message-ID: <4rku0p$r24@samba.rahul.net>
Source record: 21992
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.shortwave

On Sunday morning, July 7, around 8:37 a.m. EDT (12:37 UTC), the Space Shuttle Columbia (STS-78) is expected to touch down at Kennedy Space Center. About 25 minutes prior to landing, as it approaches the U.S. Pacific Coast, the orbiter will experience sufficient atmospheric friction to create an ionized wake, a condition persisting for nearly fifteen minutes as the craft streaks like a meteor over central California, Nevada, the "Four Corners" region, Dallas, central Louisiana, and the Gulf Coast of Mississippi.

DXers working VHF frequencies -- TV, FM, 2-meter, and 6-meter ham bands -- who reside within a few hundred miles of the re-entry track will have a rare opportunity to test if the Shuttle-generated plasma trail permits reception of over-the-horizon signals. The circumstances are similar to meteor-scatter reception: Meteors are typically pea-gravel-sized flotsam that ionize narrow columns of the upper atmosphere for a few seconds; in contrast, the near-airliner-sized Shuttle should cut a much larger plasma swath across the sky over an interval of minutes. These temporary plasmas can redirect very-high-frequency radio signals over the horizon, whereas before reception was limited to line-of-site distances from the transmitter. Signals received via Shuttle plasma scattering may persist for a few minutes.

DXers should tune to a known distant station in the general direction of the Shuttle's re-entry track -- that is, if you are south of the track, try for a station to the north, on an unoccupied, interference-free frequency in your area. The following Web site may assist you in finding candidate FM stations, their frequencies, and transmitter power:

http://www.airwaves.com/fmdb.html

- Re-entry Time Line -

If the re-entry goes as planned, the time line will be as follows:

Event Time UTC EDT CDT MDT MST/PDT*

Arrives over West Coast 12:14 8:14 7:14 6:14 5:14

Enters Nevada 12:15 8:15 7:15 6:15 5:15

Overflies "Four Corners" 12:17 8:17 7:17 6:17 5:17

Overflies Dallas, TX 12:21 8:21 7:21 6:21 5:21

Overflies Mississippi Coast 12:24 8:24 7:24 6:24 5:24

KSC Touch down 12:37 8:37 7:37 6:37 5:37

(* Much of Arizona is on Mountain Standard Time [MST].)

More detailed predictions containing look-angles at best visibility
for various locales are available at the end of the document found at:

http://shuttle.nasa.gov/sts-78/orbit/orbiter/sighting/sighting.html

Note that only observers west of Utah will have a decent chance at
visually sighting the Shuttle, due to lessened interference from
sunlight. The sonic boom, however, may be detectable to everyone
in the vicinity of the re-entry track.

- Last-Minute Sources of Information -

Weather conditions at Kennedy may cause last-minute postponement of
the landing. The following Web site provides weather status:

http://www.ksc.nasa.gov/weather/weather.html

Last-minute information about the Shuttle's re-entry/landing status
is available at:

http://shuttle.nasa.gov/

Also, last-minute schedule changes are usually reported on the hourly
national news on CBS Radio affiliate stations, on CNN, and on NASA TV.

I would especially like to hear of any successful (or unsuccessful)
attempts to exploit Shuttle re-entries for DXing purposes. I will
happily summarize them and report the results on these very same
newsgroups. You are welcome to contact me at the e-mail address below.

Good luck!

--
~~~~~~
Mark Gingrich grinch@rahul.net San Leandro, California
~~~~~~

1324. Re: HELP (tnc)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: "Jack E. Davis" <jedavis@mail.pacbell.net>
Message-ID: <NEWTNews.836638334.18841.pacmail@PacBell.pacbell.net>
Source record: 21993

In Article<31DD4E65.683C@public1.guangzhou.gd.cn>, <gzluhuih@public1.guangzhou.gd.CN>
writes:
> Path: news.pacbell.net!news.PBI.net!decwrl!elroy.jpl.nasa.gov!swrinde!ihnp4.ucsd.edu!new
s1.ucsd.edu!news-mail-gateway
> From: gzluhuih@public1.guangzhou.gd.CN (Lu Hui-Hua)
> Newsgroups: rec.radio.amateur.space
> Subject: HELP (tnc)
> Date: 5 Jul 96 17:18:29 GMT
> Organization: ucsd usenet gateway
> Lines: 13
> Message-ID: <31DD4E65.683C@public1.guangzhou.gd.cn>
> References: <199607051130.EAA10845@.mail.ucsd.edu>
> Reply-To: bd7ix@amsat.org
> NNTP-Posting-Host: mail.ucsd.edu
> Originator: daemon@ucsd.edu
>
> hello everybody, here is BD7IX(Lu Hui-Hua) from P.R.CHINA.
> somedays ago, i send a mail at here , said want to know how
> to made a modem(tnc) myself, my plan is use TCM3105 or
> AM7910(7911) chip to do it, but unfortunate, the chip is
> not produce. soi think maybe motorola's MC145442 OR MC145443
> can replace it. but mc145442(3) only can use 300 baud
> (CCITT V.21 OR BELL 103).
> who can tell me the alternative else?
> and if i use MC145442(3), who can give the circuit design about it?
> please tell me via e-mail bd7ix@amsat.org
> thanks
>
> Lu Hui-Hua*bd7ix*
How many AM7910/11 are you looking for?
I may have an extra one you can have if there is any easy way
to get it to you.

73 de WA4EJR
Jack Davis - Southern Califnornia- 55 Miles south of Los Angeles.

1325. Re: Crossed yagi - linear polarization ?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: Darrel Emerson <74010.2230@compuserve.com>
Message-ID: <31DE2491.6D5B@compuserve.com>
Source record: 21994
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.antenna

Hi Philip,
I do exactly what Gary suggests: I have 2 equal lengths of
cable from the 2 linear feeds of my 2-meter crossed Yagi. The
elements of the crossed Yagi are at 45 degrees to the horizontal.
In the shack, I have one separate quarter-wave lengths of coax,
and a separate half-wave length, either of which can be put into
series with either of the 2 feeders from the antenna.
(1) If I combine the 2 lengths of feeder without any extra length
patched in, I get horizontal linear polarizaton. (By "combine," I mean
the 2 feeders are fed in phase through a suitable coupler.)
(2) If I add a half-wave length into one feeder before combining,
I get vertical linear polarization.
(3) If I combine the 2 feeders with just the extra quarter-wave in
the first of the 2 feeders, I get RHC polarization.
(4) Putting the extra quarter-wave into the second of the 2 feeders,
rather than the first, I get LHC polarization.

Depending on exactly how your antenna is arranged, (1) and (2) may be
swapped, and/or (3) and (4) may be swapped. I chose to arrange the
antenna this way because of the added flexibility, and because adding in
my extra half-wave or quarter-wave of feeder probably adds less loss
than most polarization switching relays. I've found the arrangement
very convenient indeed for both satellite and terrestrial operation.

Good luck,
cheers,
Darrel Emerson (aa7fv@amsat.org)

1326. Re: Yeee Haw! I worked the Columbia!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: Dave Cappellucci <dcappell@usa.net>
Message-ID: <31DE826C.99E@usa.net>
Source record: 21995
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

John Jordan wrote:
>
> At 07:01:00UTC on 07:04:96 I picked up the mic to try (for the
> millionth time) to make a voice contact with STS-78, the only
> difference with this try was that it was answered! Robert Thirsk
> (VA3CSA), Payload Specialist, answered my call to W5RRR on an uplink
> of 144.950MHz and a down of 145.550MHz. I asked how the mission was
> going and he told me that theyu had just completed muscle strength
> tests and that the mission was going great, he confirmed my call and
> QTH and told me that he was logging our QSO. I'm floating about a
> foot above the ground right now! Just thought I'd share this with
> someone, before I burst with excitement.. When I get the time, I'm
> going to make a .wav of my contact with MIR and Columbia (I recorded
> them) and put them on my web page..
>
> 73's all and good luck with your contact attempts, I hope you get'em!
>
> John KB7VZL
> rb@cyberhighway.net
> www.cyberhighway.net/~rb
> KB7VZL@KC7KFE.#SALEM.OR.USA.NOAM

Congratulations!

Dave Cappellucci
Acappella Publishing
http://www.usa.net/acappella/

1327. Re: Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: Peter Armstrong <psstech@infocom.net>
Message-ID: <4rlq0o$rhl@news.infocom.net>
Source record: 21996
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

wallnerw@cts.com (Bill Wallner) wrote:
>Francisco Costa (fcosta@mail.telepac.pt) wrote:
>: Hi
>
>: I'm looking for a tracking program
>: (like NASA DEMOS), with 3 dimension
>: display capability.
>
>: Is it avaliable? Where?
>
>: Many thanks in advance.
>
>: 73's F.Costa CT1EAT
>
>MicroOrbit, available as shareware, does some very nice 3D.
>
>If you can't find it, email me. I am in the wrong program to give you
>the URL.
>
>Bill

It is at http://www.infocom.net/~pss
From there you can go to the demo page and download the program.

1328. Shuttle Retransmission Freq's

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: psgeorge@infinet.com
Message-ID: <psgeorge-0607961654460001@cmh-p106.infinet.com>
Source record: 21997

I'm wondering if anyone in the Ohio area was able to pick up any of the shuttle audio retransmissions on any bands? I've been listening, but have been unable to hear anything.

Paul n8xqv

--
Paul S. George (psgeorge@infinet.com)

1329. Eectronic Engine Control Noise: Mobile Operation

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: Keith Nelson <knelson@aimnet.com>
Message-ID: <31DEA2CB.5C5B@aimnet.com>
Source record: 21998

I am W6KLK. I am using my Yaesu FT-890 in my 1992 Toyota PU V-6 for mobile operation. The noise from the electronic engine control (located on the passenger side panel) is severe and making reception impossible. I am an electrical engineer and I have done mobile noise supression in the past (1950ties) but I am stumped on this one. It appears to be radiated interference, not conducted, but I may be mistaken.

I would appreciate suggestions on how to solve the problem.

Please respond by email. Thanks!

Keith W6KLK <knelson@aimnet.com>

1330. Re: Yeasu FT-290

Newsgroup: rec.radio.amateur.space
Date: 1996-07-06 00:00:00 UTC
From: lewis@phoenix.net
Message-ID: <lewis-0607962109030001@news.phoenix.net>
Source record: 21999

In article <4quqcv$1kre@CT1.SNET.Net>, albert@unknown.address.com (Albert Alvareztorres, Jr.) wrote:

>In article <4mdv1c$hhr@newsbf02.news.aol.com>, lewiss3@aol.com (LewisS3) wrote:
>> I am considering this readio, an all mode for 2 meters. Can it be used to
>> work satellites?
>>
>> Lewis KC5PSX
>
>Yes & no. You need a second receiver to work satellites that receive on
>2 meters and transmit on another band. For example with a "short-wave"
>or 10 meter radio, you can work the RS-10.
>
>To work sats that operate on 2 meters and 440, you need a radio like the
>FT-736 which allows you to work those two bands in duplex.
>
>With the FT-290 alone you can work MIR and SAREX on the Shuttle.
>
>Al/AA1DO

thanks for the response. I had to think about this one for a bit to remember the original post. I still haven't bought a rig yet but I am looking at something a little older than the FT-736. Maybe a 726 if I get lucky and find a cheap one.

I posted this originally about four or five months ago by the way.

Lewis (KM5BH) (old call KC5PSX)

--
Lewis P. Stephens Jr. KM5BH (Amateur Radio Callsign)
Amber, Inc. CLARC (Clear Lake Amateur Radio Club)
lewis@phoenix.net NAMU (NASA Area Macintosh Users)
LewisS3@AOL.com
73404.1403.compuserve.com

1331. Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4rod36$ae7@sloth.swcp.com>
Source record: 22000
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Good Morning Everybody,
Who saw or heard the Shuttle while it was re-entering to land? There were about 10 Hams looking for it here in Albuquerque, New Mexico (It is nice to have an "on the air" search party using Amateur Radio so we can all look out for each other). It was supposed to be visible at 22.0 degrees (NNE), at an elevation of 40.4 degrees (Information from NASA).
One Ham was seeing where the Shuttle was on the web. It would update itself every couple minutes.
Well, we all heard the sonic boom (Loud outside Albuquerque, muffled inside the city) when the Shuttle was over Utah. Wonder if NASA's tracking display on the Internet was slow, or delayed.
Anyway, we all heard the sonic boom from STS-78! Sure wanted to see it, but there were some clouds in the way that probably covered it up. We will catch it on the next mission!
73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1332. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: Mark Gingrich <grinch@rahul.net>
Message-ID: <4rog6o$nt9@samba.rahul.net>
Source record: 22001
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Brian Mileshosky, N5ZGT (n5zgt@swcp.com) asked:

> Who saw or heard the Shuttle while it was re-entering to land?....

[Raises hand] I saw it!

Under moderately twilit skies in the San Francisco area, I could follow it nearly from horizon to horizon. Even in twilight it's a cool sight, but it is more dramatic in a *completely* dark sky.

This was my second re-entry sighting. (Saw the last one, too.) But on both occasions I did not hear a sonic boom. (I'm watching from a windy location, and this natural source of white noise could be masking the muffled boom from 45 miles up.)

I'm going to miss seeing these, since there don't appear to be any 39-degree-inclination-orbit missions in the schedule for the next few years....

--
~~~~~~
Mark Gingrich grinch@rahul.net San Leandro, California
~~~~~~

1333. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: nawotka@leland.stanford.edu
Message-ID: <nawotka-0707960935580001@tip-mp3-ncs-5.stanford.edu>
Source record: 22002
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In article <4rod36$ae7@sloth.swcp.com>, n5zgt@swcp.com wrote:

> Good Morning Everybody,
> Who saw or heard the Shuttle while it was re-entering to land?

No luck in Sunnyvale, CA. I live about 3-4 miles from SF Bay and the
morning fog was enough to block it out.
The fog must have muffled the boom also, since I didn't hear it. I did
like the live pictures from the pilot's seat though.
Kevin Nawotka

--
nawotka@leland.stanford.edu (Kevin Nawotka)

1334. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: allen butcher <abutcher@texinet.net>
Message-ID: <31E0014A.38AF@texinet.net>
Source record: 22003
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Mark Gingrich wrote:
>
> Brian Mileshosky, N5ZGT (n5zgt@swcp.com) asked:
>
> > Who saw or heard the Shuttle while it was re-entering to land?....
>
> [Raises hand] I saw it!
>
> Under moderately twilit skies in the San Francisco area, I could follow
> it nearly from horizon to horizon. Even in twilight it's a cool
> sight, but it is more dramatic in a *completely* dark sky.
>

I did not see it, but I heard the booms! This is the third re-entry out of the last five that I have seen from north central Texas. The first (STS-74?) I saw was a 2 AM CST re-entry that was spectacular from my in-town back yard. The fireball was very white with a sparkling quality to it. The best description is the sparkling that one sees around a laser spot. The trail, also bright white, extended horizon to horizon and stayed put, although small gaps did open after a minute or two.

For STS 75, my wife and kids and I got up at 5 AM on a terribly cold (for Texas) morning and saw nothing, not knowing the Shuttle had been waived off for an orbit.

For STS 77, I drove north to Gainesville TX, north of Ft Worth on the OK border. The sun angle was 8 degrees below the horizon and the sky was quite bright and was already blue. The Shuttle fireball appeared as a white spot, no sparkles, and the trail only lasted about 20 degrees behind the fireball. However, we heard the booms with about a five minute delay. The closest approach was about 60 degrees above the horizon.

For STS 78, Ft Worth was scheduled for a zenith crossing, so I drove to a site just south of Ft Worth. We were on a country road away from traffic - to better the chances of hearing the boom. The sun was about 10 degrees up and we did not see a thing - we had the latest NASA predictions, a compass, and WWV, but did not see anything. We then concentrated on the boom, and three minutes after the predicted crossing ... BOOM ... BOOM.

The moral to this is if the sun is up, you won't see a thing, but you can still hear it. If the sky is in twilight, you will see it zip across the sky. If the sky is dark, WHAT A SHOW!

Other experiences?

1335. Re: Help 3D Tracking

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: james.mollica@compudata.com
Message-ID: <8C4034F.15110001AB.uuout@compudata.com>
Source record: 22004

PA>It is at http://www.infocom.net/~pss
>From there you can go to the demo page and download the program.

Can you ftp MicroOrbit from INFOCOM.NET?
I can log on but can't seem to find the dir
the pgm is located in.

* 1st 2.00 #1439 * N2NRD @ AMSAT.ORG

1336. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: John Todd <jtodd@emigre.com>
Message-ID: <31DFBF77.3528@emigre.com>
Source record: 22005
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Just by luck, I had forgotten to turn off my alarm clock Sunday morning. It went off at 5am. I was about to doze again, when I realised that the shuttle would be coming over soon. I tuned into NASA0-selct on TV, and went out on the deck to take a look.

It was actually so bright, I thought that it was a plane coming out of Sacramento International. The smoke trail it left behind showed me that it was Columbia. I did watch it for about a minute until it was out of sight, but I didn't hear a sonic bom. Was it too high over NorCal?

-John

1337. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4rp8tn$bum@shellx.best.com>
Source record: 22006
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In article <nawotka-0707960935580001@tip-mp3-ncs-5.stanford.edu>,
Kevin Nawotka <nawotka@leland.stanford.edu> wrote:
>In article <4rod36$ae7@sloth.swcp.com>, n5zgt@swcp.com wrote:
>
>> Good Morning Everybody,
>> Who saw or heard the Shuttle while it was re-entering to land?
>
> No luck in Sunnyvale, CA. I live about 3-4 miles from SF Bay and the
>morning fog was enough to block it out.

Oh dear. The few miles between Kevin's house and mine (I'm near the
bay--such as it is this far south) must have made the difference.
I had an excellent view from north Sunnyvale.

That pinkish-orange color of the shuttle is unforgettable. The plasma
trail was harder to see this time than in May due to the somewhat
lighter sky, but it was visible, especially in binoculars.

I came back in the house afterwards and almost forgot about the
sonic boom till I heard some folks talking about it on 2 meters.
So I went outside and heard one little thump about 7 minutes
after the shuttle had gone by.

I cannot suggest too strongly that if you ever get a chance to see
a re-entry, do it! You can always make up the lost sleep later.

Patty

================================ N6BIS ================================
Support "Due South"! If you're a fan, let CBS know ASAP!
========== patty@wintertime.com ======= Sunnyvale, Calif. =============

1338. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-07 00:00:00 UTC
From: MCH <milesh1@ix.netcom.com>
Message-ID: <4rp8hm$rga@sjx-ixn5.ix.netcom.com>
Source record: 22007
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Redwood City (30 Mi. south of SF) - beautiful!

Brilliant pink-violet "meteor", quite high up in the
northern sky, easily visible even through slight haze.
Seemed as bright or brighter than Jupiter, Venus, etc.
Burned across the sky at exactly the predicted time.
It rolled off into the East where the dawn was starting
to light up the sky. It quickly became a tiny pink dot in
a pink sky - already far, far away. Florida 25 min. later.

No trail visible due to haze. No booms heard - but
birds bolted out of trees around 5 min. after passage.

1339. Re: Motorola Visar RIB sw needed

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: eplatt@earthlink.net
Message-ID: <31e09381.7450572@news.earthlink.net>
Source record: 22008
Cross-posted to: rec.radio.swap,rec.radio.noncomm,rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space

But where is .HR?? They may not have the same laws we do.

Radioactive Communications <radio3@village.ios.com> wrote:

>Nino Cvetkovic wrote:
>>
>> I can offer RIB software for almost every other Motorola in exchange.
>>
>> Nino
>Nino I'm sure that the Motorola people over in Plantation Florida are
>thrilled to know that you are offering illegally pirated copies of their
>RSS over the net!!! Really smart!!!

1340. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: wallnerw@cts.com
Message-ID: <4rq922$7pb@newsfeed.cts.com>
Source record: 22009
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Patty Winter (pwinter@best.com) wrote:
: In article <nawotka-0707960935580001@tip-mp3-ncs-5.stanford.edu>,
: Kevin Nawotka <nawotka@leland.stanford.edu> wrote:
: >In article <4rod36$ae7@sloth.swcp.com>, n5zgt@swcp.com wrote:
: >
: >> Good Morning Everybody,
: >> Who saw or heard the Shuttle while it was re-entering to land?

Well, while I was listening on 146.640, my dad, living in Napa, got his second thrill this year. (The other being 77).

I was able to feed him the numbers Saturday night and 78 was right on time at 5:14 PDT. He reports 78 was not quite as spectacular as 77 as the earlier reentry was in the 3AM range.

Nevertheless, at 80 years old, probably his last chance. :-)

Bill (no ops in San Diego) Wallner

1341. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: tfrielin@catfish.bbc.peachnet.edu
Message-ID: <tfrielin.748.002450EA@catfish.bbc.peachnet.edu>
Source record: 22010
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In article <4rod36$ae7@sloth.swcp.com> n5zgt@swcp.com (Brian Mileshosky, N5ZGT) writes:

>Good Morning Everybody,
> Who saw or heard the Shuttle while it was re-entering to land?

I was out camping in Grady County, GA (just north of Tallahassee, FL) Sunday morning and we heard the twin sonic booms as clear as day.

We always do down here in south Georgia when the Shuttle lands at KSC.

1342. Question about PSK modems

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: debaker@bnr.ca
Message-ID: <4rr5vb$4eh@crchh327.rich.bnr.ca>
Source record: 22011
Cross-posted to: rec.radio.amateur.space,rec.radio.digital.misc

Thanks for reading this, I am trying to setup a station capable of receiving 1200 PSK downlinks, but I am unclear about the uplink needed for the PSK sats. Is the uplink identical to the AFSK used in terrestrial systems (i.e. can I use my built-in TNC modem for that) or do you HAVE to use the output from the PSK modem (a PSK-1 in my case). I have not found a clear answer to this in what little information I have been able to find on the subject.

Thanks in advance for any help.
--
+---+
| David E. Baker Internet: debaker@nortel.com (Richardson, TX, USA) |
| My opinions do not necessarily reflect the opinions of my employer |
+---+

1343. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: yoffa@digital.net
Message-ID: <4rrcdv$1tq@ddi2.digital.net>
Source record: 22012
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Mark Gingrich (grinch@rahul.net) wrote:
: Brian Mileshosky, N5ZGT (n5zgt@swcp.com) asked:
:
: > Who saw or heard the Shuttle while it was re-entering to land?....
:
: [Raises hand] I saw it!

<raises both hands>

I heard it...brother, did I *ever* hear it. I was inside a building in Orlando (sadly, yes, I was working) and the skylight above my head sounded like it was going to rattle enough to break.

It was *GREAT*!!! :-] :-)

-sry

Sarah R. Yoffa O- | email me at phoenix@digital.net
PHOENIX RISING ENTERPRISES | or visit the Web Developers'
"Stupid rules are meant to be | Library (WDVL) at
changed, not broken." -sry on | http://WWW.Stars.com
sci.space.shuttle in winter of 1993 | Your *FREE* resource on the Web!

1344. Re: KU band dish size

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4rrbqk$t2i@service3.uky.edu>
Source record: 22013

In article <31DA98CB.3BD5@qni.com>, Rick Harkins <rharkins@qni.com> says:
>
>This isn't an amateur question, but I couldn't think of a better group
>to find expertise in...
>
>We need to receive critical business data from Galaxy 4 on KU-band. The
>vendor wants to install a 1.2 meter dish. I'm sure that a good ole
>Missouri thunderstorm will kill the signal occasionally. If we
>installed a larger dish (3 meter?), would the additional gain prevent at
>least some of the weather fade? Is there a point of diminishing return
>on dish size?
>
>Thanks in advance for the help...
>
>Rick Harkins N0MRJ
>Kansas City, MO
>rharkins@qni.com
>Rick_Harkins@twentieth-century.com
I am a TV Enigineer with the University of Kentucky (these opinions are
not theirs) and we have a 6.1 meter uplink/downlink. During very heavy
rain the downlinks vanish. I mean they are gone. The spectrum monitor
shows nothing but system noise. While a larger dish will give you more
"fade" margin, nothing will get signals through a heavy enough rain.
I have even see rain wipe out a 60' dish C band downlink. When you say
"critical", if it is like "life support" critical, you are out of luck.
No distribution, either satellite or land based, is "fail safe". That is
why the military spends fortunes to see that their important messages
get thru. If you system is a "robust" as the DBS tv systems, then
you can expect your data to be there about 99% of the time. And I suspect
that your data rates are much lower than DBS and this should give you
a much beter fade margin than the digital video.
Good luck.
.....
Terry Fugate
UKTV
University of Kentucky
"The opinions expressed herein are mine, and soley mine. They do not
represent the official view of the University of Kentucky,
the State of Kentucky, or any agency of any government.
If you do not like my opinion, just get on with your life.
I will not change your mind and you damn sure can not change mine."

1345. satellite freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: jeff_griffin_at_aos500@admin.tc.faa.gov
Message-ID: <4rrjaeINN1ao@faatcrl.faa.gov>
Source record: 22014

Does anyone know of a list of frequencies and modes that amateur satellites use. I'm finding the info I need, but a list someone has compiled would be a big help. Thanks for reading this.

73 Jeff KB2WQM KB2WQM@KB2HJC.#SNJ.NJ.USA.NOAM

1346. Re: KU band dish size

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: Matthew Halsey <matthew.halsey@intelsat.int>
Message-ID: <4rrker$7bs@intelsat2.intelsat.int>
Source record: 22015

Terry,

Any and every satellite link includes a rain margin which is tied to the availability of service. If you want to ensure 99.9% service availability then the rain margin included in the
link analysis needs to be sufficient to counter all but 0.1% of the time, when the heaviest rain is falling. So in your example, the size of the dish may be sufficient to offer you the
availability of service you require. It depends on what availability you have requested or been offered.
Additionally the advantage of a bigger dish is to increase gain but, more importantly, a satellite dish's performance is related to its sensitivity, referred to as G/T (in dB/Kelvin).
What this figure is is the ratio of antenna receive gain to system noise. The system noise is
dominated by the noise of the low noise amp (often quoted as a noise figure). So, it is possible to increase your availability by installing a lower noise amp rather than a bigger dish. Or both and you then get even more improvement.

So, I hope this helps to some extent, but remember your bottom line is the availability of service you require or have been offered. You will never get 100% (except maybe in the Arizona
desert!) and it costs far more to realize small gains in the availability the closer you get to
100%, particularly in Ku-band.

If you want a better explanation please feel free to email me or call me (details below).

73 Matt W3/G0IHG

matthew.halsey@intelsat.int
(202) 944 7510

--
INTELSAT

1347. GOES / EMWIN homebrew?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-08 00:00:00 UTC
From: dabo@airmail.net
Message-ID: <4rrsmn$frt@news-f.iadfw.net>
Source record: 22016

I am looking for any tech. info on construction of a GOES-8 downconverter/receiver. Anyone seen any tech. pubs or ham journal articles detailing this?

I am especially interested in receiving the EMWIN data being transmitted by the NWS on the GOES satellites.

Thanks. David Black, KC0JB

1348. Re: Yeee Haw! I worked the Columbia!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4rtjkl$lhc@news.mhv.net>
Source record: 21919
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

In article <4rsru8$dol@paperboy.ids.net>, Philip Chien <kc4yer@amsat.org> wrote:

>hmmm, you know, if you can keep floating you probably could volunteer
>from some space experiments. ;-)
>
>Would save NASA a whole bunch of money if you could do microgravity
>experiments just by picking up the mike. ....

Yes they would! I've yet to work the shuttle and I'm ready to float myself!
Here's to more sarex flights in the future!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1349. Re: satellite freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: Mark <kb9khm@expert.cc.purdue.edu>
Message-ID: <31E1ECA5.4EB@expert.cc.purdue.edu>
Source record: 21920

jeff griffin wrote:
>
> Does anyone know of a list of frequencies and modes that amateur satellites
> use.
Check out the amsat home page at: www.amsat.org

Mark (KB9KHM)

1350. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: jrburca@aol.com
Message-ID: <4run9f$1bc@newsbf02.news.aol.com>
Source record: 21921
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Drove for 6 hrs. from LA area to get a good view. Got off the freeway at 5 AM and
found a school grounds area in a residential neighborhood in San Ramon NE of San
Francisco. Was hoping that it didn't get waved off on the first attempt but didn't
know for sure. There it was low on the horizon right on time! Bright and pinkish-red
going across the sky with a plasma trail behind. It started in the western sky where
it was dark enough to see some stars and so was more spectacular at the
beginning of the arc but it could easily be seen until low on the eastern horizon.

This was my first Shuttle re-entry sighting. In all the excitement, I forgot to listen for
a sonic boom and didn't hear anything. Did some sightseeing in No. Calif. and just
got back Mon. evening. I hope to see more Shuttle re-entries, maybe from Baja California.

Jake in Calif.

1351. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: Bill Meenahan <wjmeena@ix.netcom.com>
Message-ID: <31E2DB83.2EF4@ix.netcom.com>
Source record: 21922
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

Why are there *two* booms?

-- Bill Meenahan, KD6GRE
Laurel, MD

When you come to a fork in the road -- take it! -- Yogi Berra

---

1352. Re: Question about PSK modems

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Du9y46.yM@pe1chl.ampr.org>
Source record: 21923
Cross-posted to: rec.radio.amateur.space,rec.radio.digital.misc

In <4rr5vb$4eh@crchh327.rich.bnr.ca> debaker@bnr.ca (David Baker) writes:

>Thanks for reading this, I am trying to setup a station capable of
>receiving 1200 PSK downlinks, but I am unclear about the uplink
>needed for the PSK sats. Is the uplink identical to the AFSK used
>in terrestrial systems (i.e. can I use my built-in TNC modem for
>that) or do you HAVE to use the output from the PSK modem (a PSK-1
>in my case).

The uplink is not identical to AFSK, you HAVE to use the PSK modem
output.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1353. psk modem help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: luis velis <n3tuk@idsonline.com>
Message-ID: <4rumoh$8io@news2.cais.com>
Source record: 21924

Hi folks
I am seting up my station to work the pacsats but i have one problem interfacing the TARP psk modem to my mfj 1278 tnc,the manual of the psk modem say to cut the trace on jp200 on the botton of the board but i can't find that jumper,i was wondering if they just miss printed the manual and put jp200 intead of jnp2..
Any help will be apreciate it

best 73's de luis

1354. ARLK049 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk049.1996@arrl.org>
Source record: 21925
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK049
ARLK049 Keplerian data

ZCZC SK49
QST de W1AW
Keplerian Bulletin 49 ARLK049
From ARRL Headquarters
Newington, CT July 9, 1996
To all radio amateurs

SB KEP ARL ARLK049
ARLK049 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96191.45325041 .00002121 00000-0 30391-4 0 06021
2 16609 51.6518 11.9890 0009874 280.6037 79.3845 15.61477905593459
HST
1 20580U 90037B 96191.40878070 .00000319 00000-0 16330-4 0 09040
2 20580 28.4686 75.7060 0006198 47.5699 312.5406 14.91072163141900
AO-10
1 14129U 83058B 96181.09750413 .00000126 00000-0 10000-3 0 04331
2 14129 26.1353 202.3042 6012945 27.7105 354.4743 2.05880123070119
RS-10/11
1 18129U 87054A 96191.36051819 .00000008 00000-0 -78410-5 0 02407
2 18129 82.9259 132.1525 0013171 90.2942 269.9723 13.72366861453212
UO-11
1 14781U 84021B 96190.99081145 .00000073 00000-0 20176-4 0 09033
2 14781 97.8025 180.7501 0012899 25.3197 334.8637 14.69463741660856
RS-12/13
1 21089U 91007A 96191.46838209 -.00000012 00000-0 -29380-4 0 09095
2 21089 82.9228 172.8190 0028869 168.1498 192.0303 13.74071207272091
AO-13
1 19216U 88051B 96190.15096461 .00004127 00000-0 10055-2 0 2369
2 19216 57.2099 106.0828 7433163 44.3519 355.1366 2.09954356 30286
UO-14
1 20437U 90005B 96191.23159300 .00000007 00000-0 19526-4 0 02143
2 20437 98.5437 273.8349 0011545 133.5094 226.7049 14.29925336337200
```

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RS-15
1 23439U 94085A 96191.44948859 -.00000039 00000-0 10000-3 0 01588
2 23439 64.8190 347.0823 0160392 195.1944 164.4137 11.27527297063291
AO-16
1 20439U 90005D 96191.25852635 .00000008 00000-0 19816-4 0 9935
2 20439 98.5585 276.1225 0011532 134.7317 225.4804 14.29979099337224
DO-17
1 20440U 90005E 96191.27857986 .00000017 00000-0 23285-4 0 09961
2 20440 98.5608 276.7918 0011698 133.7546 226.4604 14.30121184337251
WO-18
1 20441U 90005F 96191.26890090 -.00000014 00000-0 11480-4 0 00136
2 20441 98.5599 276.7173 0012041 134.6344 225.5818 14.30090465337257
LO-19
1 20442U 90005G 96191.26303522 .00000014 00000-0 22274-4 0 09980
2 20442 98.5626 277.2173 0012663 133.7937 226.4293 14.30199469337276
FO-20
1 20480U 90013C 96191.06009154 -.00000052 00000-0 -52159-4 0 09117
2 20480 99.0256 211.7586 0541177 74.9377 291.0925 12.83233630300696
AO-21
1 21087U 91006A 96191.35588418 .00000094 00000-0 82657-4 0 7209
2 21087 82.9379 305.2913 0035665 142.1211 218.2462 13.74569990273053
UO-22
1 21575U 91050B 96191.19218150 .00000029 00000-0 23937-4 0 07041
2 21575 98.3497 256.9236 0006945 195.8999 164.1965 14.37029100261221
KO-23
1 22077U 92052B 96191.33275479 -.00000037 00000-0 10000-3 0 06039
2 22077 66.0764 143.0907 0013683 291.8560 68.1001 12.86296967183650
KO-25
1 22828U 93061F 96191.26322768 -.00000034 00000-0 39262-5 0 4634
2 22828 98.5759 266.6408 0010136 146.7408 213.4412 14.28145386113262
IO-26
1 22826U 93061D 96191.21723431 .00000016 00000-0 23817-4 0 04894
2 22826 98.5805 266.5405 0008841 162.3856 197.7626 14.27807678145140
AO-27
1 22825U 93061C 96191.22259380 .00000001 00000-0 17987-4 0 05066
2 22825 98.5777 266.3739 0008498 161.8072 198.3412 14.27698941145137
PO-28
1 22829U 93061G 96191.21009730 .00000006 00000-0 20006-4 0 04881
2 22829 98.5785 266.6556 0010273 148.5180 211.6614 14.28126662145170

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
July 13, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1355. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: MarkDuncan <mdunca49@mail.telalink.net>
Message-ID: <31E328D0.F2@mail.telalink.net>
Source record: 21926
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

>
> >Good Morning Everybody,
> > Who saw or heard the Shuttle while it was re-entering to land?
>
>The double sonic boom comes from the two shock waves rolling off of the
"double-delta" wing of the shuttle . I heard it while in the Smoky
mountains in East Tennessee once . Sounded like someone blasting .

Mark

1356. Re: Yeee Haw! I worked the Columbia!

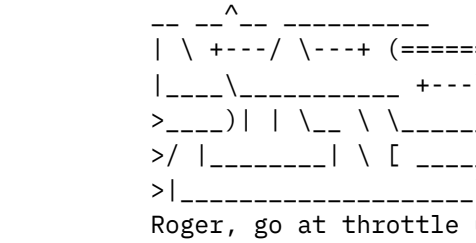
Newsgroup: rec.radio.amateur.space
Date: 1996-07-09 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4rsru8$dol@paperboy.ids.net>
Source record: 22017
Cross-posted to: rec.radio.amateur.space,sci.space.shuttle

In article <4rgjol$nv@host-3.cyberhighway.net> John Jordan,
rb@cyberhighway.net writes:
>At 07:01:00UTC on 07:04:96 I picked up the mic to try (for the
>millionth time) to make a voice contact with STS-78, the only
>difference with this try was that it was answered! Robert Thirsk
>(VA3CSA), Payload Specialist, answered my call to W5RRR on an uplink
>of 144.950MHz and a down of 145.550MHz.
<snip>

>I'm floating about a foot above the ground right now!

hmmm, you know, if you can keep floating you probably could volunteer
from some space experiments. ;-)

Would save NASA a whole bunch of money if you could do microgravity
experiments just by picking up the mike. ....

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

1357. NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-10 00:00:00 UTC
From: Dan Sndyer <dwsnyder@prolog.net>
Message-ID: <31E32200.45FD@prolog.net>
Source record: 21927

Does anyone know the basic equipment needed to pluck the NASA TV signal off Spacenet 2 without sinking a couple thousand in satellite Tv equipment? I have cable and don't care about all the other programming. Can the above be accomplished with a General Coverage receiver and the proper antenna?

Thanks for any comments!! (kind ones that is... :)

Dan
N3FLI

1358. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-10 00:00:00 UTC
From: aranders@kosepc01.delcoelect.com
Message-ID: <4s0ho5$sk6@kocrsv08.delcoelect.com>
Source record: 21928
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In <31E2DB83.2EF4@ix.netcom.com>,
Bill Meenahan <wjmeena@ix.netcom.com> writes:

>Why are there *two* booms?

The orbiter is pretty long, as supersonic things go. There are always shock waves from both the nose and the tail of a supersonic aircraft, and the waves are far enough apart in the Shuttle's case for your ears to hear them as separate sounds. It's more of a "ba-boom" than a "boom, boom" noise.

= === === === = = = === === === === = = === = = = === = = === =
Alan Anderson # Ignorance can be fixed, but stupidity is permanent.
(I do not speak for Delco Electronics, and DE does not speak for me.)

1359. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-11 00:00:00 UTC
From: todd@tj.org
Message-ID: <4s29kv$pi7@news.scruz.net>
Source record: 21929
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

jrburca@aol.com (JRBURCA) writes:

> There it was low on the horizon right on time! Bright and
> pinkish-red going across the sky with a plasma trail behind.
^^^^^^ ^^^^^

I've seen this phenomenon described as a smoke trail, a condensation trail, and a plasma trail. Having seen it a couple of times myself, what I want to know now is -- exactly what the heck is it?

Todd, KB6JXT

1360. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-11 00:00:00 UTC
From: Luke Bird <MAILONEI@mail.campus.bt.com>
Message-ID: <4s2j6n$fp0@liz.campus.bt.com>
Source record: 21930
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

can you let me in to toy story.

1361. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-11 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DuDoMF.4ux@pe1chl.ampr.org>
Source record: 21931
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In <4s0ho5$sk6@kocrsv08.delcoelect.com> aranders@kosepc01.delcoelect.com (Alan Anderson) writes:

>In <31E2DB83.2EF4@ix.netcom.com>,
>Bill Meenahan <wjmeena@ix.netcom.com> writes:

>>Why are there *two* booms?

>The orbiter is pretty long, as supersonic things go. There are always
>shock waves from both the nose and the tail of a supersonic aircraft,
>and the waves are far enough apart in the Shuttle's case for your ears
>to hear them as separate sounds. It's more of a "ba-boom" than a "boom,
>boom" noise.

Of course it also depends on where you are w.r.t. the passing aircraft.

I was on the Edwards AFB shuttle viewing site during a landing in 1989,
and as far as I remember the two booms were quite separate (and *very loud*)
when the shuttle passed over the base before the turn-around and
subsequent landing. Very spectacular!

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1362. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-11 00:00:00 UTC
From: ea4abb@ea4rct.CLubs.etsit.upm.ES
Message-ID: <50727@ea4rct.clubs.etsit.upm.es>
Source record: 21932

```
subscribe hamspa@ea4rct.clubs.etsit.upm.es ham-space
```

1363. Re: NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-12 00:00:00 UTC
From: grem@pixie.co.za
Message-ID: <4s5rkf$bqu@hawk.pix.za>
Source record: 21933

Dan Sndyer <dwsnyder@prolog.net> wrote:

>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

>Thanks for any comments!! (kind ones that is... :)

>Dan
>N3FLI
Hi DAn

Sounds like you want half a job.

Satellites don't work like that.

1364. Re: NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-12 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <4s5tpc$d23@news.jf.intel.com>
Source record: 21934
Cross-posted to: rec.radio.amateur.space,rec.video.satellite.tvro

In article <31E32200.45FD@prolog.net>, Dan Sndyer <dwsnyder@prolog.net> wrote:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

>Thanks for any comments!! (kind ones that is... :)

I am cross-posting and followup this to rec.video.satellite.tvro where
it more properly belongs. Somewhere there you can get the Scrounger's
Guide to TVRO, which will tell you how to set up a dish for $100.
I myself have an old dish setup suitable for this which I have not been
able to give away until recently. And NO, a General Coverage receiver
is not going to help at all, at least for NASA Select.

As a taxpayer who is funding NASA, I was delighted with the payback when they
started their TVRO service. Now that they scramble during the most
interesting times, 4 plex the video (I can't blink that fast), and do
other weird stuff to ruin my reception, I realize that they didn't have
ME in mind afterall. No wonder they don't get funded anymore.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1365. Re: NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-12 00:00:00 UTC
From: Mark de Hoo <mdehoo@tip.nl>
Message-ID: <31E60AC7.188A@tip.nl>
Source record: 21935

Dan Sndyer wrote:
>
> Does anyone know the basic equipment needed to pluck the NASA TV signal
> off Spacenet 2 without sinking a couple thousand in satellite Tv
> equipment? I have cable and don't care about all the other programming.
> Can the above be accomplished with a General Coverage receiver and the
> proper antenna?
>

Dear Dan,

I do not know anything about the above.
But I would like to.
Is this something send from space ?
I would like to know what freq's and other data.

--
Best regards,

Mark de Hoo

E-mail : mdehoo@tip.nl
Home page : http://www.tip.nl/users/mdehoo
AX25 : PA3GTY@PI8RYS.#NH1.NLD.EU

1366. NASA [Re:]

Newsgroup: rec.radio.amateur.space
Date: 1996-07-12 00:00:00 UTC
From: rfallon@ix.netcom.com
Message-ID: <4s6bgc$o99@sjx-ixn4.ix.netcom.com>
Source record: 21936

jgarver@ichips.intel.com wrote

>As a taxpayer who is funding NASA, I was delighted with the payback
>when they started their TVRO service. Now that they scramble during
>the most interesting times, 4 plex the video (I can't blink that
>fast), and do other weird stuff to ruin my reception, I realize that
>they didn't have ME in mind afterall. No wonder they don't get funded
>anymore.
>
--
>jgarver@ichips.intel.com WA7LDV I don't speak for Intel

Jim, your talking about the SN2 Transponder 5 signal which is the one
that is scrambled. The Transponder 9 signal is in the clear, but
nowadays they are showing a lot of the inside of the Johnson Space
Center instead of the camera located inside the payload bay. Even then
it is still worth it. The Mir linkups have been spectacular.

- Ray WA1WZF

1367. Re: NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-12 00:00:00 UTC
From: btaylor@mailserv.nbnet.nb.ca
Message-ID: <4s6fmc$kre@agate.nbnet.nb.ca>
Source record: 21937

Dan Sndyer <dwsnyder@prolog.net> wrote:

>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

Hi Dan,

Short of a dish, there's really no way to get it. But if NASA TV was all you wanted, you could certainly scrounge enough basic hardware to rig up a dedicated dish for much less than a couple of thousand dollars.

You would need the dish only, a used spun aluminum or fiberglas would be just fine. You would not even need an equatorial mount or actuator or power supply to move the dish.

You wouldn't even need a polarotor servo or controller once you tuned it up.

You would just need a medium to small C-band dish, some way of fixed-mounting it, an LNB (or LNA) and a compatible receiver even if only with only that one channel works.

If you're a good scrounger you could probably rig up nicely for under $200. A really good scrounger could probably do it for half of that.

Good luck!

1368. Satellite ATV?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: bjl1@cec.wustl.edu
Message-ID: <4s6vue$baq@oldfart.ecl.wustl.edu>
Source record: 21938
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc

I was wondering if there is any fast scan ATV over amateur radio satellites? It seems like something
neat to do since it would be like running your own satellite network. It would give one an idea of what
the commercial satellite uplinkers do.

Brad Lindseth

--
Brad Lindseth, EE Undergrad Student (summer pony-express and phone)
Washington University Mail: 2018 Belmont Road
E-mail: bjl1@cec.wustl.edu Grand Forks, ND 58201
Web: http://www.cec.wustl.edu/~bjl1 Phone: (701) 772-9257
Amateur Radio: N0UAG

1369. Re: NASA TV

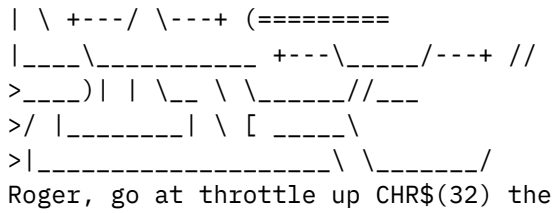
Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <4s7f9u$3b0@paperboy.ids.net>
Source record: 21939

In article <31E32200.45FD@prolog.net> Dan Sndyer, dwsnyder@prolog.net writes:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

Not a general coverage receiver. During shuttle missions there are many NASA audio retransmissions by hams, most notably the Goddard Spaceflight Center's WA3NAN amateur radio club on various shortwave frequencies. But that's only during shuttle missions.

You don't need a couple of thousand dollars for a true satellite receiver -- especially if you're a real ham. If you've got mechanical skills, can crimp a couple of cables together, and if you know how to bargain for old junk equipment (all imporant skills for hams) then you can put together your own satellite dish.

A scrounged satellite dish can be put together for anywhere from almost nothing to a couple of hundred dollars. My particular setup cost $500, and that's only because I wanted a descrambler and a new receiver. Old systems and components can be had for a song or less. There's an excellent document "The Scrounger's Guide to TVRO" which you can get via the Robert Smathers web site http://www.nmia.com/~roberts/ and go to the icon "Gary's information files". Excellent information.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

1370. Re: Satellite ATV?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jul13.052622.26218@ke4zv.atl.ga.us>
Source record: 21940
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc

In article <4s6vue$baq@oldfart.ecl.wustl.edu> bjl1@cec.wustl.edu (Bradley James Lindseth) writes:
>
>I was wondering if there is any fast scan ATV over amateur radio satellites? It seems like something
>neat to do since it would be like running your own satellite network. It would give one an idea of what
>the commercial satellite uplinkers do.

None of the current amateur satellites have the transponder bandwidth
or power necessary to do fast scan ATV. SSTV is possible, however, but
it is discouraged because it is a constant carrier mode and hogs the
shared transponder's power from other users.

You'd need a 22 MHz wide transponder to do the FM TV that the commercial
TV satellites do. Even VSB requires a 6 MHz transponder (and lacking
the FM enhancement factor, would need lots more transponder power to
achieve an equivalent baseband SNR).

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1371. KO-23 Anomaly

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <4s8b8j$2kq@dfw-ixnews4.ix.netcom.com>
Source record: 21941

Hi All,

I am having a bit of trouble with KO-23. I receive a strong signal
that is seen by both the radio and TNC but the TNC doesn't see it
as data. The same setup works fine on KO-25 so I think the radio
etc. are fine. Is anyone else having the same problem.

73 Jerry KK5YY

1372. Mir 440 Safex Beacon

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4s8esh$1i9@news.cyberportal.net>
Source record: 21942

Hio all the Mir space station is beaconing on the 437.925 freq it is supposed to be a repeater with a tone, but I have no ideas as to what tone
Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

1373. ARLK050 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk050.1996@arrl.org>
Source record: 21943
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK050
ARLK050 Keplerian data

ZCZC SK50
QST de W1AW
Keplerian Bulletin 50 ARLK050
From ARRL Headquarters
Newington, CT July 13, 1996
To all radio amateurs

SB KEP ARL ARLK050
ARLK050 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96194.07721258 .00001820 00000-0 26941-4 0 05897
2 16609 51.6510 358.7660 0009755 289.9593 70.0330 15.61488654593860
AO-10
1 14129U 83058B 96194.21080117 .00000048 00000-0 10000-3 0 4340
2 14129 26.0924 200.1428 6015984 31.3128 353.6223 2.05879639 70381
RS-10/11
1 18129U 87054A 96193.91228971 .00000029 00000-0 15321-4 0 02587
2 18129 82.9258 130.2665 0013230 83.8478 276.4183 13.72367083453561
UO-11
1 14781U 84021B 96193.98690756 .00000056 00000-0 17273-4 0 08987
2 14781 97.8022 183.6120 0012729 16.2542 343.9070 14.69464406661297
RS-12/13
1 21089U 91007A 96194.08981614 .00000058 00000-0 45282-4 0 09058
2 21089 82.9223 170.8740 0028115 160.9147 199.3041 13.74072046272451
AO-13
1 19216U 88051B 96193.00850974 .00005324 00000-0 11084-2 0 02377
2 19216 57.2032 105.4888 7433728 44.6643 355.1121 2.09979169030345
UO-14
1 20437U 90005B 96193.75064845 .00000002 00000-0 17418-4 0 02009
2 20437 98.5438 276.3072 0011688 126.3926 233.8330 14.29925500337568
RS-15
1 23439U 94085A 96193.93291282 -.00000039 00000-0 10000-3 0 01473
2 23439 64.8192 343.0678 0160273 194.7545 164.8673 11.27527416063570
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AO-16
1 20439U 90005D 96193.77748649 .00000009 00000-0 20380-4 0 00067
2 20439 98.5579 278.5972 0011830 127.7679 232.4576 14.29979434337582
DO-17
1 20440U 90005E 96193.79729036 .00000003 00000-0 17979-4 0 00109
2 20440 98.5606 279.2685 0011828 126.4467 233.7806 14.30121327337618
WO-18
1 20441U 90005F 96193.78766533 -.00000017 00000-0 10347-4 0 00032
2 20441 98.5601 279.1947 0012333 127.4036 232.8270 14.30090606337619
LO-19
1 20442U 90005G 96193.78160776 .00000015 00000-0 22488-4 0 00137
2 20442 98.5623 279.6939 0012704 126.1032 234.1328 14.30199798337637
FO-20
1 20480U 90013C 96194.10072277 -.00000017 00000-0 27057-4 0 09008
2 20480 99.0254 214.2204 0541222 68.0479 297.7225 12.83233979301083
AO-21
1 21087U 91006A 96193.83078958 .00000094 00000-0 82657-4 0 07353
2 21087 82.9375 303.4579 0035534 135.1483 225.2555 13.74570084273399
UO-22
1 21575U 91050B 96194.11657173 .00000026 00000-0 23040-4 0 07196
2 21575 98.3494 259.7601 0007072 186.2695 173.8405 14.37029493261641
KO-23
1 22077U 92052B 96194.05401672 -.00000037 00000-0 10000-3 0 05913
2 22077 66.0765 137.3932 0013784 291.8210 68.1338 12.86297045184000
KO-25
1 22828U 93061F 96194.13572227 .00000013 00000-0 22455-4 0 04754
2 22828 98.5758 269.4616 0010067 137.7114 222.4847 14.28146086113675
IO-26
1 22826U 93061D 96193.74002100 .00000053 00000-0 39074-4 0 05004
2 22826 98.5800 269.0164 0008599 154.6424 205.5176 14.27808494145505
AO-27
1 22825U 93061C 96194.09598696 .00000021 00000-0 26089-4 0 04985
2 22825 98.5776 269.1943 0008502 153.0806 207.0834 14.27699417145548
PO-28
1 22829U 93061G 96194.15269213 .00000019 00000-0 25006-4 0 04790
2 22829 98.5782 269.5454 0010323 139.8084 220.3864 14.28127167145599

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
July 16, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1374. Amateur Setups for SETI?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: toth.22@osu.edu
Message-ID: <toth.22.232.31E7FFCA@osu.edu>
Source record: 21944

Anyone know of a good way of building a home-based, lowcost radio antenna to do amateur SETI?

Thanks!

1375. MIR on UHF

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: ka0yos@arn.net
Message-ID: <4s8vg2$sh2@services.arn.net>
Source record: 21945

Howdy,

It sounds like the SAFEX experiment has started on MIR! Try
listening on 437.925 MHz.

73,
Joe

1376. Univ. of Cincinnati ARC Mail List

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: lewsa@ucunix.san.uc.edu
Message-ID: <4s98mf$7mi@babbage.ece.uc.edu>
Source record: 21946
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.dx

Hi rec.radio.amateur readers:
If you are a student, alumnus, employee of the University of Cincinnati (or any other interested party...) and are interested in keeping up on the activities of the University of Cincinnati ARC...

Please send me Email at: aj054@dayton.wright.edu (summer address only) and I will add you to our mailing list!!

We know there are plenty of amateurs affiliated with U.C. who we haven't tracked down yet. We would like to hear from you and keep you informed!!

-73- de Steve, N8TFD....UCARC President 1996-1997

1377. Re: KO-23 Anomaly

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: rparsons@bga.com
Message-ID: <rparsons-1307962213480001@maria-4g.ip.realtime.net>
Source record: 21947

In article <4s8b8j$2kq@dfw-ixnews4.ix.netcom.com>,
kc5egg@ix.netcom.com(Gerald Schmitt) wrote:

> Hi All,
>
> I am having a bit of trouble with KO-23. I receive a strong signal
> that is seen by both the radio and TNC but the TNC doesn't see it
> as data. The same setup works fine on KO-25 so I think the radio
> etc. are fine. Is anyone else having the same problem.
>
> 73 Jerry KK5YY

KO-23 is down currently.

Ron W5RKN

--
Ron W5RKN

1378. News from Spain

Newsgroup: rec.radio.amateur.space
Date: 1996-07-13 00:00:00 UTC
From: josedacal@arrakis.es
Message-ID: <4s8hgd$let@artemis.ibernet.es>
Source record: 21948

Hola a todos:

Hace unos dias que se creo un nuevo grupo de news sobre
radioaficionados en espanol.

El grupo es: es.rec.radio.amateur

Un saludo.

josedacal@arrakis.es

1379. Re: Mir 440 Safex Beacon

Newsgroup: rec.radio.amateur.space
Date: 1996-07-14 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4s9ief$kad@news.mhv.net>
Source record: 21949

In article <4s8esh$1i9@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Hio all the Mir space station is beaconing on the 437.925 freq it is supposed
> to be a repeater with a tone, but I have no ideas as to what tone
>Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE
>
>
>e-mail=dhend@cyberportal.net
> packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
> phone 1-603-542-2493 1-603-542-6917

Thanks for the info Dave! I hope we can more info as it's available!
What's the status of the 2 meter packet station? I miss it!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1380. Re: Did Anybody See/Hear STS-78 While Re-Entering?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-14 00:00:00 UTC
From: Alton Luper <aluper@zianet.com>
Message-ID: <4satrq$h0n@news.leonardo.net>
Source record: 21950
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

todd@tj.org (Todd Jonz) wrote:
>jrburca@aol.com (JRBURCA) writes:
>
> > There it was low on the horizon right on time! Bright and
> > pinkish-red going across the sky with a plasma trail behind.
> ^^^^^^ ^^^^^
>
>I've seen this phenomenon described as a smoke trail, a condensation
>trail, and a plasma trail. Having seen it a couple of times myself,
>what I want to know now is -- exactly what the heck is it?
>
>
>Todd, KB6JXT
>
>
The golden (no pun intended) trail you may see during the landing pass
is a result of the Orbiter passing through the high thin air at hyper
velocity (12,000 to 16,000 mph), and is definitely a plasma trail. This
is the same effect that caused a communication blackout before we got
TDRSS West in place.
ABLuper

1381. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-14 00:00:00 UTC
From: <>
Message-ID: <199607141515.IAA03364@UCSD.EDU>
Source record: 21951

```
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sun, 14 Jul 96 08:15 PDT
Received: by mail.ucsd.edu; id EAA20773
sendmail 8.6.12/UCSD-2.2-sun
Sun, 14 Jul 1996 04:30:32 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA20758
sendmail 8.6.12/UCSD-2.2-sun
Sun, 14 Jul 1996 04:30:30 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 13613
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199607141130.EAA20758@ mail.ucsd.edu>
Date: Sun, 14 Jul 96 04:30:29 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #209
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sun, 14 Jul 96 Volume 96 : Issue 209

Today's Topics:
Amateur Setups for SETI?
ARLK050 Keplerian data
KO-23 Anomaly (2 msgs)
Mir 440 Safex Beacon (2 msgs)
MIR on UHF
NASA [Re:]
NASA TV (2 msgs)
Satellite ATV?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Sat, 13 Jul 1996 19:58:02 GMT
From: toth.22@osu.edu (Captain Zyrain)
Subject: Amateur Setups for SETI?

Anyone know of a good way of building a home-based, lowcost radio antenna to
do amateur SETI?

Thanks!

Date: 13 Jul 1996 13:56:36 -0400
From: w1aw@arrl.org
Subject: ARLK050 Keplerian data

SB KEP @ ARL $ARLK050
ARLK050 Keplerian data

ZCZC SK50
QST de W1AW
Keplerian Bulletin 50 ARLK050

Date: 13 Jul 1996 14:18:59 GMT
From: kc5egg@ix.netcom.com (Gerald Schmitt)
Subject: KO-23 Anomaly

Hi All,

I am having a bit of trouble with KO-23. I receive a strong signal
that is seen by both the radio and TNC but the TNC doesn't see it
as data. The same setup works fine on KO-25 so I think the radio
etc. are fine. Is anyone else having the same problem.

73 Jerry KK5YY

Date: Sat, 13 Jul 1996 22:13:48 -0500
From: rparsons@bga.com (Ronald G. Parsons)
Subject: KO-23 Anomaly

In article <4s8b8j$2kq@dfw-ixnews4.ix.netcom.com>,
kc5egg@ix.netcom.com(Gerald Schmitt) wrote:

> Hi All,
>
> I am having a bit of trouble with KO-23. I receive a strong signal
> that is seen by both the radio and TNC but the TNC doesn't see it
> as data. The same setup works fine on KO-25 so I think the radio
> etc. are fine. Is anyone else having the same problem.
>
> 73 Jerry KK5YY

KO-23 is down currently.

Ron W5RKN

--
Ron W5RKN

Date: 13 Jul 1996 15:20:49 GMT
From: dhend@cyberportal.net
Subject: Mir 440 Safex Beacon

Hio all the Mir space station is beaconing on the 437.925 freq it is supposed to be a repeater with a tone, but I have no ideas as to what tone
Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

Date: Sun, 14 Jul 96 01:29:55 GMT
From: trandall@mhv.net
Subject: Mir 440 Safex Beacon

In article <4s8esh$1i9@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Hio all the Mir space station is beaconing on the 437.925 freq it is supposed
> to be a repeater with a tone, but I have no ideas as to what tone
>Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE
>
>
>e-mail=dhend@cyberportal.net
> packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
> phone 1-603-542-2493 1-603-542-6917

Thanks for the info Dave! I hope we can more info as it's available!
What's the status of the 2 meter packet station? I miss it!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 13 Jul 1996 20:04:18 GMT
From: ka0yos@arn.net (ka0yos)
Subject: MIR on UHF

Howdy,

It sounds like the SAFEX experiment has started on MIR! Try
listening on 437.925 MHz.

73,
Joe

Date: 12 Jul 1996 20:10:52 GMT
From: rfallon@ix.netcom.com (Ray Fallon)
Subject: NASA [Re:]

jgarver@ichips.intel.com wrote

>As a taxpayer who is funding NASA, I was delighted with the payback
>when they started their TVRO service. Now that they scramble during
>the most interesting times, 4 plex the video (I can't blink that
>fast), and do other weird stuff to ruin my reception, I realize that
>they didn't have ME in mind afterall. No wonder they don't get funded
>anymore.
>
--
>jgarver@ichips.intel.com WA7LDV I don't speak for Intel

Jim, your talking about the SN2 Transponder 5 signal which is the one
that is scrambled. The Transponder 9 signal is in the clear, but
nowadays they are showing a lot of the inside of the Johnson Space
Center instead of the camera located inside the payload bay. Even then
it is still worth it. The Mir linkups have been spectacular.

- Ray WA1WZF

Date: 12 Jul 1996 16:16:43 GMT
From: jgarver@ichips.intel.com (Jim Garver)
Subject: NASA TV

In article <31E32200.45FD@prolog.net>, Dan Sndyer <dwsnyder@prolog.net> wrote:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

>Thanks for any comments!! (kind ones that is... :)

I am cross-posting and followup this to rec.video.satellite.tvro where
it more properly belongs. Somewhere there you can get the Scrounger's
Guide to TVRO, which will tell you how to set up a dish for $100.
I myself have an old dish setup suitable for this which I have not been
able to give away until recently. And NO, a General Coverage receiver
is not going to help at all, at least for NASA Select.

As a taxpayer who is funding NASA, I was delighted with the payback when they
started their TVRO service. Now that they scramble during the most
interesting times, 4 plex the video (I can't blink that fast), and do
other weird stuff to ruin my reception, I realize that they didn't have

ME in mind afterall. No wonder they don't get funded anymore.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

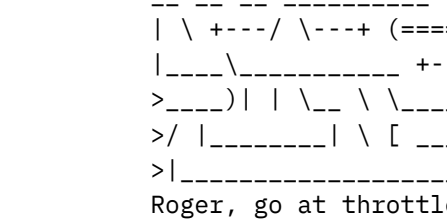
Date: 13 Jul 1996 06:21:50 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: NASA TV

In article <31E32200.45FD@prolog.net> Dan Sndyer, dwsnyder@prolog.net
writes:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

Not a general coverage receiver. During shuttle missions there are many
NASA audio retransmissions by hams, most notably the Goddard Spaceflight
Center's WA3NAN amateur radio club on various shortwave frequencies. But
that's only during shuttle missions.

You don't need a couple of thousand dollars for a true satellite receiver
-- especially if you're a real ham. If you've got mechanical skills, can
crimp a couple of cables together, and if you know how to bargain for old
junk equipment (all imporant skills for hams) then you can put together
your own satellite dish.

A scrounged satellite dish can be put together for anywhere from almost
nothing to a couple of hundred dollars. My particular setup cost $500,
and that's only because I wanted a descrambler and a new receiver. Old
systems and components can be had for a song or less. There's an
excellent document "The Scrounger's Guide to TVRO" which you can get via
the Robert Smathers web site http://www.nmia.com/~roberts/ and go to the
icon "Gary's information files". Excellent information.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: Sat, 13 Jul 1996 05:26:22 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Satellite ATV?

In article <4s6vue$baq@oldfart.ecl.wustl.edu> bjl1@cec.wustl.edu (Bradley James Lindseth) writes:
>
>I was wondering if there is any fast scan ATV over amateur radio satellites? It seems like something
>neat to do since it would be like running your own satellite network. It would give one an idea of what
>the commercial satellite uplinkers do.

None of the current amateur satellites have the transponder bandwidth
or power necessary to do fast scan ATV. SSTV is possible, however, but
it is discouraged because it is a constant carrier mode and hogs the
shared transponder's power from other users.

You'd need a 22 MHz wide transponder to do the FM TV that the commercial
TV satellites do. Even VSB requires a 6 MHz transponder (and lacking
the FM enhancement factor, would need lots more transponder power to
achieve an equivalent baseband SNR).

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: (null)
From: (null)

SB KEP ARL ARLK050
ARLK050 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96194.07721258 .00001820 00000-0 26941-4 0 05897
2 16609 51.6510 358.7660 0009755 289.9593 70.0330 15.61488654593860
AO-10
1 14129U 83058B 96194.21080117 .00000048 00000-0 10000-3 0 4340
2 14129 26.0924 200.1428 6015984 31.3128 353.6223 2.05879639 70381
RS-10/11
1 18129U 87054A 96193.91228971 .00000029 00000-0 15321-4 0 02587
2 18129 82.9258 130.2665 0013230 83.8478 276.4183 13.72367083453561
UO-11
1 14781U 84021B 96193.98690756 .00000056 00000-0 17273-4 0 08987
2 14781 97.8022 183.6120 0012729 16.2542 343.9070 14.69464406661297

```
RS-12/13
1 21089U 91007A 96194.08981614 .00000058 00000-0 45282-4 0 09058
2 21089 82.9223 170.8740 0028115 160.9147 199.3041 13.74072046272451
AO-13
1 19216U 88051B 96193.00850974 .00005324 00000-0 11084-2 0 02377
2 19216 57.2032 105.4888 7433728 44.6643 355.1121 2.09979169030345
UO-14
1 20437U 90005B 96193.75064845 .00000002 00000-0 17418-4 0 02009
2 20437 98.5438 276.3072 0011688 126.3926 233.8330 14.29925500337568
RS-15
1 23439U 94085A 96193.93291282 -.00000039 00000-0 10000-3 0 01473
2 23439 64.8192 343.0678 0160273 194.7545 164.8673 11.27527416063570
AO-16
1 20439U 90005D 96193.77748649 .00000009 00000-0 20380-4 0 00067
2 20439 98.5579 278.5972 0011830 127.7679 232.4576 14.29979434337582
DO-17
1 20440U 90005E 96193.79729036 .00000003 00000-0 17979-4 0 00109
2 20440 98.5606 279.2685 0011828 126.4467 233.7806 14.30121327337618
WO-18
1 20441U 90005F 96193.78766533 -.00000017 00000-0 10347-4 0 00032
2 20441 98.5601 279.1947 0012333 127.4036 232.8270 14.30090606337619
LO-19
1 20442U 90005G 96193.78160776 .00000015 00000-0 22488-4 0 00137
2 20442 98.5623 279.6939 0012704 126.1032 234.1328 14.30199798337637
FO-20
1 20480U 90013C 96194.10072277 -.00000017 00000-0 27057-4 0 09008
2 20480 99.0254 214.2204 0541222 68.0479 297.7225 12.83233979301083
AO-21
1 21087U 91006A 96193.83078958 .00000094 00000-0 82657-4 0 07353
2 21087 82.9375 303.4579 0035534 135.1483 225.2555 13.74570084273399
UO-22
1 21575U 91050B 96194.11657173 .00000026 00000-0 23040-4 0 07196
2 21575 98.3494 259.7601 0007072 186.2695 173.8405 14.37029493261641
KO-23
1 22077U 92052B 96194.05401672 -.00000037 00000-0 10000-3 0 05913
2 22077 66.0765 137.3932 0013784 291.8210 68.1338 12.86297045184000
KO-25
1 22828U 93061F 96194.13572227 .00000013 00000-0 22455-4 0 04754
2 22828 98.5758 269.4616 0010067 137.7114 222.4847 14.28146086113675
IO-26
1 22826U 93061D 96193.74002100 .00000053 00000-0 39074-4 0 05004
2 22826 98.5800 269.0164 0008599 154.6424 205.5176 14.27808494145505
AO-27
1 22825U 93061C 96194.09598696 .00000021 00000-0 26089-4 0 04985
2 22825 98.5776 269.1943 0008502 153.0806 207.0834 14.27699417145548
PO-28
1 22829U 93061G 96194.15269213 .00000019 00000-0 25006-4 0 04790
2 22829 98.5782 269.5454 0010323 139.8084 220.3864 14.28127167145599
```

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
July 16, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #209
****

1382. Guide to the Personal Radio Newsgroups

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: jmaynard@admin5.hsc.uth.tmc.edu
Message-ID: <radio/personal-intro_837456555@rtfm.mit.edu>
Source record: 21952
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.info,rec.answers,news.answers

```
Posted-By: auto-faq 3.1.1.2
Archive-name: radio/personal-intro
Revision: 2.1 1994/11/01 03:50:23
Posting-Frequency: posted on the 15th of each month

This message describes the rec.radio.amateur.*, rec.radio.cb,
rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet
mailing list counterparts and complements. It is intended to serve as a
guide for the new reader on what to find where. Questions and comments may
be directed to the author, Jay Maynard, K5ZC, by Internet electronic mail at
jmaynard@admin5.hsc.uth.tmc.edu. This message was last changed on 31 October
1994 to add the discussion of non-Usenet mailing lists and streamline most
of the history discussion, and to change the moderator information for
rec.radio.info.

History
=======

Way back when, before there was a Usenet, the Internet hosted a mailing list
for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions
were held on the mailing list, and sent to the mailboxes of those who had
signed up for it. When the Usenet software was created, and net news as we
now know it was developed, a newsgroup was created for hams: net.ham-radio.
The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became
progressively higher. First one by one, and then as part of two
reorganizations, what was once one group became many. In the process,
developments elsewhere on the net were reflected in the groups as they were
created, most notably the change to place all of the ham radio groups in one
hierarchy.

The collection of newsgroups continues to grow as more people join the net,
and as more topics of discussion gain volume, I expect to see more groups be
created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the
notable exception being rec.radio.swap. There are also a few mailing lists
that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them,
and not to the groups that aren't. The whole idea of having different
```

newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec-radio-info@stat.com. Inquires and other administrivia should be directed to rec-radio-info-request@stat.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups rec.radio.amateur.antenna, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas.

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send email with the word "subscribe" on a line by itself to cq-contest-request@tgv.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to

dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

All of the following mailing lists are sponsored to the Boston Amateur Radio Club, as well as some others of local interest. Thanks to N1IST for the information.

qrp-l: This is the qrp mailing list, previously maintained by Bruce Walker at Think.com. It is for discussions about the design, construction, and use of qrp (low power) radios and related equipment.
arrl-ve-list: This is a one-way list, run by Bart Jahnke of the ARRL VEC, for announcements to VEs and VE teams.
w1aw-list: ARRL bulletins, news, and information
newsline-list: Redistribution of Amateur Radio Newsline
letter-list: Redistribution of the ARRL Letter
fox-list: Fox hunting and Radio Direction Finding
fieldorg-l: ARRL field organization discussions
ham-tech: Technical discussions and questions about Amateur Radio
arrl-exam-list: amateur radio license examinations scheduled in the US and in some foreign areas.

To sign up or inquire about these lists, send mail to listserv@netcom.com with the following in the body (subject is ignored) of the message.
<listname> is the name of the list to subscribe to.
To subscribe: subscribe <listname>
To unsubscribe: unsubscribe <listname>
For more information: help
To post (to the two-way lists), send your message to <listname>@netcom.com

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while

still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
"All is strange and vague." "Are we dead?" "Or is this Ohio?"
-- Yakko and Dot Warner

1383. Re: MIR on UHF

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: brunel@hugo.rz.fh-ulm.de
Message-ID: <brunel.179.000CA054@hugo.rz.fh-ulm.de>
Source record: 21953

> It sounds like the SAFEX experiment has started on MIR! Try
>listening on 437.925 MHz.

Thanks for info!
Heard the voice recorder twice this morning during the passes
on 6:52 Z and 8:29 Z over Germany. They transmitted greetings from MIR space
station in Russian and English every two minutes.
73, Roman (DL2SFE)

1384. FO-20 Antenna System

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: ve6bpr@incentre.NET
Message-ID: <9607150033.AA16347@bach.ccinet.ab.ca>
Source record: 21954

Hello Everyone.
I am new to this list, and this is my first post.
I am interested in trying out FO-20 mode J.
Can anyone recommend a good efficient antenna system, without
the need of elevation control?
Thanks, AL, VE6BPR...sk

ve6bpr@incentre.net

1385. Address of VE6ITV Needed

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: Brian Webb <102670.1206@CompuServe.COM>
Message-ID: <4sc5pd$2kd$1@mhafc.production.compuserve.com>
Source record: 21955
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

I just had my first foreign contact today (it was by satellite).
I'd like to exchange QSLs, but I don't have an international
callbook. Can anybody please look up the address for VE6ITV?

Regards,

Brian Webb, KD6NRP

1386. Mir 440 on HT with rubber duck!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4se8ko$7lh@news.monad.net>
Source record: 21956

I heard Mir this Morning in New England with my handheld at work I thought at the noon pass
I heard some other activity, but don't really know as
the pass was going down, and signal was bad, hoping to see the repeater working.. 73 DAVE

e-mail=dhend@cyberportal.net http://www.cyberportal.net/dhend/dave1.html
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

1387. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: sfjcr@scfn.THpl.lib.fl.US
Message-ID: <Pine.SUN.3.93.960715191319.15373A-100000@scfn>
Source record: 21957

unsubscribe

1388. Usa Qsl Bureau Update

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: usburo@aol.com
Message-ID: <4scgqn$ekq@newsbf02.news.aol.com>
Source record: 21958

U.S.A. QSL BUREAU INFORMATION
Providing Domestic QSL Card Service Since Janurary 1996
**NEW LOWER RATES
**NOW DX QSL SERVICE

"QSL VIA USBURO"
A qsl bureau for domestic U.S.A. qsl cards, all 10
districts, territories and trusteeships of the U.S.A.
A qsl bureau for all your outgoing DX cards too!

Dear Fellow Ham,
"The final courtesy of a qso is a qsl", besides being one of
the oldest quotes in amateur radio, it is also our tradition!

As postage costs have climbed to the current 20/32 cents for
cards/letters, the USA QSL BUREAU was created by hams for hams,
to provide an inexpensive alternative to the high cost of
postage, allowing all of us the ability to carry on the
tradition of sending a qsl card for all our stateside qso's.

To be successful, and function properly, all of us must
participate. It is our sincere hope and the sincere hope of
the hundereds of your fellow hams that are current users, that
you will come onboard and further help all of us make this a
success. The savings and benefits are yours!!

Your participation will help every U.S. ham to enjoy the ability
to carry on the tradition of being able to qsl every qso with
an inexpensive alternative, saving you and everyone of us $$$ in
postage.

After many requests from our current users who wanted to be
able to "one stop shop" and hams that are not ARRL members,
we now offer you the ability to send all your outgoing DX qsl
cards via the USA QSL BUREAU.

Thank You,
73's
Bill-AA1MF-, Your fellow users, & the USA QSL BUREAU staff
- -
Send all your outgoing usa qsl cards via the bureau
New low rate for your outgoing cards;
Just $0.05 each reguardless of quantity, A REAL BARGIN!!

Presort all cards by district and suffix
(IE: W1A, W1B, W4A, W4F, W4G, W4H, W5A, W5C, ETC.)

Please put callsign of station you are sending card to in
the address section (back of card) in 3/4 inch letters.

No charge for cards sent to you by the bureau - PLEASE keep at least
one SASE on file - Bureau wil notify stations that have cards waiting
but do not have SASE's on file. - ALL CARDS GET DELIVERED!!

For those of you who would like to "one stop shop" or those who are
not members of the ARRL. You may now send all your out going DX qls
cards via the USA QSL BUREAU.
Rates for outgoing DX qsl cards; $0.05 each regardless of quantity
Your only requirement; ALL outgoing DX qsl cards MUST BE alphabetically
sorted by callsign prefix; (IE: AM, CE, CO, DL1, DL7, EA, LH, OA, 3A,
5A, 7JA ETC.)
We handle cards going to all IARU Bureau's & countries without a IARU
Bureau but have a qsl manager or other organization available for the
callsigns being sent. A list of countries served is available for a
sase or request by e-mail.

You may use "QSL VIA AA1MF" if you prefer to have all cards come through
the USA QSL BUREAU, otherwise you will receive your incoming DX cards
via your call district incoming DX qsl bureau. Be sure you have SASE's
on file there. A list of incoming DX district qsl bureau's is available
by SASE or e-mail request.

Start enjoying the savings and benefits today!!
Send us up to -4- #6-3/4(3-5/8 X 6-1/2) SASE's (one stamp each)
PLEASE put your callign in the upper lefthand corner, or you may send us
$5.00, your correct return address, & we will supply you with 10 SASE's.

Send your check and outgoing cards along with your SASE's to:
USA QSL BUREAU
P.O. BOX 814
BREWER, ME 04412-0814

DON'T DELAY! DO IT TODAY!
The Qsl Card -The Final Courtesy Of A QSO!

The USA QSL BUREAU is a NOT FOR PROFIT ORGANIZATION!

Operated by AA1MF and crew.
E-MAIL TO:
USBURO@AOL.COM
AA1MF@AOL.COM
STILWELL@ONSLOWONLINE.NET
-EOF-

1389. hearsat

Newsgroup: rec.radio.amateur.space
Date: 1996-07-15 00:00:00 UTC
From: peter.cresswell@digcir.cts.com
Message-ID: <960715160508110@digcir.cts.com>
Source record: 21959

```
subscribe hearsat-l
help
list
index hearsat-l
```

1390. Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: psgeorge@infinet.com
Message-ID: <psgeorge-1607961616500001@cmh-p141.infinet.com>
Source record: 21869

I have a question... Is there a consensus as to what is the best (feature, price, etc.) satellite tracking program available (PC or Mac)? I've been using WinOrbit (shareware) and it does a reasonable job, but it does lack a few features such as tracking multiple satellites in the same window and the ability to interface with an antenna Az/El controller.

If anyone out there is using one or has an opinion as to which one is best, I would certainly be interested in your opinion.

Thanks!

--
Paul S. George n8xqv (psgeorge@infinet.com)

1391. NORAD Two-Line Orbital Element Sets (TLE837)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4setbk$so7@blackbird.afit.af.mil>
Source record: 21870

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #837 -
Alouette 1
1 00424U 62049A 96195.84672760 .00000039 00000-0 35264-4 0 2136
2 00424 80.4577 257.4368 0023446 328.7384 31.2363 13.67871755685986
ATS 1
1 02608U 66110A 96194.78606088 -.00000310 00000-0 10000-3 0 9733
2 02608 14.6260 352.5799 0009800 87.5178 272.5718 1.00325435 25125
ATS 3
1 03029U 67111A 96192.59042381 -.00000129 00000-0 10000-3 0 5150
2 03029 14.9131 359.5380 0009716 266.3034 130.1295 1.00273128105006
Starlette
1 07646U 75010A 96193.91392998 -.00000158 00000-0 -12681-4 0 9835
2 07646 49.8285 51.1347 0205958 312.0967 46.2571 13.82190657 82387
LAGEOS
1 08820U 76039A 96196.00766422 .00000027 00000-0 10000-3 0 2076
2 08820 109.8495 35.1996 0043748 123.3538 237.1425 6.38664527215548
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96192.42461677 .00000041 00000-0 10000-3 0 6949
2 10061 12.3950 36.8232 0009984 123.2991 106.2424 1.00269783 14674
IUE
1 10637U 78012A 96188.56861855 -.00000299 00000-0 10000-3 0 2618
2 10637 35.7646 82.8008 1369203 57.3851 306.0860 1.00234551 20128
GPS BI-01
1 10684U 78020A 96185.95606993 -.00000046 00000-0 10000-3 0 4576
2 10684 64.9837 23.3942 0059419 162.4329 197.8036 1.98069263119746

```
GPS BI-02
1 10893U 78047A 96193.10986887 -.00000002 00000-0 10000-3 0 2576
2 10893 63.1525 260.2372 0220445 12.1179 348.4854 2.01628491133292
GOES 3
1 10953U 78062A 96191.48140523 -.00000149 00000-0 10000-3 0 6776
2 10953 11.3887 39.7333 0001193 55.6695 264.5283 1.00270767 19275
SeaSat 1
1 10967U 78064A 96195.51811575 -.00000048 00000-0 28607-4 0 5009
2 10967 107.9918 229.2355 0001599 268.2436 91.8522 14.38112737945230
GPS BI-03
1 11054U 78093A 96192.22934847 -.00000046 00000-0 10000-3 0 4152
2 11054 62.8815 259.4926 0046988 210.4881 149.2731 1.93503395131155
Nimbus 7
1 11080U 78098A 96195.59881963 -.00000106 00000-0 -58125-4 0 6004
2 11080 98.9403 56.5543 0008219 256.6917 103.3322 13.83692030894829
GPS BI-04
1 11141U 78112A 96195.77204059 -.00000040 00000-0 10000-3 0 531
2 11141 65.0081 25.5761 0050515 28.7277 331.5997 1.92894645 18391
GPS BI-05
1 11690U 80011A 96191.78365581 -.00000041 00000-0 10000-3 0 380
2 11690 65.3225 24.6756 0144334 189.6592 170.1068 2.00573067134653
GPS BI-06
1 11783U 80032A 96189.50378254 -.00000013 00000-0 10000-3 0 1542
2 11783 62.2998 252.9800 0227212 29.4591 331.8749 2.03456300119245
GOES 5
1 12472U 81049A 96186.71771309 .00000045 00000-0 10000-3 0 9389
2 12472 8.2090 49.9739 0006614 43.1097 316.9311 1.00225471 13278
Cosmos 1383
1 13301U 82066A 96192.87593836 .00000026 00000-0 13087-4 0 5106
2 13301 82.9325 116.4378 0026949 171.6279 188.5327 13.68075455700614
LandSat 4
1 13367U 82072A 96196.22102251 .00092930 00000-0 20289-1 0 9642
2 13367 98.0718 246.3202 0008212 61.3064 298.8921 14.57219606744473
DMSP B5D2-1
1 13736U 82118A 96195.89333826 -.00000005 00000-0 16285-4 0 399
2 13736 98.6253 23.8499 0008262 316.6563 43.3972 14.25792217704872
IRAS
1 13777U 83004A 96196.03264266 .00000146 00000-0 13033-3 0 3718
2 13777 98.9661 20.9583 0014089 24.0475 336.1342 13.99261995357121
Cosmos 1447
1 13916U 83021A 96194.91882855 .00000045 00000-0 31477-4 0 6047
2 13916 82.9462 172.0118 0039634 80.0541 280.5092 13.74342813667276
TDRS 1
1 13969U 83026B 96190.00000000 -.00000311 00000-0 10000-3 0 6034
2 13969 9.0208 43.4770 0002052 62.8648 131.2953 1.00276394 21590
GOES 6
1 14050U 83041A 96191.17490182 -.00000258 00000-0 10000-3 0 5248
2 14050 7.0547 53.5716 0004704 32.9229 184.9434 1.00245687106412
OSCAR 10
1 14129U 83058B 96195.18218122 .00000086 00000-0 10000-3 0 4359
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2 14129 26.0898 199.9837 6016060 31.5921 353.5689 2.05879130 70403
LandSat 5
1 14780U 84021A 96196.20816177 .00068222 00000-0 14998-1 0 4940
2 14780 98.3288 254.0228 0002026 182.5388 177.5799 14.57098244657869
UoSat 2
1 14781U 84021B 96193.91881453 .00000058 00000-0 17681-4 0 8970
2 14781 97.8022 183.5469 0012748 16.4343 343.7277 14.69464418661283
GPS BI-09
1 15039U 84059A 96195.77358673 -.00000047 00000-0 10000-3 0 4216
2 15039 64.6363 19.8915 0082848 19.5516 340.7915 1.92302503 87940
Cosmos 1574
1 15055U 84062A 96193.65342895 .00000032 00000-0 18688-4 0 8041
2 15055 82.9566 227.8920 0026408 275.4823 84.3320 13.73636876604342
GPS BI-10
1 15271U 84097A 96195.29193552 .00000035 00000-0 10000-3 0 1747
2 15271 62.1776 253.3759 0107097 158.6070 201.9333 1.92618634 171
Cosmos 1602
1 15331U 84105A 96192.77360393 .00000261 00000-0 27927-4 0 4878
2 15331 82.5337 90.9397 0018301 229.0009 130.9619 14.84767235636477
NOAA 9
1 15427U 84123A 96195.81883996 .00000015 00000-0 31541-4 0 7665
2 15427 98.9468 260.7583 0013870 237.5572 122.4254 14.13791073597395
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96195.74118053 .00001806 00000-0 26776-4 0 5918
2 16609 51.6505 350.3886 0009988 298.5256 61.4749 15.61496089594121
SPOT 1
1 16613U 86019A 96193.80855038 .00003042 00000-0 14317-2 0 9634
2 16613 98.8270 261.8282 0000144 284.2533 75.9182 14.19982628223894
Cosmos 1766
1 16881U 86055A 96194.34540815 .00000196 00000-0 20762-4 0 4023
2 16881 82.5191 147.1729 0017270 254.7250 105.2049 14.83746856537575
EGP
1 16908U 86061A 96195.67619639 -.00000083 00000-0 10000-3 0 1002
2 16908 50.0113 275.5657 0011262 80.8791 279.3317 12.44414525119700
NOAA 10
1 16969U 86073A 96195.81185314 .00000057 00000-0 42500-4 0 6967
2 16969 98.5244 192.1149 0012339 280.6854 79.2941 14.24993435510397
MOS-1
1 17527U 87018A 96195.73373396 -.00000043 00000-0 00000+0 0 4315
2 17527 98.9368 257.1421 0018989 254.1452 105.7621 14.00394731478707
GOES 7
1 17561U 87022A 96193.60647985 -.00000175 00000-0 10000-3 0 9675
2 17561 3.1149 68.9602 0005526 318.2415 26.6143 1.00273697 17547
Kvant-1
1 17845U 87030A 96195.86918084 -.00008877 00000-0 -95435-4 0 6828
2 17845 51.6502 349.7402 0010104 300.5965 59.4039 15.61480965594002
DMSP B5D2-3
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1 18123U 87053A 96195.53223868 -.00000019 00000-0 12460-4 0 5135
2 18123 98.7687 25.3967 0013721 175.9079 184.2209 14.15446596468229
RS-10/11
1 18129U 87054A 96195.22462879 .00000055 00000-0 43314-4 0 2368
2 18129 82.9258 129.2967 0013298 80.6145 279.6515 13.72367390453749
Meteor 2-16
1 18312U 87068A 96193.39322617 .00000051 00000-0 32681-4 0 4934
2 18312 82.5540 332.8781 0012555 146.2825 213.9133 13.84081365449524
Meteor 2-17
1 18820U 88005A 96196.06484980 .00000021 00000-0 54841-5 0 9888
2 18820 82.5411 25.7252 0015465 208.5099 151.5217 13.84759097427243
DMSP B5D2-4
1 18822U 88006A 96193.58104355 -.00000015 00000-0 11758-4 0 2965
2 18822 98.3827 24.4776 0005610 301.9960 58.0673 14.23194554438046
Glonass 34
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2 19336 82.5384 148.2188 0016886 165.7351 194.4257 13.16977569382866
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2 22787 4.1201 326.9502 0003234 108.2054 218.1174 1.00268498 9084
SPOT 3
1 22823U 93061A 96193.91217263 -.00000044 00000-0 00000+0 0 5663
2 22823 98.6987 267.2380 0001343 74.4885 285.6440 14.20043018144743
STELLA
1 22824U 93061B 96196.24105782 -.00000012 00000-0 12955-4 0 4857
2 22824 98.5794 270.6880 0006316 146.8398 213.3179 14.27105340145797
AO-27
1 22825U 93061C 96192.27383554 -.00000008 00000-0 14387-4 0 4869
2 22825 98.5774 267.4055 0008616 158.6860 201.4681 14.27698940145287
IO-26
1 22826U 93061D 96195.21164730 -.00000007 00000-0 14651-4 0 4852
2 22826 98.5801 270.4617 0008759 149.9439 210.2215 14.27808037145719
HEATHSAT
1 22827U 93061E 96196.24813218 -.00000005 00000-0 15276-4 0 5470
2 22827 98.5787 271.3835 0009314 134.0842 226.1104 14.27942723145877
ITAMSAT
1 22828U 93061F 96195.74712165 .00000009 00000-0 20938-4 0 4646
2 22828 98.5761 271.0455 0010188 133.1103 227.0933 14.28146127113900
PO-28
1 22829U 93061G 96193.73232137 .00000018 00000-0 24728-4 0 4786
2 22829 98.5782 269.1325 0010313 141.0030 219.1890 14.28127107145530
KO-25
1 22830U 93061H 96194.70531321 .00000021 00000-0 25318-4 0 4974
2 22830 98.4677 258.6281 0012154 111.8745 248.3730 14.28111753145673
GPS BIIA-23
1 22877U 93068A 96191.61958599 -.00000077 00000-0 10000-3 0 4400
2 22877 55.6712 48.2660 0039366 295.1025 64.6204 2.00575671 19848
METEOSAT 6
1 22912U 93073B 96195.54967669 -.00000096 00000-0 00000+0 0 5036
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2 22920 28.4670 326.8256 0002915 27.5514 332.5217 15.04855012143289
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1 22969U 94003A 96193.91628005 .00000051 00000-0 10000-3 0 2682
2 22969 82.5581 243.0432 0015002 172.4384 187.7025 13.16737285118300
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2 22970 82.5579 242.7172 0015916 169.0665 191.0806 13.16827976118351
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1 23027U 94016A 96193.69163421 .00000015 00000-0 10000-3 0 3796
2 23027 55.2090 348.7863 0066508 204.3006 155.4182 2.00557640 17313
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1 23043U 94021A 96193.00723985 -.00000085 00000-0 10000-4 0 3757
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Glonass 63
1 23044U 94021B 96193.82824900 -.00000086 00000-0 00000+0 0 3437
2 23044 64.6399 323.0364 0030015 201.9911 157.8762 2.13102807 17531
Glonass 64
1 23045U 94021C 96195.41328448 -.00000084 00000-0 00000+0 0 3529
2 23045 64.6243 322.9874 0010861 34.9517 325.1152 2.13102045 17567
GOES 8
1 23051U 94022A 96196.17963080 -.00000260 00000-0 10000-3 0 5509
2 23051 0.0843 97.1278 0005090 45.1287 139.6029 1.00261698 15631
MSTI 2
1 23101U 94028A 96192.59626582 .00003729 00000-0 58805-4 0 3322
2 23101 97.0821 25.8265 0009531 233.0922 126.9447 15.54133604122935
STRV-1A
1 23125U 94034B 96195.11109540 .00002811 00000-0 65489-3 0 3074
2 23125 7.0121 227.8519 7254519 83.4734 347.0667 2.32215244 16726
STRV-1B
1 23126U 94034C 96195.19848923 .00003461 00000-0 64837-3 0 2693
2 23126 7.0261 227.8492 7258241 83.4819 347.0781 2.32190379 16764
Nadezhda 4
1 23179U 94041A 96194.13331499 .00000026 00000-0 10657-4 0 2031
2 23179 82.9463 218.1057 0038064 54.4704 305.9989 13.75682360100224
Glonass 65
1 23203U 94050A 96195.08155353 .00000082 00000-0 00000+0 0 3126
2 23203 64.7721 203.2532 0006343 164.1050 195.9551 2.13102214 14959
Glonass 66
1 23204U 94050B 96194.84595240 .00000084 00000-0 00000+0 0 3327
2 23204 64.7646 203.2785 0015228 340.5552 19.4268 2.13102245 14943
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1 23205U 94050C 96195.66708694 .00000077 00000-0 00000+0 0 3083
2 23205 64.7659 203.2433 0003575 280.4891 79.5079 2.13102613 14966
DMSP B5D2-7
1 23233U 94057A 96195.78143459 .00000075 00000-0 64054-4 0 8465
2 23233 98.8265 254.1642 0013596 103.5059 256.7626 14.12719581 96585
OKEAN 1-7
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1 23317U 94066A 96196.18827965 .00000100 00000-0 11713-4 0 1673
2 23317 82.5445 34.1940 0026298 355.6852 4.4140 14.74028250 94513
ELEKTRO
1 23327U 94069A 96192.65603699 -.00000113 00000-0 00000+0 0 1746
2 23327 0.1242 159.0829 0005078 290.9546 151.0986 1.00269518 6230
RESURS 1-3
1 23342U 94074A 96194.19895717 .00000022 00000-0 11621-4 0 5214
2 23342 97.9644 250.6619 0001063 74.6876 285.4448 14.69846269 90483
Glonass 68
1 23396U 94076A 96193.67891507 -.00000055 00000-0 00000+0 0 2847
2 23396 65.0921 83.4452 0028971 190.8420 203.7758 2.13102613 12762
Glonass 69
1 23397U 94076B 96196.15614032 -.00000029 00000-0 00000+0 0 2751
2 23397 65.0851 83.3674 0012692 323.6169 36.3578 2.13102181 12815
Glonass 70
1 23398U 94076C 96194.16280946 -.00000050 00000-0 00000+0 0 2938
2 23398 65.0827 83.4134 0002887 292.0513 67.9712 2.13101916 12789
LUCH (Altair-2)
1 23426U 94082A 96194.03505903 -.00000285 00000-0 00000+0 0 3454
2 23426 1.4124 267.5999 0002528 206.0342 284.5119 1.00273423 5751
RS-15
1 23439U 94085A 96193.84421919 -.00000039 00000-0 10000-3 0 1464
2 23439 64.8192 343.2111 0160244 194.7754 164.8460 11.27527416 63567
NOAA 14
1 23455U 94089A 96195.79398475 .00000026 00000-0 38679-4 0 6724
2 23455 98.9455 141.1908 0009276 160.9680 199.1839 14.11597939 79206
Glonass 71
1 23511U 95009A 96193.18317340 -.00000085 00000-0 00000+0 0 2053
2 23511 64.6631 323.3306 0006312 206.7157 153.2469 2.13103416 10484
Glonass 72
1 23512U 95009B 96193.30225803 -.00000009 00000-0 10000-3 0 2220
2 23512 64.6652 323.3304 0004592 332.3693 27.6427 2.13101078 10496
Glonass 73
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2 23513 64.6581 323.2542 0013491 197.9323 162.0155 2.13102755 10545
GMS 5
1 23522U 95011B 96192.78261336 -.00000299 00000-0 10000-3 0 1327
2 23522 0.3945 348.4923 0001504 160.9583 201.1478 1.00262389 4684
DMSP B5D2-8
1 23533U 95015A 96195.85352431 .00000016 00000-0 32167-4 0 5881
2 23533 98.8388 197.9722 0007430 350.3980 9.7047 14.12745324 67396
OSC 1
1 23545U 95017A 96194.21821667 .00000257 00000-0 90019-4 0 1486
2 23545 69.9753 112.1060 0012978 159.5452 200.6198 14.45367242 67275
OSC 2
1 23546U 95017B 96194.25136083 .00000198 00000-0 73274-4 0 1682
2 23546 69.9776 112.1145 0012556 151.8951 208.2861 14.45312450 67289
Microlab 1
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2 23547 69.9788 109.5944 0012140 151.8151 208.3634 14.45555690 67432
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1 23549U 95018A 96195.90582610 .00005363 00000-0 11969-3 0 2794
2 23549 143.3665 31.0222 0223153 3.2440 356.9734 15.16174160 70424
GFZ-1
1 23558U 86017JE 96192.56703099 .00002015 00000-0 28279-4 0 1409
2 23558 51.6519 355.4156 0005830 322.1517 37.9065 15.62338295593661
ERS-2
1 23560U 95021A 96194.22071135 -.00000019 00000-0 90000-5 0 2531
2 23560 98.5456 267.9301 0001227 92.0431 268.0893 14.32248934 64156
Spektr
1 23579U 95024A 96195.86918056 -.00008877 00000-0 -95435-4 0 3872
2 23579 51.6502 349.7402 0010104 300.5965 59.4024 15.61480965 65606
GOES 9
1 23581U 95025A 96195.47293507 .00000073 00000-0 10000-3 0 2073
2 23581 0.3588 267.6454 0000801 302.1018 117.4712 1.00279286 4184
Helios 1A
1 23605U 95033A 96194.70907880 .00000082 00000-0 24612-4 0 2435
2 23605 98.1217 130.0505 0001661 74.7837 285.3549 14.63849635 54295
UPM SAT 1
1 23606U 95033B 96194.89071587 .00000139 00000-0 33329-4 0 1912
2 23606 98.1022 131.3687 0008750 98.0047 262.2148 14.67261891 54489
CERISE
1 23607U 95033C 96194.89268630 .00000049 00000-0 17424-4 0 1020
2 23607 98.1042 131.2323 0007312 95.1834 265.0203 14.66951383 54500
TDRS 6
1 23613U 95035B 96191.33959907 .00000087 00000-0 00000+0 0 1804
2 23613 0.7283 83.0810 0002207 108.3864 47.6769 1.00284127 3601
Glonass 74
1 23620U 95037A 96195.72465620 .00000076 00000-0 00000+0 0 1588
2 23620 64.8226 203.0895 0018475 173.8262 186.2354 2.13102816 7576
Glonass 75
1 23621U 95037B 96193.55567068 .00000094 00000-0 00000+0 0 1600
2 23621 64.8360 203.1629 0018288 184.9034 175.1221 2.13102051 7520
Glonass 76
1 23622U 95037C 96194.08314271 .00000091 00000-0 00000+0 0 1591
2 23622 64.8291 203.1452 0036797 168.5205 191.6065 2.13102556 7531
Prognoz-M2
1 23632U 95039A 96191.29100520 -.00000351 00000-0 00000+0 0 650
2 23632 70.0180 250.0730 8283667 322.3890 318.4490 0.26374400 902
SICH-1
1 23657U 95046A 96193.03495944 .00000129 00000-0 16361-4 0 920
2 23657 82.5331 178.6089 0027632 336.5491 23.4456 14.73481294 46341
RADARSAT
1 23710U 95059A 96194.52901988 -.00000018 00000-0 10000-4 0 1595
2 23710 98.5782 200.8556 0001056 72.5816 287.5505 14.29980542 35869
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1 23734U 95068A 96193.26235628 .00000095 00000-0 00000+0 0 1387
2 23734 64.8294 203.0899 0019523 318.9164 40.9860 2.13102151 4486
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1 23735U 95068B 96195.34941544 .00000080 00000-0 00000+0 0 1317
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2 23735 64.8303 203.0044 0008444 224.2259 135.7516 2.13125300 4521
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1 23736U 95068C 96194.90462883 .00000084 00000-0 00000+0 0 1137
2 23736 64.8147 203.0385 0008190 209.9606 150.0336 2.13102071 4519
XTE
1 23757U 95074A 96192.56859372 .00000451 00000-0 88843-5 0 707
2 23757 22.9899 252.6382 0012789 339.4614 20.5354 14.97666703 28974
1996010D
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2 23797 48.0390 242.0295 7071268 36.7106 355.9474 2.62358387 3297
Soyuz TM-23
1 23798U 96011A 96195.86918056 -.00008877 00000-0 -95435-4 0 1230
2 23798 51.6502 349.7402 0010104 300.5965 59.4024 15.61480965 22365
Polar
1 23802U 96013A 96194.66047275 .00000038 00000-0 00000+0 0 272
2 23802 86.1076 25.8056 6569551 285.1631 14.9772 1.36677393 1909
1996010E
1 23824U 96010E 96196.12565281 .00000944 00000-0 29360-2 0 783
2 23824 47.6579 245.1272 7266381 34.2386 356.1545 2.21699237 3217
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2 23833 54.6893 347.0290 0036078 148.4575 211.7772 2.00564233 2182
Priroda
1 23848U 96023A 96195.86917850 -.00008164 00000-0 -87258-4 0 760
2 23848 51.6502 349.7403 0010101 300.7717 59.2166 15.61481984 12698
MSX
1 23851U 96024A 96195.52062811 -.00000047 00000-0 00000+0 0 492
2 23851 99.3768 175.3202 0006967 83.1158 277.0639 13.97682018 11176
Progress M-31
1 23860U 96028A 96195.86917850 -.00008164 00000-0 -87258-4 0 680
2 23860 51.6502 349.7403 0010101 300.7717 59.2166 15.61481984 10869
MSTI 3
1 23868U 96031A 96195.06258963 .00000597 00000-0 13879-4 0 371
2 23868 97.1219 25.0569 0013790 82.3707 277.9102 15.46190471 8815
Gorizont 32
1 23880U 96034A 96194.37747179 .00000085 00000-0 00000+0 0 349
2 23880 1.3866 283.7046 0015261 329.3428 226.3000 1.00279378 485
1996034E
1 23886U 96034E 96189.25599693 .00001894 00000-0 55090-3 0 131
2 23886 47.2236 271.6590 7326138 11.2577 359.0828 2.22719251 967
1996034F
1 23887U 96034F 96194.28291783 .00000417 00000-0 61452-3 0 128
2 23887 47.2623 270.5358 7307560 12.3503 358.8360 2.22270943 1078
1983063A
1 23906U 83063E 96193.50544300 .00000554 00000-0 19879-3 0 81
2 23906 82.0235 181.8961 0045133 107.9550 252.6562 14.31868659680013
INTELSAT 709
1 23915U 96035A 96196.05722267 -.00000298 00000-0 00000+0 0 276
2 23915 0.0366 284.7303 0002070 287.4404 43.5318 1.00268854 314
1996035B
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1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
TOMS-EP
1 23940U 96037A 96193.76417451 -.00010559 00000-0 00000+0 0 144
2 23940 97.3702 98.9181 0013598 245.9888 114.0535 15.21063398 393
1996037B
1 23941U 96037B 96195.75458948 .00002651 00000-0 81782-4 0 124
2 23941 97.3807 100.7195 0425983 126.0735 238.0718 14.76418769 1691
APSTAR 1A
1 23943U 96039A 96195.97615284 -.00000330 00000-0 00000+0 0 223
2 23943 0.0681 242.6568 0004030 221.6003 313.3486 1.00269705 99
1996039B
1 23944U 96039B 96192.57484316 .00005750 00000-0 13794-2 0 33
2 23944 27.0510 78.2150 7606233 181.9772 170.4737 1.89548382 146
ARABSAT 2A
1 23948U 96040A 96195.55911560 -.00000117 00000-0 00000+0 0 155
2 23948 0.1715 87.8152 0553889 173.2250 225.8868 1.08503299 74
TURKSAT 1C
1 23949U 96040B 96196.27442786 -.00000149 00000-0 10000-4 0 145
2 23949 0.1899 80.9625 0692825 172.2161 166.0258 1.10859250 63
1996040C
1 23950U 96040C 96193.75210374 -.00000399 00000-0 00000+0 0 10
2 23950 6.9469 81.5588 7292111 179.4378 49.9644 2.29092215 33
1996040D
1 23951U 96040D 96194.34482006 .00056486 00000-0 66844-2 0 29
2 23951 6.9595 81.2596 7287664 180.0099 179.0648 2.29235954 55
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1392. ARLK051 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk051.1996@arrl.org>
Source record: 21871
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK051
ARLK051 Keplerian data

ZCZC SK51
QST de W1AW
Keplerian Bulletin 51 ARLK051
From ARRL Headquarters
Newington, CT July 16, 1996
To all radio amateurs

SB KEP ARL ARLK051
ARLK051 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96198.10911731 .00001965 00000-0 28574-4 0 06000
2 16609 51.6521 338.4548 0010162 308.0232 51.9844 15.61507729594492
HST
1 20580U 90037B 96198.57085657 .00000301 00000-0 14567-4 0 8248
2 20580 28.4686 29.6723 0006166 120.3758 239.7437 14.91074291142971
AO-10
1 14129U 83058B 96198.09623108 .00000114 00000-0 10000-3 0 04381
2 14129 26.0811 199.4984 6019012 32.2465 353.4002 2.05881760070463
RS-10/11
1 18129U 87054A 96197.84930685 .00000056 00000-0 44422-4 0 02590
2 18129 82.9258 127.3571 0013273 73.3871 286.8745 13.72367615454103
UO-11
1 14781U 84021B 96198.00439759 .00000058 00000-0 17610-4 0 8986
2 14781 97.8017 187.4491 0012573 3.9223 356.2079 14.69465404661880
RS-12/13
1 21089U 91007A 96198.02196830 .00000006 00000-0 -10013-4 0 09052
2 21089 82.9224 167.9581 0028541 149.6631 210.6184 13.74071528272995
AO-13
1 19216U 88051B 96197.77013121 .00004993 00000-0 12990-2 0 02390
2 19216 57.1965 104.4961 7434425 45.0608 355.0727 2.10044916030448
UO-14
1 20437U 90005B 96197.87909959 -.00000015 00000-0 11052-4 0 02003
2 20437 98.5438 280.3582 0011831 115.0637 245.1761 14.29925608338152
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RS-15
1 23439U 94085A 96198.45629113 -.00000039 00000-0 10000-3 0 1473
2 23439 64.8194 335.7517 0160623 193.9413 165.7048 11.27527597 64089
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1 20439U 90005D 96197.76583955 -.00000015 00000-0 10952-4 0 00069
2 20439 98.5580 282.5180 0011917 116.3668 243.8737 14.29979461338157
DO-17
1 20440U 90005E 96197.78524771 -.00000026 00000-0 67272-5 0 00097
2 20440 98.5607 283.1910 0012026 115.1544 245.0886 14.30121310338185
WO-18
1 20441U 90005F 96197.77570871 -.00000025 00000-0 70551-5 0 00036
2 20441 98.5600 283.1161 0012592 116.0179 244.2301 14.30090606338185
LO-19
1 20442U 90005G 96197.76934620 -.00000005 00000-0 14980-4 0 00101
2 20442 98.5624 283.6176 0012820 114.9456 245.3057 14.30199940338206
FO-20
1 20480U 90013C 96198.07690949 -.00000023 00000-0 13473-4 0 09004
2 20480 99.0251 217.4397 0541181 59.0632 306.2514 12.83233723301593
AO-21
1 21087U 91006A 96198.19826360 .00000094 00000-0 82657-4 0 7221
2 21087 82.9382 300.2267 0035823 122.9928 237.4573 13.74570195273999
UO-22
1 21575U 91050B 96198.15501529 -.00000010 00000-0 10836-4 0 07202
2 21575 98.3492 263.6777 0007305 172.9795 187.1488 14.37029534262229
KO-23
1 22077U 92052B 96198.17478603 -.00000037 00000-0 10000-3 0 5918
2 22077 66.0762 128.7654 0013727 289.4657 70.4877 12.86296836184536
KO-25
1 22828U 93061F 96198.12918983 -.00000021 00000-0 87931-5 0 04762
2 22828 98.5763 273.3862 0010244 125.8120 234.3979 14.28146022114242
IO-26
1 22826U 93061D 96198.08482312 -.00000023 00000-0 82566-5 0 04959
2 22826 98.5765 273.2825 0009142 142.1766 218.0066 14.27807852146125
AO-27
1 22825U 93061C 96198.09070391 -.00000022 00000-0 88037-5 0 04957
2 22825 98.5783 273.1171 0008597 141.1150 219.0651 14.27699258146115
PO-28
1 22829U 93061G 96198.21627537 -.00000025 00000-0 71636-5 0 4797
2 22829 98.5782 273.5370 0010463 128.0401 232.1720 14.28127036146171

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
July 20, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1393. Check this out!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: sean@Alpha.remcan.CA
Message-ID: <31EBB0BC.7695@Alpha.remcan.ca>
Source record: 21960

```
Check this out!
Http://personal.solutions.net/sean/
```

1394. Re: Satellite ATV?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4sgcrh$fh0@tilde.csc.ti.com>
Source record: 21961
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc

Brad, there is no fast scan amateur satellite activity that I know of. As to using an amateur satellite for broadcasting... broadcasting is not one of the amateur privileges. We are allowed to communicate, control, relay, etc., but not to broadcast. ARRL does it for training purposes although technically it is illegal.

Ken K5MBV mbv@flash.net

1395. Re: Satellite ATV?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: pwinter@best.com
Message-ID: <4sgo2j$227@shellx.best.com>
Source record: 21962
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.policy

In article <4sgcrh$fh0@tilde.csc.ti.com>, Ken Durham <mbv@ti.com> wrote:
>As
>to using an amateur satellite for broadcasting... broadcasting is not one
>of the amateur privileges. We are allowed to communicate, control, relay,
>etc., but not to broadcast. ARRL does it for training purposes although
>technically it is illegal.

No 'tisn't.

From 97.111 of the FCC rules:

(b) In addition to one-way transmissions specifically authorized
elsewhere in this Part, an amateur station may transmit the following
types of one-way communications:
...
(5) Transmissions necessary to assisting persons learning, or
improving proficiency in, the international Morse code; and
(6) Transmissions necessary to disseminate information bulletins.

That pretty well covers what W1AW does.

Part 97 even allows someone to get paid for broadcasting the
aforementioned types of items, under certain conditions.

Followups to rec.radio.amateur.policy.

Patty

========================= patty@wintertime.com ==========================
"Lois--salmon swimming *upstream* haven't had the mating
troubles *we've* had." --Clark Kent on "Lois & Clark"
=============== N6BIS ================= Sunnyvale, Calif. ===============

1396. ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: "James S. Kaplan" <kg7fu@combined.com>
Message-ID: <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>
Source record: 21963
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

ARRL lawyer to sue member

The following is a copy of a message I received today from
ARRL General Counsel Christopher D. Imlay N3AKD:

To: James S. Kaplan, KG7FU
Copies: Mary Lou Brown, NM7N
Terry Baun
John Poray
Date: July 16, 1996
Re: Your article, SBE Chapter 124 Newsletter, July, 1996
****

Jim, I have just finished reading your article in the July,
1996 Water Cooled Newsletter, page 6. In it, you argue that two of
my clients, the American Radio Relay League, Inc. and the Society
of Broadcast Engineers, Inc. should cooperate in certain government
relations projects, specifically spectrum protection. You note that
I serve as the General Counsel for both organizations. You then
jump from that argument to the following, which I quote:

If Mr. Imlay can't resolve HIS OWN conflicts of interest,
perhaps both ARRL and SBE should be seeking more
effective counsel. No offense Chris, but we have work to
do. We should not only be sending a message to the FCC
and Congress, but to other radio industries.

(emphasis in original)

It is not useful for me to educate you on the subject of your
article to correct the errors in it, and I do not intend to do so.
What I do intend, however, is for you to print a retraction, in
unambiguous terms, in a form acceptable to me, and to furnish to
me, in writing, an assurance that such will be printed in the next
Chapter Newsletter for Chapter 124. Failing that, I am going to sue
you in the District of Columbia for libel.

I have no intention of allowing you to falsely allege that I
have a conflict of interest in representing two of my best clients,
especially in an SBE publication. You are not entitled to damage my
reputation as a lawyer, which you have done in your article, or to
infer (without any basis at all) that I have violated the canons of
ethics governing attorneys, by which I govern my actions.

I will await your response.

Chris Imlay, N3AKD

And here is my reply:

Dear Mr. Imlay:

Thank you for reading my column in the SBE Chapter 124 Newsletter "Water Cooled".

I will not be giving you a retraction for any of my statements published in the July 1996 issue as you have requested. My statements are my personal opinions and views. I do apologize if you feel you have been hurt or damaged by my statements. My intent is to spur thought and action, not to personally attack. If your actions require others to think or act, don't you think they have the right to be informed? I believe my statements to be true and have been given no reason to retract them. My statements, by the way, are my own and don't necessarily reflect the views or opinions of Chapter 124, it's officers or members.

I am a member in good standing of both groups and do many hours of unpaid work for the benefit of both groups and their members. I take personal offense at the threat of lawsuit by their counsel. It is unprofessional and you are certainly coming close to conflict with your fiduciary duty to both groups by proposing to sue a member. Perhaps it is you who owe me, and the Society of Broadcast Engineers and the American Radio Relay League an explanation for your actions and your lack of action in certain critical spectrum protection matters.

After much discussion with SBE and ARRL BOD persons and members I have decided that the best way to deal with this matter is to offer you the chance to refute my statements or rebut, in your own words, in my column for publication in the next issue. In other words, please give yourself the chance to "educate me on the subject of my article to correct the errors in it".

I know you'll also agree that, if you choose to pursue litigation, the proper forum for legal action would be an Oregon court as the column was written and published here.

Sincerely,

James S. Kaplan KG7FU
Member SBE
Member ARRL
kg7fu@combined.com
http://users.aol.com/kg7fu/home.htm
KG7FU@N7DXT.#EUGEN.OR.USA.NOAM

1397. FS : Radio Equipment

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: Raymond Hoopes Jr <sysop@southerntier.com>
Message-ID: <31EC25C4.7510@southerntier.com>
Source record: 21964

Transciever 736R Yaesu with Microphone / New
Antennas 2M and 70CM yagi
SWR Meter
Dummy Load
Approx. 60 Feet 6013 coax
PK 88 packet Modem/New with 24v power supply

For Sale for $1800 or most offer.
E-Mail : sysop@southerntier.com
Phone : 716-973-3431
Raymond Hoopes Sr.

1398. Re: FO-20 Antenna System

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: grem@pixie.co.za
Message-ID: <4sg2uk$k8e@hawk.pix.za>
Source record: 21965

ve6bpr@incentre.NET (Alyn Backe) wrote:

>Hello Everyone.
>I am new to this list, and this is my first post.
>I am interested in trying out FO-20 mode J.
>Can anyone recommend a good efficient antenna system, without
>the need of elevation control?
>Thanks, AL, VE6BPR...sk

>ve6bpr@incentre.net

Hi there,

I use a "J-Pole" which I copied from the ARRL handbook, this antenna exceeds their specs and amazes me daily. I did not need to set up the VSWR after I followed their dimensions explicitly. A pre-amp at the mast is highly reccomended. You will need c0-ax switch if you use a pre-amp for recieve.

Good luck and shout if you want the plans.

Graeme (South Africa)

1399. Need 10mtr Dwnlink Sched. Pls

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: afpgreg@gatekeeper.ddp.state.me.us
Message-ID: <4sg8vc$mce@web.ddp.state.me.us>
Source record: 21966

Ahoy,

I'm not into satellite communications, but I'd like to do a demonstration for my 13-year old nephew who's kinda interested in Amateur Radio.

My QTH is FN54 (MidCoast Maine) and I'd like to know when 10 meters will come alive with downlink activity, say within the next two weeks. I will be grateful to receive a list of times, preferably eveings when I'm home from work.

Pls email me directly as I do not read this list. Mny tnx.

email: afpgreg@state.me.us

7 3 de KB1AOC, Paul

1400. Eggbeater and preamp 4 sale

Newsgroup: rec.radio.amateur.space
Date: 1996-07-16 00:00:00 UTC
From: George.Henry@f668.n115.z1.fidonet.org
Message-ID: <79d_9607191037@station1.planetc.com>
Source record: 21967

Posting for friend....

M2 432 Eggbeater and Ampire mast-mount preamp. Preamp has 20 dB gain,
RF-switched to 100 watts. N-connectors.

$180.00 shipped, firm.

1401. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: jjmartin@shore.net
Message-ID: <4sil7k$2f7@shore.shore.net>
Source record: 21872
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

"James S. Kaplan" <kg7fu@combined.com> wrote:

>ARRL lawyer to sue member
etc., etc.

Jim, could you spam a few more newsgroups please? There were several
that I subscribe to where I didn't see your post.

==========
cheers! Jim Martin, wk1v
Lowell, Mass, U.S.A.
http://www.shore.net/~jjmartin/jjm.htm

1402. Ham Radio.FAQ >>> WWW

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: john@wd1v.mv.com
Message-ID: <john-1707960833130001@wd1v.mv.com>
Source record: 21873

Announcing NEW Ham Radio.FAQ

This file started as a regular USENET posting called "rec.radio.amateur
.misc Frequently Asked Questions".

The evolving file was distributed far and wide thanks to passionate
contributors. The file was abandoned in 1994 and is being
resurrected now
on the WWW for currency and convenience.

All help is welcomed!

Please scan the file. Know of links that should be added? Info that
should be corrected? Let me know!

Please provide a copy of the Ham Radio.FAQ to any new or
soon-to-be Hams
that you know or share with them the URL to this site:

http://www.mv.com/ipusers/wd1v

73!

John D. Seney |_|_|_|_| john@wd1v.mv.com
144 Pepperidge Dr |_| |_| www.mv.com/ipusers/wd1v
Manchester, NH 03103-6150 |_|_ _|_| wd1v@wb1dsw.nh.usa.noam
V 603.533.3472 F 627.1623 | | | | | Paging 5956779@skymail.com

www.lecroy.com

1403. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bb73fb$255a96e0$068067ce@miseno.netwide.net>
Source record: 21874

The best is surely out there..! It's LogSat for Windows. Check out the home page at http://www.logsat.com You can download a demo or order the software online.

You can track all the satellites you want in a single windows, and furthermore you can open as many windows as you want at the same time. It uses the KCT to interface with the rotor. There's a kazillion of other features, but the best description can be seen on the home page. There you'll also find fresh keps, separated by satellite type (amateur, weather, visible etc.), and moon keps for EME.

Ciao de
Roberto ik8sqi

Paul S. George <psgeorge@infinet.com> wrote in article
<psgeorge-1607961616500001@cmh-p141.infinet.com>...
> I have a question... Is there a consensus as to what is the best
(feature,
> price, etc.) satellite tracking program available (PC or Mac)? I've
been
> using WinOrbit (shareware) and it does a reasonable job, but it does
lack
> a few features such as tracking multiple satellites in the same window
and
> the ability to interface with an antenna Az/El controller.
>
> If anyone out there is using one or has an opinion as to which one is
> best, I would certainly be interested in your opinion.
>
> Thanks!
>
> --
> Paul S. George n8xqv (psgeorge@infinet.com)
>

1404. Amateur SETI and/or Radio Astronomy?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: marty@trucom.com
Message-ID: <4sjbc5$lom@thepit.trucom.com>
Source record: 21875

Hello, Folks:

Anyone out there doing Amateur Radio Astronomy and/or SETI work?

I suggested this here about 1-2 years ago and was met with a lot of reasons why it won't work. The truth is, there is an entire group of several hundred folks doing it on a world wide basis. For more info, see:

http://wbs.net/sara.html

I personally have not done anything with this as of yet, but it seems to be a natural for Hams!

Any comments or thoughts?

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

****
* Could your business mail 40,000,000 catalogs? *
* http://www.adgrafix.com/info/calbertjr *
****

1405. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: jlindqui@qualcomm.com
Message-ID: <jlindqui.837622283@strange>
Source record: 21876
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

[Followups pureed]

>ARRL lawyer to sue member

>The following is a copy of a message I received today from
>ARRL General Counsel Christopher D. Imlay N3AKD:

>To: James S. Kaplan, KG7FU
>Copies: Mary Lou Brown, NM7N
> Terry Baun
> John Poray
>Date: July 16, 1996
>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
>**

[snip]

>It is not useful for me to educate you on the subject of your
>article to correct the errors in it, and I do not intend to do so.
>What I do intend, however, is for you to print a retraction, in
>unambiguous terms, in a form acceptable to me, and to furnish to
>me, in writing, an assurance that such will be printed in the next
>Chapter Newsletter for Chapter 124. Failing that, I am going to sue
>you in the District of Columbia for libel.

Wait... he wants you to apologize and retract what you've said,
but he won't explain the reasons why such a retraction is
neccessary. He just throws out the threat of a libel suit.

Cute. And people wonder why the legal profession has such
a bad reputation...

JL

--
Jason A. Lindquist KB9LCL <*> "Unfortunately, no one is listening
jlindqui@qualcomm.com (business) to keystrokes at the moment. You
linky@uiuc.edu (personal) might as well stop typing" -- S. Dorner

--
Jason A. Lindquist KB9LCL <*> "Unfortunately, no one is listening
jlindqui@qualcomm.com (business) to keystrokes at the moment. You
linky@uiuc.edu (personal) might as well stop typing" -- S. Dorner

1406. Re: Amateur SETI and/or Radio Astronomy?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: timh@xetron.com
Message-ID: <DupCr7.9xH@xetron.com>
Source record: 21877

http://www.seti-inst.edu/other-seti.html

In article <4sjbc5$lom@thepit.trucom.com>, marty@trucom.com says...
>
>Hello, Folks:
>
>Anyone out there doing Amateur Radio Astronomy and/or SETI work?
>
>I suggested this here about 1-2 years ago and was met with a lot of
>reasons why it won't work. The truth is, there is an entire group of
>several hundred folks doing it on a world wide basis. For more info,
>see:
>
> http://wbs.net/sara.html
>
>I personally have not done anything with this as of yet, but it seems
>to be a natural for Hams!
>
>Any comments or thoughts?
>
>Take Care & 73
>
>
>
>Marty Albert - marty@trucom.com
>Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM
>
>**
>* Could your business mail 40,000,000 catalogs? *
>* http://www.adgrafix.com/info/calbertjr *
>**
>

1407. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: Sean sharkey <Sean@g0oanint.demon.co.uk>
Message-ID: <960717103128000058@g0oanint.demon.co.uk>
Source record: 21878

In article <4shfo0$1p9@news.mhv.net>, trandall@mhv.net writes:

> I have a question... Is there a consensus as to what is the best >
> satellite tracking program available (PC or Mac)?

For the Mac I would suggest OrbiTrack. It's Shareware and available
from all good FTP sites. If you have any trouble finding it let me
know.

Regards,

Sean.

1408. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4shfo0$1p9@news.mhv.net>
Source record: 21879

In article <psgeorge-1607961616500001@cmh-p141.infinet.com>, psgeorge@infinet.com (Paul S. George) wrote:
>I have a question... Is there a consensus as to what is the best (feature,
>price, etc.) satellite tracking program available (PC or Mac)? I've been
>using WinOrbit (shareware) and it does a reasonable job, but it does lack
>a few features such as tracking multiple satellites in the same window and
>the ability to interface with an antenna Az/El controller.
>
>If anyone out there is using one or has an opinion as to which one is
>best, I would certainly be interested in your opinion.

I'll recommend STSORBIT PLUS. Been using it for years. Tracks up to 32 sats
at a time. Another one that seems to be a favorite is tracksat.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1409. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: jimo@vt.edu
Message-ID: <4sj3id$sce@solaris.cc.vt.edu>
Source record: 21880
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Mr. Martin, why do you consider Jim's article as SPAM?

Thank you very much, Jim Overfelt WD4JYZ

RRL lawyer to sue member
etc., etc.

Jim, could you spam a few more newsgroups please? There were several
that I subscribe to where I didn't see your post.

==========
cheers! Jim Martin, wk1v
Lowell, Mass, U.S.A.
http://www.shore.net/~jjmartin/jjm.htm

1410. WWW Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: asperges@innotts.co.uk
Message-ID: <31ed3e9d.13924758@news.innotts.co.uk>
Source record: 21881

~~~~~~

AMATEUR (HAM) RADIO PAGES IN CENTRAL UK

Revised for Jul/Aug, "Netscaped" and now even Sound!

http://www.innotts.co.uk/~asperges/

14,000 visitors to date. If you're not one of them,
Please come and see for yourself.

Thanks to the many loyal supporters to date.

73 de Jeremy G4NJH Jul/Aug 96

~~~~~~

1411. Mir Operations guide>>http://www.sarrio.com

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: wb6siv@cyberg8t.com
Message-ID: <wb6siv-1707961927030001@host55.cyberg8t.com>
Source record: 21882

For those new to Mir operations, I have republished an article titled "Mir Refresher Course" at http://www.sarrio.com. The was originally published by SpaceNews, originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited free distribution.
73's Ray
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

1412. Hamfest

Newsgroup: rec.radio.amateur.space
Date: 1996-07-17 00:00:00 UTC
From: Tim <towers@futureone.com>
Message-ID: <01bb7445.3c8f2480$c5b667ce@observer>
Source record: 21883
Cross-posted to:
rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.swap

```
Hamfest, Fort Tuthill In Flagstaff, Arizona
July 19, 20, 21, 1996
Arizona's Largest Hamfest

For More Information: http://www.geocities.com/RainForest/2425/
```

1413. Analog Satellite Freq's

Newsgroup: rec.radio.amateur.space
Date: 1996-07-18 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <7127cc$41624.175@GRAYLADY>
Source record: 21884

```
Current Amateur Satellite Frequencies

Analog Satellites

2 3
AO-10 Beacon (MHz) 145.810 and 145.987
Uplink (MHz) 435.030 - 435.180 LSB/CW
1
Downlink (MHz) 145.975 - 145.825 USB/CW
Type Mode B
2 4
AO-13 Beacon (MHz) 145.812 and 145.985
Uplink (MHz) 435.423 - 435.573 LSB/CW
1
Downlink (MHz) 145.975 - 145.825 USB/CW
Type Mode B
4
AO-13 Beacon (MHz) 2400.661
Uplink (MHz) 435.603 - 435.639 LSB/CW
1
Downlink (MHz) 2400.711 - 2400.749 USB/CW
Type Mode S

AO-27 Uplink (MHz) 145.850 FM
1
Downlink (MHz) 436.800 FM
Type Part - Time Repeater
5
FO-20 Beacon (MHz) 435.795
Uplink (MHz) 145.900 - 146.000 SSB/CW
1
Downlink (MHz) 435.800 - 435.900 SSB/CW
Type Mode JA
10
JAS-2 Beacon (MHz) 435.795
Uplink (MHz) 145.900 - 146.000 SSB/CW
1
Downlink (MHz) 435.800 - 435.900 SSB/CW
Type Mode JA
6
RS-10 Beacon (MHz) 29.357
Uplink (MHz) 145.865 - 145.905 USB/CW
1
Downlink (MHz) 29.360 - 29.400
Type Mode A
```

7
RS-12 Beacon (MHz) 29.408
Uplink (MHz) 21.210 - 21.250 USB/CW
1
Downlink (MHz) 29.410-29.450/145.910-145.950
Type Mode KT

RS-15 Beacon (MHz) 29.352
Uplink (MHz) 145.858 - 145.898 USB/CW
1
Downlink (MHz) 29.354 - 29.394
Type Mode A

Notes:

1) Frequenices are shown without Doppler compensation. At start of typical LEO pass,the original signal will be several kHz higher than shown.Refer to specfic satellite operating instructions for complete details.
2) For AO-10 and AO-13 Mode B, transmit in LSB, receive in USB. Also in Mode B, when the transmitted frequency is increased the received frequency will decease (inverting transponder). AO-10 is no longer controllable but the transponder works when the satellite is in sunlight.
3) AO-10 beacon is an unmodulated carrier. DO not transmit to the satellite if the beacon is FMing.
4) AO-13 beacon sends CW at the beginnig of the hour, RTTY at 67 wpm at 15 and 45 minutes past the hour, and 400 bps rest of the time.
5) Presently, FO-20 digital JD mode is not operational.
6) RS-10 Robot via 145.820 MHz uplink and 29.403 downlink.
7) RS-12 Robot via 21.129 MHz uplink and 29.454 MHz downlink
10) JAS-2 Launch scheduled for August 17, 1996. For additional details, refer to JAS-2 article in the Sept/Oct 1995 issue of the AMSAT Journal.

Info from the July/August AMSAT Journal and retyped by N1HID.....

1414. Digital Satellite Freq's

Newsgroup: rec.radio.amateur.space
Date: 1996-07-18 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <7127cc$4181.196@GRAYLADY>
Source record: 21885

```
Current Amateur Satellite Frequencies

8
Digital Satellites

1
UO-11 Downlink (MHz) 145.825
Type 1200 Baud PSK

AO-16 Name or Callsign PACSAT
Uplink (MHz) 145.900,920,960 FM
1
Downlink (MHz) 437.0513 SSB
Type 1200 Baud PSK

DO-17 Name or Callsign DOVE
1
Downlink (MHz) 145.825 FM
Type Mode 1200 Baud AFSK
9
WO-18 Name or Callsign WEBERSAT
Downlink (MHz) 437.104 SSB
Type 1200 Baud PSK AX.25

LO-19 Name or Callsign LUSAT
Uplink (MHz) 145.840,860,880,900 FM
Downlink (MHz) 437.1528 SSB
Type 1200 Baud PSK AX.25

UO-22 Name or Callsign UOSAT5
Uplink (MHz) 145.900, 975 FM
Downlink (MHz) 435.120 FM
Type 9600 Baud FSK

KO-23 Name or Callsign HL01
Uplink (MHz) 145.850, 900 FM
1
Downlink (MHz) 435.175 FM
Type 9600 Baud FSK

KO-25 Name or Callsign HL02
Uplink (MHz) 145.870 FM
1
Downlink (MHz) 436.500 FM
Type 9600 Baud FSK
```

IO-26 Name or Callsign ITMSAT
Uplink (MHz) 145.875, 900, 925, 950 FM
1
Downlink (MHz) 435.822 SSB
Type 1200 Baud PSK

POSAT Name or Callsign POSAT1
Uplink (MHz) 145.975 FM
1
Downlink (MHz) 435.277 FM
Type 9600 Baud FSK
10
JAS-2 Name or Callsign 8J1JCS
Uplink (MHz) 145.850, 870, 890, 910 FM
1
Downlink (MHz) 435.910 FM/SSB
Type 1200 Baud BPSK and 9600 Baud FSK

Notes:

1) Frequencies are shown without Doppler compensation. At start of pass, the original signal will be several kHz higher than shown. Refer to specific satellite operating instructions for complete details.
8) Digital satellites use program suite containing PB/PG/PFHADD/PHS or WiSP.
9) WO-18 transmit experimental and image data and can be captured in KISS mode via PB or TLMDC.
10) JAS-2 Launch scheduled for August 17, 1996. For additional details, refer to JAS-2 article in the Sept/Oct 1995 issue of the AMSAT Journal.

Info from the July/August AMSAT Journal and retyped by N1HID.....

1415. MIR and SAREX Freq's

Newsgroup: rec.radio.amateur.space
Date: 1996-07-18 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <7127cc$419e.136@GRAYLADY>
Source record: 21886

```
Current Amateur Satellite Frequencies

MIR and SAREX

MIR Name or Callsign R0MIR
Uplink (MHz) 145.550 FM
1
Downlink (MHz) 145.550 FM
Type Simplex Voice or Packet

11
MIR Name or Callsign R0MIR
Uplink (MHz) 435.750 FM
1
Downlink (MHz) 437.950 FM
Type Mode Repeater

11
MIR Name or Callsign R0MIR
Uplink (MHz) 435.725 FM
1
Downlink (MHz) 437.925
Type Voice

11
MIR Name or Callsign R0MIR
1
Downlink (MHz) 435.775 - 436.775@25kHz spacing
Type 9600 Baud Packet

Shuttle Name or Callsign W5RRR
12
Uplink (MHz) 144.490 FM
1
Downlink (MHz) 145.550 FM
Type Packet

Shuttle Name or Callsign Various
12
Uplink (MHz) 144.910, .93, .95, .97, .99 FM
1
Downlink (MHz) 145.550 FM
Type Non-Mir Docking Missions

Shuttle Name or Callsign Various
12
Uplink (MHz) 144.450, .470 FM
```

1
Downlink (MHz) 145.840 FM
Type Mir Docking Missions

Notes:

1) Frequencies are shown without Doppler compensation.
At start of typical pass, the original signal will
be several kHz higher than shown. Refer to specific
satellite operating instructions for complete
details.
11) Tentative frequencies for SAFEXII that are currently
being tested. Refer to AMSAT News Service bulletins
for additional infornmation.
12) These are typical SAREX uplink frequencies. Refer to
AMSAT News bulletins for exact SAREX frequencies.

Info from the July/August AMSAT Journal and retyped by
N1HID.....

1416. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: jangus@netcom.com
Message-ID: <jangusDusKA3.Iow@netcom.com>
Source record: 21887
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

"James S. Kaplan" <kg7fu@combined.com> writes:

>ARRL lawyer to sue member

>The following is a copy of a message I received today from
>ARRL General Counsel Christopher D. Imlay N3AKD:

It never fails to amaze me how the granting of an operating license
by the FCC is taken by some of our fellow hams.

Remember "Hatlo's, They'll Do It Every Time?"

Towit, the granting of a license absolves the grantee from any personal
responsibility for their actions.

Apparently a keyboard and access to usenet news works the same way these
days.

Jeff
Who shouldn't be amazed by anything these days....

--
Amateur: WA6FWI@WA6FWI.#SOCA.CA.USA.NA | "It is difficult to imagine our
Internet: jangus@skyld.grendel.com | universe run by a single omni-
US Mail: PO Box 4425 Carson, CA 90749 | potent god. I see it more as a
Phone: 1 (310) 887-8545 | badly run corporation."

1417. Epoch format - year 2000

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <31EFE996.2F97@uiuc.edu>
Source record: 21888

Does anyone know what plans (if any) exist for handling the epoch field
in keplerian elements sets after 1999 ?

For example, the epoch is usually given as something like:
96190.12345 for day 190 of 1996

Will this become
00190.12345 for day 190 of 2000
100190.12345
or something completely different ?

73!
Carl
K8CG

1418. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: rrehr@epix.net
Message-ID: <4so3ip$6ah@star.epix.net>
Source record: 21889

In article <psgeorge-1607961616500001@cmh-p141.infinet.com>,
psgeorge@infinet.com says...
>
>I have a question... Is there a consensus as to what is the best (feature,
>price, etc.) satellite tracking program available (PC or Mac)? I've been
>using WinOrbit (shareware) and it does a reasonable job, but it does lack
>a few features such as tracking multiple satellites in the same window and
>the ability to interface with an antenna Az/El controller.
>
>If anyone out there is using one or has an opinion as to which one is
>best, I would certainly be interested in your opinion.
>
>Thanks!
>
>--
>Paul S. George n8xqv (psgeorge@infinet.com)
I hav tried WinSat, WinOrbit, WISP, and LogSat Professional for Windows and
find the last the best. IMHO, its so far ahead of the rest in display,
features (multiple satellites on same map, audio warning of satellite
acquisition, etc) that there's absolutely NO CONTEST. I would recommend it
most highly. Check out their web site at www.logsat.com!!

-Roger WA3JYM

1419. NORAD Two-Line Orbital Element Sets (TLE840)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4sovd4$ghn@blackbird.afit.af.mil>
Source record: 21890

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #840 -
Alouette 1
1 00424U 62049A 96199.86966546 .00000039 00000-0 35834-4 0 2144
2 00424 80.4572 253.4653 0022900 318.3889 41.5513 13.67871985686531
ATS 1
1 02608U 66110A 96194.78606088 -.00000310 00000-0 10000-3 0 9733
2 02608 14.6260 352.5799 0009800 87.5178 272.5718 1.00325435 25125
ATS 3
1 03029U 67111A 96200.16074303 -.00000116 00000-0 10000-3 0 5170
2 03029 14.9142 359.4533 0009084 266.2788 343.0314 1.00273221105078
Starlette
1 07646U 75010A 96198.10747376 -.00000193 00000-0 -39795-4 0 9840
2 07646 49.8282 34.5918 0206210 326.0297 32.7550 13.82190248 82963
LAGEOS
1 08820U 76039A 96200.07903479 .00000019 00000-0 10000-3 0 2086
2 08820 109.8501 36.5931 0043717 122.4873 238.0099 6.38664676215809
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96196.61617019 .00000047 00000-0 10000-3 0 6954
2 10061 12.4015 36.7794 0010056 123.6093 179.0309 1.00271117 14717
IUE
1 10637U 78012A 96197.12209527 -.00000302 00000-0 10000-3 0 2628
2 10637 35.7632 82.6675 1370541 57.6810 152.3750 1.00231798 20216
GPS BI-01
1 10684U 78020A 96197.56823016 -.00000045 00000-0 10000-3 0 4594
2 10684 64.9894 23.0576 0058617 161.7636 198.4887 1.98069413119974

```
GPS BI-02
1 10893U 78047A 96193.10986887 -.00000002 00000-0 10000-3 0 2576
2 10893 63.1525 260.2372 0220445 12.1179 348.4854 2.01628491133292
GOES 3
1 10953U 78062A 96200.18178346 -.00000135 00000-0 10000-3 0 6807
2 10953 11.3989 39.6440 0001454 62.4767 158.4983 1.00270945 19368
SeaSat 1
1 10967U 78064A 96199.55254664 -.00000049 00000-0 28274-4 0 5019
2 10967 107.9918 237.5858 0001695 270.9794 89.1153 14.38113391945815
GPS BI-03
1 11054U 78093A 96192.22934847 -.00000046 00000-0 10000-3 0 4152
2 11054 62.8815 259.4926 0046988 210.4881 149.2731 1.93503395131155
Nimbus 7
1 11080U 78098A 96200.15432045 -.00000089 00000-0 -42650-4 0 6013
2 11080 98.9405 60.8863 0008189 244.1141 115.9169 13.83691629895452
GPS BI-04
1 11141U 78112A 96200.43778873 -.00000041 00000-0 10000-3 0 543
2 11141 65.0104 25.4455 0050336 28.8859 331.4247 1.92894658 18485
GPS BI-05
1 11690U 80011A 96199.76076125 -.00000042 00000-0 10000-3 0 414
2 11690 65.3302 24.4379 0144257 189.9559 169.8062 2.00573304134819
GPS BI-06
1 11783U 80032A 96196.38485306 .00000038 00000-0 10000-3 0 1550
2 11783 62.2949 252.7464 0227106 29.9388 331.4449 2.03456283119384
GOES 5
1 12472U 81049A 96198.69012366 .00000063 00000-0 10000-3 0 9391
2 12472 8.2323 49.8503 0006907 45.6264 314.4803 1.00229464 13391
Cosmos 1383
1 13301U 82066A 96201.21350279 .00000014 00000-0 -17145-5 0 5127
2 13301 82.9323 110.3260 0027691 148.6910 211.5902 13.68075319701757
LandSat 4
1 13367U 82072A 96201.23367784 .00012532 00000-0 27797-2 0 9747
2 13367 98.0718 251.1793 0008120 49.2262 310.9620 14.57199483745209
DMSP B5D2-1
1 13736U 82118A 96201.15655389 .00000037 00000-0 33869-4 0 433
2 13736 98.6250 29.0277 0007962 300.6342 59.4053 14.25793482705622
IRAS
1 13777U 83004A 96200.17995602 -.00000000 00000-0 29852-4 0 3755
2 13777 98.9665 25.0182 0014056 12.7380 347.4124 13.99261473357707
Cosmos 1447
1 13916U 83021A 96198.99579443 .00000034 00000-0 19270-4 0 6051
2 13916 82.9455 168.9952 0039654 69.0661 291.4729 13.74342964667837
TDRS 1
1 13969U 83026B 96198.20223804 -.00000300 00000-0 10000-3 0 6042
2 13969 9.0242 43.3724 0003143 23.2790 251.9628 1.00274207 21676
GOES 6
1 14050U 83041A 96198.19987043 -.00000246 00000-0 10000-3 0 5252
2 14050 7.0642 53.5504 0004809 33.8068 199.2852 1.00243525106489
OSCAR 10
1 14129U 83058B 96199.06757561 .00000099 00000-0 10000-3 0 4393
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2 14129 26.0819 199.3426 6018850 32.5715 353.3169 2.05880883 70481
LandSat 5
1 14780U 84021A 96200.80919683 .00000268 00000-0 69768-4 0 5011
2 14780 98.3276 258.6253 0002757 167.7867 192.3399 14.57055726658536
UoSat 2
1 14781U 84021B 96198.00439759 .00000058 00000-0 17610-4 0 8986
2 14781 97.8017 187.4491 0012573 3.9223 356.2079 14.69465404661880
GPS BI-09
1 15039U 84059A 96199.41375235 -.00000050 00000-0 10000-3 0 4230
2 15039 64.6486 19.8030 0083563 19.5157 340.8336 1.92300871 88013
Cosmos 1574
1 15055U 84062A 96198.16953727 .00000024 00000-0 92928-5 0 8056
2 15055 82.9565 224.5612 0026201 262.1392 97.6787 13.73636944604966
GPS BI-10
1 15271U 84097A 96198.92605656 .00000035 00000-0 10000-3 0 1754
2 15271 62.1568 253.2599 0099905 161.2937 199.2132 1.92620749 245
Cosmos 1602
1 15331U 84105A 96197.22150367 .00000164 00000-0 16426-4 0 4886
2 15331 82.5337 86.7729 0018639 212.5541 147.4500 14.84767738637135
ERBS
1 15354U 84108B 96197.54814514 -.00000198 00000-0 35143-5 0 2019
2 15354 56.9968 264.9519 0001750 137.6500 222.4665 14.94966269641086
NOAA 9
1 15427U 84123A 96200.77282364 .00000070 00000-0 60617-4 0 7712
2 15427 98.9469 265.7147 0014048 223.0716 136.9355 14.13792383598090
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96200.79703010 .00001198 00000-0 19816-4 0 5958
2 16609 51.6517 324.9070 0010127 317.1552 42.8654 15.61515683594917
SPOT 1
1 16613U 86019A 96199.72743900 .00000088 00000-0 62356-4 0 9652
2 16613 98.8285 267.7336 0001329 119.5583 240.5726 14.19980903224648
Cosmos 1766
1 16881U 86055A 96198.39172585 .00000141 00000-0 14190-4 0 4036
2 16881 82.5192 143.3811 0017355 239.8729 120.0765 14.83747648538172
EGP
1 16908U 86061A 96199.69187083 -.00000083 00000-0 10000-3 0 1012
2 16908 50.0116 263.2198 0011303 91.0436 269.1694 12.44414602120201
NOAA 10
1 16969U 86073A 96200.86738256 .00000060 00000-0 43738-4 0 7013
2 16969 98.5246 197.0259 0012090 263.9681 96.0121 14.24994552511110
MOS-1
1 17527U 87018A 96199.73480141 -.00000043 00000-0 00000+0 0 4327
2 17527 98.9371 261.0539 0018827 241.7339 118.1928 14.00395143479260
GOES 7
1 17561U 87022A 96199.19872720 -.00000168 00000-0 10000-3 0 9753
2 17561 3.1267 68.9495 0005593 318.4536 245.1746 1.00273513 17609
Kvant-1
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1 17845U 87030A 96200.79701941 .00007460 00000-0 91203-4 0 6878
2 17845 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762594779
DMSP B5D2-3
1 18123U 87053A 96200.55113802 .00000035 00000-0 40076-4 0 5186
2 18123 98.7691 30.3330 0013983 161.2001 198.9692 14.15447819468932
RS-10/11
1 18129U 87054A 96199.23455366 .00000040 00000-0 27688-4 0 2377
2 18129 82.9260 126.3339 0013323 69.9267 290.3321 13.72367544454294
Meteor 2-16
1 18312U 87068A 96197.44151594 .00000035 00000-0 17641-4 0 4940
2 18312 82.5540 329.6663 0012740 135.1854 225.0338 13.84081536450086
Meteor 2-17
1 18820U 88005A 96200.54469295 .00000051 00000-0 32247-4 0 9922
2 18820 82.5405 22.1594 0015805 195.0695 164.9991 13.84759593427862
DMSP B5D2-4
1 18822U 88006A 96200.54119186 .00000008 00000-0 21808-4 0 3013
2 18822 98.3824 31.1052 0005337 279.3258 80.7316 14.23195425439033
Glonass 34
1 19163U 88043A 96198.62068368 -.00000011 00000-0 10000-3 0 937
2 19163 65.2739 84.8452 0007798 158.1725 201.9377 2.13102196 62861
Glonass 36
1 19165U 88043C 96199.61618823 -.00000009 00000-0 10000-3 0 4993
2 19165 65.2486 84.7749 0004698 356.8763 3.1657 2.13101964 63502
METEOSAT 3
1 19215U 88051A 96199.47559967 -.00000136 00000-0 10000-3 0 2691
2 19215 3.3257 67.6012 0002720 99.7989 260.1719 0.96948510 17471
AO-13
1 19216U 88051B 96201.10255286 .00006020 00000-0 11536-2 0 2414
2 19216 57.1918 103.7869 7435929 45.3156 355.1321 2.10080325 30519
OKEAN 1
1 19274U 88056A 96200.16860424 .00000145 00000-0 15060-4 0 1042
2 19274 82.5138 242.5925 0021110 26.3529 333.8753 14.82496764433961
Meteor 3-2
1 19336U 88064A 96199.02015191 .00000051 00000-0 10000-3 0 4963
2 19336 82.5397 145.3169 0017695 155.9065 204.2879 13.16978004383405
Glonass 39
1 19503U 88085C 96199.64614750 -.00000054 00000-0 10000-3 0 3891
2 19503 65.5734 323.6899 0005907 153.2847 206.7499 2.13101746 60997
NOAA 11
1 19531U 88089A 96200.67082103 .00000020 00000-0 35997-4 0 5878
2 19531 99.1879 219.6081 0011948 147.8733 212.3168 14.13097812402899
TDRS 2
1 19548U 88091B 96198.75398483 -.00000198 00000-0 10000-3 0 2214
2 19548 2.5538 71.8763 0003169 93.2258 126.4187 1.00274234 15820
Glonass 40
1 19749U 89001A 96200.62225208 -.00000170 00000-0 10000-3 0 6071
2 19749 65.2183 84.3170 0007322 262.0574 97.8961 2.13098809 58665
Glonass 41
1 19750U 89001B 96197.86170999 -.00000015 00000-0 10000-3 0 5145
2 19750 65.2324 84.4607 0005813 243.4006 116.6060 2.13101779 58487
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GPS BII-01
1 19802U 89013A 96200.54930036 -.00000858 00000-0 10000-3 0 2616
2 19802 55.3558 109.4033 0019879 213.4011 146.5070 2.00564459 54343
Akebono
1 19822U 89016A 96198.75322326 .00010418 00000-0 57574-3 0 7510
2 19822 75.0752 106.7927 3741750 83.9667 316.5650 7.92368765169036
Meteor 2-18
1 19851U 89018A 96198.55083485 -.00000014 00000-0 -25302-4 0 4922
2 19851 82.5207 257.6620 0012355 254.7154 105.2642 13.84413110372897
MOP-1
1 19876U 89020B 96196.25601835 -.00000072 00000-0 10000-3 0 2044
2 19876 2.0391 71.2615 0019351 288.7212 70.5427 0.97109318 6884
TDRS 3
1 19883U 89021B 96198.22873786 -.00000273 00000-0 10000-3 0 2298
2 19883 0.0492 116.1921 0004059 40.7668 178.7364 1.00269819199401
GPS BII-02
1 20061U 89044A 96200.39750628 -.00000107 00000-0 10000-3 0 2391
2 20061 54.2091 285.1320 0157929 220.8781 137.9603 2.00559629 52109
Nadezhda 1
1 20103U 89050A 96200.81884709 .00000012 00000-0 -35569-5 0 8402
2 20103 82.9610 85.3595 0037694 328.1953 31.6922 13.73867489353021
GPS BII-03
1 20185U 89064A 96200.24698855 -.00000015 00000-0 10000-3 0 2890
2 20185 55.1484 109.8610 0019518 317.4997 42.3688 2.00544983 50656
GMS 4
1 20217U 89070A 96199.56147902 -.00000372 00000-0 10000-3 0 4121
2 20217 1.8486 74.7815 0001233 184.1737 358.8516 1.00263215 25725
INTERCOSMOS 24
1 20261U 89080A 96200.20504116 -.00000010 00000-0 -56971-5 0 5130
2 20261 82.5927 250.9094 1242043 331.1864 22.5673 12.47340893309779
GPS BII-04
1 20302U 89085A 96200.27125939 .00000031 00000-0 10000-3 0 2511
2 20302 53.2260 224.9540 0022337 197.3754 162.5810 2.00567321 49457
Meteor 3-3
1 20305U 89086A 96201.18992658 .00000044 00000-0 10000-3 0 6053
2 20305 82.5528 102.4771 0006492 219.5860 140.4885 13.04425091322372
COBE
1 20322U 89089A 96196.54024449 .00000192 00000-0 15067-3 0 2274
2 20322 98.9422 211.3262 0009224 326.9733 33.0887 14.03457185340769
Kvant-2
1 20335U 89093A 96200.79701941 .00007460 00000-0 91203-4 0 6394
2 20335 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762378069
GPS BII-05
1 20361U 89097A 96200.28471108 -.00000059 00000-0 10000-3 0 971
2 20361 55.9993 52.0754 0086092 133.5473 227.2051 2.00564348 38932
COSMOS 2054 (Altair-1)
1 20391U 89101A 96200.39684056 .00000000 00000-0 10000-3 0 3866
2 20391 3.8937 63.1560 0004260 56.0223 304.0230 1.00268681 24389
SPOT 2
1 20436U 90005A 96199.93090756 -.00000044 00000-0 00000+0 0 946
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2 20436 98.6971 273.0693 0000890 87.6207 272.5072 14.20042359336203
UO-14
1 20437U 90005B 96201.23783831 -.00000003 00000-0 15449-4 0 1974
2 20437 98.5438 283.6541 0011950 105.7411 254.5093 14.29925904338635
UO-15
1 20438U 90005C 96200.76714474 -.00000006 00000-0 14677-4 0 9938
2 20438 98.5367 281.0751 0010762 112.1454 248.0869 14.29233936338435
PACSAT
1 20439U 90005D 96199.79500135 -.00000028 00000-0 58875-5 0 9951
2 20439 98.5580 284.5127 0011981 110.6461 249.6007 14.29979405338443
DO-17
1 20440U 90005E 96199.25449481 -.00000024 00000-0 75185-5 0 9959
2 20440 98.5608 284.6364 0012131 111.0438 249.2041 14.30121349338393
WO-18
1 20441U 90005F 96201.20402450 .00000007 00000-0 19427-4 0 07
2 20441 98.5600 286.4879 0012512 105.8598 254.3973 14.30091083338671
LO-19
1 20442U 90005G 96199.23851297 -.00000023 00000-0 76759-5 0 9958
2 20442 98.5625 285.0636 0012889 110.8796 249.3765 14.30199813338413
GPS BII-06
1 20452U 90008A 96200.18062824 .00000027 00000-0 10000-3 0 1937
2 20452 54.0407 165.4967 0062259 88.9879 271.6901 2.00571182 47436
MOS-1B
1 20478U 90013A 96198.55914661 .00000088 00000-0 10000-3 0 9556
2 20478 99.1249 267.6840 0004488 154.8314 205.3062 13.93964289248646
DEBUT
1 20479U 90013B 96198.50599073 -.00000031 00000-0 -36583-5 0 9947
2 20479 99.0247 217.9951 0541051 57.5219 307.7004 12.83342449301661
FO-20
1 20480U 90013C 96200.57175699 -.00000010 00000-0 44517-4 0 8922
2 20480 99.0247 219.4592 0541170 53.4116 311.5532 12.83233985301915
MOS-1B R/B
1 20491U 90013D 96200.77586248 .00000223 00000-0 48720-3 0 2605
2 20491 99.0755 285.6879 0469940 220.3719 136.1619 13.02980032305973
LACE
1 20496U 90015A 96200.25258898 .00000581 00000-0 24582-4 0 6671
2 20496 43.1026 26.0276 0011437 260.7213 99.2352 15.35735058358603
Nadezhda 2
1 20508U 90017A 96200.81373207 .00000041 00000-0 27859-4 0 8405
2 20508 82.9519 219.8416 0043314 278.9680 80.6574 13.73509676320234
OKEAN 2
1 20510U 90018A 96199.49418584 .00000105 00000-0 11214-4 0 5123
2 20510 82.5209 197.6491 0017188 215.2006 144.8076 14.78612594344158
GPS BII-07
1 20533U 90025A 96199.58870397 -.00000033 00000-0 00000+0 0 2348
2 20533 54.5532 285.8603 0051414 78.0613 282.5679 2.00568492 46196
PegSat
1 20546U 90028A 96201.05984742 .00002936 00000-0 54218-4 0 9470
2 20546 94.1083 10.4992 0056824 241.4798 118.0716 15.47523236349939
HST
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1 20580U 90037B 96198.57085657 .00000301 00000-0 14567-4 0 8248
2 20580 28.4686 29.6723 0006166 120.3758 239.7437 14.91074291142971
MACSAT 2
1 20608U 90043B 96197.90461948 .00000130 00000-0 19873-4 0 1960
2 20608 89.9252 173.1405 0105401 317.0614 42.2411 14.64930331330494
Glonass 44
1 20619U 90045A 96196.29724208 -.00000078 00000-0 10000-3 0 3108
2 20619 65.1700 323.0250 0025692 209.7299 150.1259 2.13102626 47889
Glonass 45
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Glonass 58
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2 23579 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762 66370
GOES 9
1 23581U 95025A 96200.54134207 .00000078 00000-0 10000-3 0 2096
2 23581 0.3501 267.1970 0001007 292.4827 157.2859 1.00280469 4230
Helios 1A
1 23605U 95033A 96199.76725991 .00000032 00000-0 15162-4 0 2454
2 23605 98.1224 135.0364 0001703 73.2536 286.8853 14.63850107 55031
UPM SAT 1
1 23606U 95033B 96201.16465259 .00000092 00000-0 24875-4 0 1930
2 23606 98.1024 137.5715 0008960 80.2244 279.9971 14.67263353 55403
CERISE
1 23607U 95033C 96198.98524940 .00000066 00000-0 20425-4 0 1038
2 23607 98.1053 135.2789 0007513 84.6789 275.5276 14.66952293 55101
TDRS 6
1 23613U 95035B 96200.49082162 .00000094 00000-0 00000+0 0 1844
2 23613 0.7447 83.1344 0001222 121.8398 97.3626 1.00264995 3698
Glonass 74
1 23620U 95037A 96199.00943349 .00000059 00000-0 00000+0 0 1594
2 23620 64.8216 202.9771 0018567 174.3620 185.6848 2.13103087 7642
Glonass 75
1 23621U 95037B 96200.59451689 .00000065 00000-0 00000+0 0 1624
2 23621 64.8339 202.9282 0018392 184.7437 175.2568 2.13102362 7675
Glonass 76
1 23622U 95037C 96200.65272923 .00000066 00000-0 00000+0 0 1625
2 23622 64.8275 202.9239 0036689 168.7607 191.3413 2.13102664 7670
Prognoz-M2
1 23632U 95039A 96203.43647650 .00000044 00000-0 00000+0 0 669
2 23632 69.4750 250.4060 8226396 322.4590 29.8830 0.26352200 940
SICH-1
1 23657U 95046A 96201.04808326 .00000044 00000-0 34013-5 0 946
2 23657 82.5333 171.2336 0026707 309.7999 50.0844 14.73482259 47524
RADARSAT
1 23710U 95059A 96199.52535803 -.00000018 00000-0 10000-4 0 1612
2 23710 98.5765 205.7817 0001098 74.7227 71.5710 14.29982593 36576
Glonass 77
1 23734U 95068A 96199.83194750 .00000061 00000-0 00000+0 0 1402
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2 23734 64.8284 202.8720 0019552 318.8833 40.9930 2.13102291 4628
Glonass 78
1 23735U 95068B 96198.63385506 .00000059 00000-0 00000+0 0 1329
2 23735 64.8289 202.8952 0008366 223.2914 136.6682 2.13125316 4597
Glonass 79
1 23736U 95068C 96198.18942372 .00000060 00000-0 00000+0 0 1142
2 23736 64.8111 202.9262 0008233 209.5884 150.3931 2.13102229 4580
XTE
1 23757U 95074A 96201.22957110 .00000438 00000-0 77440-5 0 728
2 23757 22.9884 193.6861 0013454 86.1980 274.0033 14.97669935 30272
1996010D
1 23797U 96010D 96201.01228903 .00121494 -63286-5 10000-3 0 1478
2 23797 48.0268 240.1969 6822285 38.3256 354.5282 2.97092207 3414
Soyuz TM-23
1 23798U 96011A 96200.79701941 .00007460 00000-0 91203-4 0 1270
2 23798 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762 23130
Polar
1 23802U 96013A 96200.51375291 .00000075 00000-0 00000+0 0 301
2 23802 86.0984 25.7413 6568586 284.8686 15.1095 1.36677015 1985
1996010E
1 23824U 96010E 96201.08706249 .00001085 00000-0 31295-2 0 794
2 23824 47.6401 243.8255 7268230 35.4529 356.0602 2.21709772 3325
GPS BIIA-25
1 23833U 96019A 96200.30945500 -.00000080 00000-0 10000-3 0 531
2 23833 54.6940 346.7844 0042010 140.7371 219.5726 2.00563974 2308
Priroda
1 23848U 96023A 96200.79701941 .00007460 00000-0 91203-4 0 807
2 23848 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762 13461
MSX
1 23851U 96024A 96200.88957786 -.00000047 00000-0 00000+0 0 515
2 23851 99.3771 180.7990 0006790 66.7881 293.3975 13.97679986 11925
Progress M-31
1 23860U 96028A 96200.79701941 .00007460 00000-0 91203-4 0 727
2 23860 51.6516 324.9113 0010313 316.1649 43.7952 15.61520762 11632
MSTI 3
1 23868U 96031A 96201.01659758 .00000046 00000-0 26819-5 0 391
2 23868 97.1218 30.9057 0013812 63.2378 297.0210 15.46196643 9730
Gorizont 32
1 23880U 96034A 96197.77153898 .00000087 00000-0 00000+0 0 358
2 23880 1.3809 283.6376 0015379 329.0543 11.9660 1.00280700 517
1996034E
1 23886U 96034E 96198.23463501 .00021014 00000-0 47783-2 0 143
2 23886 47.1944 269.1765 7328218 13.6208 359.0347 2.22806125 1162
1996034F
1 23887U 96034F 96199.23151096 .00000143 00000-0 14340-3 0 131
2 23887 47.2475 269.1588 7309680 13.6820 358.5513 2.22271135 1186
1983063A
1 23906U 83063E 96197.97772631 .00000494 00000-0 17674-3 0 91
2 23906 82.0245 177.7864 0045354 94.9385 265.6959 14.31872659680655
INTELSAT 709
```

```
1 23915U 96035A 96200.73617619 -.00000292 00000-0 00000+0 0 309
2 23915 0.0289 294.3867 0002127 285.9474 284.3583 1.00267511 366
1996035B
1 23916U 96035B 96199.30000000 .00154748 35387-6 41221-3 0 64
2 23916 7.0360 171.5750 7341068 204.0720 348.7170 2.26731005 735
TOMS-EP
1 23940U 96037A 96200.47560486 .00000856 00000-0 38838-4 0 185
2 23940 97.4435 105.5572 0013797 222.3018 137.7763 15.20756178 1469
1996037B
1 23941U 96037B 96200.22769284 .00001804 00000-0 56326-4 0 148
2 23941 97.3830 104.8228 0426220 111.4794 253.2420 14.76442966 2356
APSTAR 1A
1 23943U 96039A 96200.39147625 -.00000325 00000-0 00000+0 0 252
2 23943 0.0604 242.6681 0004065 220.6524 108.1028 1.00267787 130
1996039B
1 23944U 96039B 96197.83163914 .00007025 00000-0 16683-2 0 43
2 23944 27.0829 76.6490 7604095 184.5910 158.3169 1.89625965 243
ARABSAT 2A
1 23948U 96040A 96200.74436994 .00000142 00000-0 00000+0 0 300
2 23948 0.1027 247.5281 0025995 12.2983 328.4844 1.00453032 115
TURKSAT 1C
1 23949U 96040B 96200.95434742 .00000150 00000-0 00000+0 0 289
2 23949 0.0549 205.1859 0005150 335.8690 130.7818 1.00341835 106
1996040C
1 23950U 96040C 96193.75210374 -.00000399 00000-0 00000+0 0 10
2 23950 6.9469 81.5588 7292111 179.4378 49.9644 2.29092215 33
1996040D
1 23951U 96040D 96194.34482006 .00056486 00000-0 66844-2 0 29
2 23951 6.9595 81.2596 7287664 180.0099 179.0648 2.29235954 55
GPS BIIA-26
1 23953U 96041A 96201.13972791 -.00000014 00000-0 10000-3 0 46
2 23953 55.0405 107.0226 0017168 328.0729 31.6350 1.99006322 117
1996041B
1 23954U 96041B 96199.91941230 .00002161 00000-0 10000-3 0 47
2 23954 35.2543 67.5868 0074764 167.9411 192.3312 15.17510630 284
1996041C
1 23955U 96041C 96200.85652092 .00037434 50116-6 10180-2 0 70
2 23955 35.0188 98.9172 6047356 195.6404 131.3344 4.05012729 118
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1420. Tonna crossed yagi - HELP.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: Scott Macmillan <scott@golfmike>
Message-ID: <oSgcuAAUf+7xEwhg@golfmike>
Source record: 21891

Hello all, I have put up a couple of crossed yagis for satellite use.
They are 2X9 ele for 2 meters and a 2X19 ele for 70cms, both are Tonna
antennas.

I have them mounted, horizontally to a 2 meter aluminium cross boom at
a fixed 15' elevation.

Could someone please tell me how to mount these antennas in the
X configuration

If they cant be fitted in the X config, does anyone know where I can get
a fibreglass cross boom, or is it not worth the bother?

Thanks for your time.

--
Best 73's DE Scott
GM7OMU - IO75tv.

1421. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: Jeff Cook <jcook@his.com>
Message-ID: <31F03CE1.48A6@his.com>
Source record: 21892
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

James S. Kaplan wrote:
> The following is a copy of a message I received today from
> ARRL General Counsel Christopher D. Imlay N3AKD:

There also may be some liability in publicly posting a private legal communication, I don't know. But I do know that spraying the net (8 newsgroups?) with your private gripe is kind of obnoxious and seems intended to intimidate your "opponent". If you wanted opinions from the group(s) about the original complaint, you should have discussed it with us legitimately. You may be a bit casual with your use of mass communication, and you may have also added to your difficulties by posting this way.

--
Jeff Cook
jcook@his.com

1422. RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: kharker@cs.utexas.edu
Message-ID: <kharker-1907961712350001@slip-47-2.ots.utexas.edu>
Source record: 21893

I've been trying to work RS-10 for a while now from the University of Texas Amateur Radio Club station (W5EHM), and I have a few questions. First, a quick summary of the equipment - A Kenwood HF rig using a Force 12 C-4 beam antenna as the downlink, and an Icom 2m all-mode into a 13 element beam as the uplink. Both beams are mounted on the same tower, the 2m antenna being a few feet above the HF beam, and both are horizontal (not inclined above the horizon, that is.) Both beams perform quite well for terrestrial QSOs.

I can hear RS-10 just fine. Every pass I can hear the CW beacon, and on the reasonably good passes, I can hear other ops in QSO. But when I try to transmit and find my own downlink, I will hear something, but it always seems to have the following happen:

1) If I take the 2m frequency and divide it by the 10m frequency, it always comes out to about 4.996.

2) The signal is unintelligible unless I transmit on the lower sideband.

The latter one may be explained by the fact that you maybe I should transmit on lower sideband? I've never been sure about this. But the first one, coupled with the fact that occasionally I can hear this long after the bird should have been long gone, seems to indicate to me that maybe I'm hearing my own fifth harmonic.

So, 1) do I transmit on LSB or USB? and 2) how do I tell whether or not I'm hearing my own harmonic or a real downlink? I know the antennas are probably not optimal for satellite work, but it's what the club's got :-)

--

Kenneth E. Harker kharker@cs.utexas.edu
University of Texas at Austin Amateur Call: N1PVB
Department of the Computer Sciences "Long Live Peent!"
Taylor Hall TAY 2.124 Maintainer of the Linux Laptop Home Page
Austin, TX 78712-1188 USA http://www.cs.utexas.edu/users/kharker/

1423. Important!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: ke6zlj@svpal.svpal.org
Message-ID: <4sosvu$a3n@borg.svpal.org>
Source record: 21894

For ALL amateur operators: Visit my web page,
http://www.geocities.com/SiliconValley/8582/ihr, and find several links
to documents that will keep you up to date on the WRC-97 proposal, and
you'll also find a number of documents about Kenwood's 'Bold Step'. For
those of you who have already read about this stuff, be sure to visit
anyway to learn about anything new that has come up.
You can also visiit my web page (in signature) and see what else I have.
While you're visiting, please sign my guestbook so I may see who has
visited my page and from where.
Thank you.

--

| Eric |
| 73 de ke6zlj |
| Email #1: edm@netbox.com |
| Email #2: ke6zlj@svpal.org |
| Repeater: (Varian/HP) 147.315+ PL:151.4 |
| WWW: http://www.geocities.com/SiliconValley/8582/ |

1424. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: n8vna@aol.com
Message-ID: <4sneaa$ksm@newsbf02.news.aol.com>
Source record: 21895

Paul-
It depends on what you are looking to do and hwo your station is set up, i.e. rigs, KCT, Ttrakbox, etc. I personally use LogSat because it has a KCT interface in it (I'm sure most other programs do also) and I'm able to track several analog satellites on one map at a time. I use WinNT and so all my programs are windows based. If you are into the pacsats, I recommend WISP (which can be downloaded from www.amsat.org. You will get recommendations from hams saying that the program that they use is the best in the world but it just comes down to what do you want to do.

-73's Jeff n8vna

73's Jeff AMPRNet:
n8vna@switch.k4ry.ampr.org
Headland AL AX.25:
n8vna@k4ry.#cenal.al.usa.noam
"working the birds" Internet: n8vna@amsat.org -or-
n8vna@aol.com

1425. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: sfjcr@scfn.THpl.lib.fl.US
Message-ID: <Pine.SUN.3.93.960719015504.24655A-100000@scfn>
Source record: 21896

unsubscribe

1426. Brantford Flea Market

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: jthomas@wat.hookup.net
Message-ID: <jthomas.37.00073621@wat.hookup.net>
Source record: 21897

BRANTFORD AMATEUR RADIO CLUB'S

FLEA MARKET

At Burford Fairgrounds, Burford, Ontario
On Highway 53 - 15 km West of Brantford

SATURDAY AUGUST 17th, 1996

From 9:00 am.....Admission $5.00
Vendors 7:30 am.....$8.00/table plus admission
Tailgaters Welcome.....$4.00 plus admission
Expanded: 2 buildings this year.....Acres of free parking
Major Door Prize: $700 gift certificate from Norham Radio Inc.
Talk-in on VE3TCR 147.150+

For more info and table reservations, phone or write:
Richard La Rose, VE3RLX Brantford Amateur Radio Club
153 Dunsdon St. P.O. Box 25036
Brantford, ON. N3R 6N3 Brantford, ON. N3T 6K5
519-752-2437

1427. Re: RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.SOL.3.93.960719184508.6065E-100000@spork.callamer.com>
Source record: 21898

Ken, I believe that all the RS (Radio Sport) satellites are
Non-Inverting. If you hear LSB when transmitting USB, something is wrong!
Your question is not clear, but I assume you are listening on USB when
other signals are clear. As for the fifth harmonic, simple listen when you
know that the satellite not in view! Cliff K7RR

On Fri, 19 Jul 1996, Kenneth E. Harker wrote:

> I've been trying to work RS-10 for a while now from the University of
> Texas Amateur Radio Club station (W5EHM), and I have a few questions.
> First, a quick summary of the equipment - A Kenwood HF rig using a Force
> 12 C-4 beam antenna as the downlink, and an Icom 2m all-mode into a 13
> element beam as the uplink. Both beams are mounted on the same tower, the
> 2m antenna being a few feet above the HF beam, and both are horizontal
> (not inclined above the horizon, that is.) Both beams perform quite well
> for terrestrial QSOs.
>
> I can hear RS-10 just fine. Every pass I can hear the CW beacon, and
> on the reasonably good passes, I can hear other ops in QSO. But when I
> try to transmit and find my own downlink, I will hear something, but it
> always seems to have the following happen:
>
> 1) If I take the 2m frequency and divide it by the 10m frequency, it
> always comes out to about 4.996.
>
> 2) The signal is unintelligible unless I transmit on the lower sideband.
>
> The latter one may be explained by the fact that you maybe I should
> transmit on lower sideband? I've never been sure about this. But the
> first one, coupled with the fact that occasionally I can hear this long
> after the bird should have been long gone, seems to indicate to me that
> maybe I'm hearing my own fifth harmonic.
>
> So, 1) do I transmit on LSB or USB? and 2) how do I tell whether or
> not I'm hearing my own harmonic or a real downlink? I know the antennas
> are probably not optimal for satellite work, but it's what the club's got
> :-)
>
> --
> --
> Kenneth E. Harker kharker@cs.utexas.edu
> University of Texas at Austin Amateur Call: N1PVB
> Department of the Computer Sciences "Long Live Peent!"
> Taylor Hall TAY 2.124 Maintainer of the Linux Laptop Home Page
> Austin, TX 78712-1188 USA http://www.cs.utexas.edu/users/kharker/

> --
>
>

1428. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-19 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199607200435.VAA21709@UCSD.EDU>
Source record: 21899

```
From Ham-Space Tue Jul 16 07:30:23 PDT 1996 remote from UCSD.EDU
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA23066; Tue, 16 Jul 96 13:41:04 PDT
Received: by mail.ucsd.edu; id HAA25256
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:28 -0700 for ham-space-list
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Received: by mail.ucsd.edu; id HAA25233
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:25 -0700 for ham-space-ddist
Message-Id: <199607161430.HAA25233@ mail.ucsd.edu>
Date: Tue, 16 Jul 96 07:30:23 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #212
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 16 Jul 96 Volume 96 : Issue 212

Today's Topics:
Check this out!
NORAD Two-Line Orbital Element Sets (TLE837)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 16 Jul 96 15:09:48 GMT
From: sean@Alpha.remcan.CA (Commander Scott)
Subject: Check this out!

Check this out!
Http://personal.solutions.net/sean/

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Date: 16 Jul 1996 02:04:36 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE837)

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #837 -
Alouette 1
1 00424U 62049A 96195.84672760 .00000039 00000-0 35264-4 0 2136
2 00424 80.4577 257.4368 0023446 328.7384 31.2363 13.67871755685986
ATS 1
1 02608U 66110A 96194.78606088 -.00000310 00000-0 10000-3 0 9733
2 02608 14.6260 352.5799 0009800 87.5178 272.5718 1.00325435 25125
ATS 3
1 03029U 67111A 96192.59042381 -.00000129 00000-0 10000-3 0 5150
2 03029 14.9131 359.5380 0009716 266.3034 130.1295 1.00273128105006
Starlette
1 07646U 75010A 96193.91392998 -.00000158 00000-0 -12681-4 0 9835
2 07646 49.8285 51.1347 0205958 312.0967 46.2571 13.82190657 82387
LAGEOS
1 08820U 76039A 96196.00766422 .00000027 00000-0 10000-3 0 2076
2 08820 109.8495 35.1996 0043748 123.3538 237.1425 6.38664527215548
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96192.42461677 .00000041 00000-0 10000-3 0 6949
2 10061 12.3950 36.8232 0009984 123.2991 106.2424 1.00269783 14674
IUE
1 10637U 78012A 96188.56861855 -.00000299 00000-0 10000-3 0 2618
2 10637 35.7646 82.8008 1369203 57.3851 306.0860 1.00234551 20128
GPS BI-01
1 10684U 78020A 96185.95606993 -.00000046 00000-0 10000-3 0 4576
2 10684 64.9837 23.3942 0059419 162.4329 197.8036 1.98069263119746
GPS BI-02
1 10893U 78047A 96193.10986887 -.00000002 00000-0 10000-3 0 2576
2 10893 63.1525 260.2372 0220445 12.1179 348.4854 2.01628491133292

```
GOES 3
1 10953U 78062A 96191.48140523 -.00000149 00000-0 10000-3 0 6776
2 10953 11.3887 39.7333 0001193 55.6695 264.5283 1.00270767 19275
SeaSat 1
1 10967U 78064A 96195.51811575 -.00000048 00000-0 28607-4 0 5009
2 10967 107.9918 229.2355 0001599 268.2436 91.8522 14.38112737945230
GPS BI-03
1 11054U 78093A 96192.22934847 -.00000046 00000-0 10000-3 0 4152
2 11054 62.8815 259.4926 0046988 210.4881 149.2731 1.93503395131155
Nimbus 7
1 11080U 78098A 96195.59881963 -.00000106 00000-0 -58125-4 0 6004
2 11080 98.9403 56.5543 0008219 256.6917 103.3322 13.83692030894829
GPS BI-04
1 11141U 78112A 96195.77204059 -.00000040 00000-0 10000-3 0 531
2 11141 65.0081 25.5761 0050515 28.7277 331.5997 1.92894645 18391
GPS BI-05
1 11690U 80011A 96191.78365581 -.00000041 00000-0 10000-3 0 380
2 11690 65.3225 24.6756 0144334 189.6592 170.1068 2.00573067134653
GPS BI-06
1 11783U 80032A 96189.50378254 -.00000013 00000-0 10000-3 0 1542
2 11783 62.2998 252.9800 0227212 29.4591 331.8749 2.03456300119245
GOES 5
1 12472U 81049A 96186.71771309 .00000045 00000-0 10000-3 0 9389
2 12472 8.2090 49.9739 0006614 43.1097 316.9311 1.00225471 13278
Cosmos 1383
1 13301U 82066A 96192.87593836 .00000026 00000-0 13087-4 0 5106
2 13301 82.9325 116.4378 0026949 171.6279 188.5327 13.68075455700614
LandSat 4
1 13367U 82072A 96196.22102251 .00092930 00000-0 20289-1 0 9642
2 13367 98.0718 246.3202 0008212 61.3064 298.8921 14.57219606744473
DMSP B5D2-1
1 13736U 82118A 96195.89333826 -.00000005 00000-0 16285-4 0 399
2 13736 98.6253 23.8499 0008262 316.6563 43.3972 14.25792217704872
IRAS
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2 22058 64.7598 322.7742 0009360 284.7179 75.1759 2.13102858 30705
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KO-23
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2 22078 66.0792 131.3185 0015263 290.4065 69.5313 12.86581525184379
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2 22108 54.0130 226.4294 0133067 164.8320 195.6490 2.00562837 28110
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2 22275 54.6444 166.2738 0079084 236.4347 123.3659 2.00582213 26030
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Glonass 60
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2 22521 31.1052 275.4693 0055673 40.3075 320.1590 15.02959156186005
UFO F1
1 22563U 93015A 96190.00000000 -.00000060 00000-0 00000+0 0 5106
2 22563 25.2792 288.3108 0006817 241.1248 135.8807 0.99253096 12245
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2 22581 55.2350 346.9909 0092859 63.6550 297.3490 2.00556717 24135
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NOAA 13
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2 22779 54.3488 286.2824 0015856 261.1783 98.6837 2.00573888 21001
Meteor 2-21
1 22782U 93055A 96195.89752165 .00000043 00000-0 26174-4 0 4970
2 22782 82.5491 325.9680 0020955 264.1907 95.6863 13.83056701144825
UFO F2
1 22787U 93056A 96194.80799133 -.00000066 00000-0 00000+0 0 6560
2 22787 4.1201 326.9502 0003234 108.2054 218.1174 1.00268498 9084
SPOT 3
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STELLA
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2 22824 98.5794 270.6880 0006316 146.8398 213.3179 14.27105340145797
AO-27
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IO-26
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KO-25
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2 23027 55.2090 348.7863 0066508 204.3006 155.4182 2.00557640 17313
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Glonass 63
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Glonass 64
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2 23045 64.6243 322.9874 0010861 34.9517 325.1152 2.13102045 17567
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2 23051 0.0843 97.1278 0005090 45.1287 139.6029 1.00261698 15631
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1 23101U 94028A 96192.59626582 .00003729 00000-0 58805-4 0 3322
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STRV-1B
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2 23204 64.7646 203.2785 0015228 340.5552 19.4268 2.13102245 14943
Glonass 67
1 23205U 94050C 96195.66708694 .00000077 00000-0 00000+0 0 3083
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OKEAN 1-7
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2 23317 82.5445 34.1940 0026298 355.6852 4.4140 14.74028250 94513
ELEKTRO
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RESURS 1-3
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2 23439 64.8192 343.2111 0160244 194.7754 164.8460 11.27527416 63567
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GMS 5
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DMSP B5D2-8
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OSC 1
1 23545U 95017A 96194.21821667 .00000257 00000-0 90019-4 0 1486
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2 23546 69.9776 112.1145 0012556 151.8951 208.2861 14.45312450 67289
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OFEQ 3
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Spektr
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2 23579 51.6502 349.7402 0010104 300.5965 59.4024 15.61480965 65606
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Helios 1A
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2 23605 98.1217 130.0505 0001661 74.7837 285.3549 14.63849635 54295
UPM SAT 1
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2 23606 98.1022 131.3687 0008750 98.0047 262.2148 14.67261891 54489
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Glonass 76
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Prognoz-M2
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SICH-1
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2 23657 82.5331 178.6089 0027632 336.5491 23.4456 14.73481294 46341
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Glonass 78
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Glonass 79
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2 23797 48.0390 242.0295 7071268 36.7106 355.9474 2.62358387 3297
Soyuz TM-23
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Polar
1 23802U 96013A 96194.66047275 .00000038 00000-0 00000+0 0 272
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GPS BIIA-25
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Priroda
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Progress M-31
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Gorizont 32
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2 23880 1.3866 283.7046 0015261 329.3428 226.3000 1.00279378 485
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1996034F
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2 23887 47.2623 270.5358 7307560 12.3503 358.8360 2.22270943 1078
1983063A
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2 23906 82.0235 181.8961 0045133 107.9550 252.6562 14.31868659680013
INTELSAT 709
1 23915U 96035A 96196.05722267 -.00000298 00000-0 00000+0 0 276
2 23915 0.0366 284.7303 0002070 287.4404 43.5318 1.00268854 314
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TOMS-EP
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1 23941U 96037B 96195.75458948 .00002651 00000-0 81782-4 0 124
2 23941 97.3807 100.7195 0425983 126.0735 238.0718 14.76418769 1691
APSTAR 1A
1 23943U 96039A 96195.97615284 -.00000330 00000-0 00000+0 0 223
2 23943 0.0681 242.6568 0004030 221.6003 313.3486 1.00269705 99
1996039B
1 23944U 96039B 96192.57484316 .00005750 00000-0 13794-2 0 33
2 23944 27.0510 78.2150 7606233 181.9772 170.4737 1.89548382 146
ARABSAT 2A
1 23948U 96040A 96195.55911560 -.00000117 00000-0 00000+0 0 155
2 23948 0.1715 87.8152 0553889 173.2250 225.8868 1.08503299 74
TURKSAT 1C
1 23949U 96040B 96196.27442786 -.00000149 00000-0 10000-4 0 145
2 23949 0.1899 80.9625 0692825 172.2161 166.0258 1.10859250 63
1996040C
1 23950U 96040C 96193.75210374 -.00000399 00000-0 00000+0 0 10
2 23950 6.9469 81.5588 7292111 179.4378 49.9644 2.29092215 33
1996040D
1 23951U 96040D 96194.34482006 .00056486 00000-0 66844-2 0 29
2 23951 6.9595 81.2596 7287664 180.0099 179.0648 2.29235954 55
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End of Ham-Space Digest V96 #212
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1429. A new Helix Antenna design for the Mars Observer Experiment

Newsgroup: rec.radio.amateur.space
Date: 1996-07-20 00:00:00 UTC
From: mwcook@cris.com
Message-ID: <4sptvp$igr@herald.concentric.net>
Source record: 21900
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

A new Helix Antenna design for the Mars Observer Experiment

During the last few weeks, I've attempted to optimize a low cost Helix antenna design suitable for detecting the Mars Observer. Here are the characteristics and modeling results:

Reflector Screen: NONE - A single 10.66" loop reflector is used which eliminates the cumbersome reflector screen

Boom: 10 Foot length of 4" dia, thin wall PVC (normally used for tile). Weight is less than 5 Lbs and the cost is $3.50 (at Builder's Square)

Helix: 23 Turns of 1/4" refrigerator copper tubing spaced 5.125" per turn. 55 Feet of tubing required at an approximate cost of $20.

This design has a two step taper for the Helix Dia:

Reflector Loop Dia: 10.66"

First 4 Turns: 10.32"

Next 7 Turns: 8.68"

Last 12 Turns: 8.40"

The reflector is positioned 0.375" ahead of the start point of the first helix turn.

Helix Support: 1/2" PVC tubing used as stubs which are glued in the 4" boom with a spacing of 2.5625"

FeedPoint: 50 Ohm at <1.2 VSWR. No matching network required.

Gain: 15.9 dBci
(approximately 1 to 1.5 dB better than the standard Helix antennas I have modeled)

Pattern: First Side lobes at 36 degrees down 14 dB
Average of all remaining sidelobes <25 dB

Bandwidth: <0.2 dB variability from 432 to 438 Mhz
50 Ohm Match at <1.2 VSWR from 432 to 438 Mhz

Construction accuracy: The Helix diameter, especially the first 4 turns needs to be held to a +/- 0.125" tolerance to keep the gain within 0.5 dB.

Estimated Total Cost: <$30

Two of these antennas provide 18.9 dBci gain which could be enough for detection of the Mars Observer. Four would provide a nice margin at 21.9 dBci.

The pattern/image plots and the AO-PRO input file are available from my webpage. Additional pictures and sketches will be posted as construction proceeds. The webpage adr is: http://www.webcom.com/af9y

I would be happy to model any other helix designs if you email me the dimensions. I'll give any standard reflector screen designs the benefit of a perfect reflector surface. (very time consuming to model a real screen)

de Mike, AF9Y

1430. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-20 00:00:00 UTC
From: psgeorge@infinet.com
Message-ID: <psgeorge-2007961509010001@cmh-p061.infinet.com>
Source record: 21901

In article <4so3ip$6ah@star.epix.net>, rrehr@epix.net (Roger Rehr) wrote:

> In article <psgeorge-1607961616500001@cmh-p141.infinet.com>,
> psgeorge@infinet.com says...
> >
> >I have a question... Is there a consensus as to what is the best (feature,
> >price, etc.) satellite tracking program available (PC or Mac)? I've been
> >using WinOrbit (shareware) and it does a reasonable job, but it does lack
> >a few features such as tracking multiple satellites in the same window and
> >the ability to interface with an antenna Az/El controller.
> >
> >If anyone out there is using one or has an opinion as to which one is
> >best, I would certainly be interested in your opinion.
> >
> >Thanks!
> >
> >--
> >Paul S. George n8xqv (psgeorge@infinet.com)
> I hav tried WinSat, WinOrbit, WISP, and LogSat Professional for Windows and
> find the last the best. IMHO, its so far ahead of the rest in display,
> features (multiple satellites on same map, audio warning of satellite
> acquisition, etc) that there's absolutely NO CONTEST. I would recommend it
> most highly. Check out their web site at www.logsat.com!!
>
> -Roger WA3JYM

Thanks for the reply. I've come to that conclusion myself after trying
several different programs. They're all a little different depending upon
what you're looking for, but for amateur radio, it seems the best!

--
Paul S. George n8xqv (psgeorge@infinet.com)

1431. Re: Tonna crossed yagi - HELP.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-20 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Duv7Az.BLD@pe1chl.ampr.org>
Source record: 21902

In <oSgcuAAUf+7xEwhg@golfmike> Scott Macmillan <scott@golfmike> writes:

>Hello all, I have put up a couple of crossed yagis for satellite use.
>They are 2X9 ele for 2 meters and a 2X19 ele for 70cms, both are Tonna
>antennas.

>I have them mounted, horizontally to a 2 meter aluminium cross boom at
>a fixed 15' elevation.

>Could someone please tell me how to mount these antennas in the
>X configuration

>If they cant be fitted in the X config, does anyone know where I can get
>a fibreglass cross boom, or is it not worth the bother?

When you have no fibreglass cross boom, you don't need to bother mounting
them in X config because it will not improve the circularity.
(OTOH, it might make it easier to switch polarizations, depending on how
you do that)

You also need to feed the coax via the rear of the boom, not via the
cross boom.

Of course, you can also choose not to bother and tolerate some loss
of circularity.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1432. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-20 00:00:00 UTC
From: Dave Heil <k8mn@clinet.fi>
Message-ID: <31F153DB.261C@clinet.fi>
Source record: 21903
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

James S. Kaplan wrote:
>
> ARRL lawyer to sue member.....

>
>
> ...And here is my reply:
>
> Dear Mr. Imlay:
>
> Thank you for reading my column in the SBE Chapter 124 Newsletter
> "Water Cooled".
>
> I will not be giving you a retraction for any of my statements
> published in the July 1996 issue as you have requested. My statements
> are my personal opinions and views.....
> Sincerely,
>
> James S. Kaplan KG7FU
> Member SBE
> Member ARRL
> kg7fu@combined.com
> http://users.aol.com/kg7fu/home.htm
> KG7FU@N7DXT.#EUGEN.OR.USA.NOAM

Jim,

Whatever your beef with Chris, I don't think your posting or choice to air your differences with Chris in this particular forum reflects badly on your judgement. It is your reputation which would appear to be tarnished by handling the affair in this manner.

Dave OH2/K8MN

1433. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-20 00:00:00 UTC
From: "Anthony R. Gold" <tgold@tgold.dialup.access.net>
Message-ID: <837892570snz@tgold.dialup.access.net>
Source record: 21904
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>
kg7fu@combined.com "James S. Kaplan" writes:

> I will not be giving you a retraction for any of my statements
> published in the July 1996 issue as you have requested. My statements
> are my personal opinions and views.

Jim, you wrote and published that Chris Imlay was providing less than
fully effective legal service to two of his clients on account of
conflict of interest. And you have repeated that allegation to the
Usenet world at large.

I believe that a defense of personal opinion is not available to you
in this matter. I believe that you will need sufficient proof for
your repeated allegations of professional malpractice to have Chris
at least sanctioned if not disbarred, or your defense will fail.

> I know you'll also agree that, if you choose to pursue litigation, the
> proper forum for legal action would be an Oregon court as the column was
> written and published here.

I wonder how you know that Chris will agree with that? The same way
you know that he is providing ineffective legal services? Oh dear :-(

Regards,
--
Tony - G3SKR / AA2PM email: tgold@panix.com
tgold@microvst.demon.co.uk
packet: g3skr@n0ary.#nocal.ca.usa.na

1434. Mir Contact

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: bd703@scn.org
Message-ID: <DuvAzs.ACs@scn.org>
Source record: 21905

I finally managed to make a brief contact with Shannon aboard MIR at 17:04 UTC on July 19th.

I was so surprised she answered I couldn't think of much to say except for a greeting and telling her my name and QTH.

XCVR was a 20 year old Heathkit HW-2036A and the ant was a Hustler G6-144-A, mounted on a roof vent pipe. Power output was about 14 watts.

Kerwin, N7JGW

--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

1435. STS QSL INFO NEEDED PLS

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: jmricker@flash.net
Message-ID: <4stk3c$atf@excelsior.flash.net>
Source record: 21906

Hello I need the qsl info for STS-78 ...After 7 years of a vain effort I finally worked them on packet..So I need to qsl them...thank you..post it here or e-mail me at jmricker@flashnet.com thanks JIM

1436. Re: RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: tim phillips <drx1@ix.netcom.com>
Message-ID: <31F2CA43.7693@ix.netcom.com>
Source record: 21907

hello, you need to have full duplex i use a 10 meter rec. and a 2 meter trans.the rec. is set on a freq. where i can hear an operator on USB!!! then i transmit a am carrier and tune across the segemit of the ban just below and just above rs-10 input range listen for your tone from the carrier it will go from high pitch to low pitch as you get close to the corrected input freq.[due to doppler shift]then when you are close to the freq. when it clear to trans. [not out of turn or on a already in progress qso]transmit your call and cq while ajusting you transmit freq. to keep your audio clear [ps.switch from am to usb when you get close to the correct freq otherwise you will make a lot of operators upset on the freq below you! try cqs while rec 29.395 usb

tim kf4fco em70

1437. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: Steve Wolf <no8m@apk.net>
Message-ID: <31F2CFF4.62BA@apk.net>
Source record: 21908
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

> Jim, you wrote and published that Chris Imlay was providing less than
> fully effective legal service to two of his clients on account of
> conflict of interest. And you have repeated that allegation to the
> Usenet world at large.
>
> I believe that a defense of personal opinion is not available to you
> in this matter. I believe that you will need sufficient proof for
> your repeated allegations of professional malpractice to have Chris
> at least sanctioned if not disbarred, or your defense will fail.

Wait a second ...

If a fellow is working for two sides of an issue at the same time there
has to be no proof of conflict. You can not prosecute and defend. There
needs to be no proof.

I can't hire an FCC lawyer to represent me should I be accused of
a Part 97 rule violation. The FCC would see that, without proof, as
a conflict of interest.

Now, is the ARRL seeing their lawyer as being in a conflict of interest?
We've not heard from them. Maybe we should wait for their thoughts.
I hope they comment as I don't want to make my judgement based on
what has been presented here (and with the implications a lack of
comment would have).

Expressing an opinion that someone in a membership organization is
out of line is part of the democracy of the organization ... right?
The legal threats which resulted were sad. I would have defended
myself in a reply. Let's hope he was just too upset to see an
alternative course. If not, he's doing a pretty poopy job (I'm a
member! I'm a member!).

--
73,
Steve
Internet: no8m@apk.net
Amateur Radio: no8m@no8m.#neoh.oh.usa.na
MSYS Mail List: msys-request@hamnet.org ('info' for title)

1438. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: rlong@magnus.acs.ohio-state.eduu
Message-ID: <rlong-2107962039590001@ts4-4.homenet.ohio-state.edu>
Source record: 21909

In article <psgeorge-1607961616500001@cmh-p141.infinet.com>,
psgeorge@infinet.com (Paul S. George) wrote:

> I have a question... Is there a consensus as to what is the best (feature,
> price, etc.) satellite tracking program available (PC or Mac)? I've been
> using WinOrbit (shareware) and it does a reasonable job, but it does lack
> a few features such as tracking multiple satellites in the same window and
> the ability to interface with an antenna Az/El controller.
>
> If anyone out there is using one or has an opinion as to which one is
> best, I would certainly be interested in your opinion.
>
> Thanks!
>
> --
> Paul S. George n8xqv (psgeorge@infinet.com)

I recommend NOVA for Windows. Now available from AMSAT. A very impressive
program. Supports rotator movement and radio tuning.

Ron, w8gus.

1439. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: rogerjb@earthlink.net
Message-ID: <4sth7o$t46@bolivia.it.earthlink.net>
Source record: 21910
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <31F03CE1.48A6@his.com>, Jeff Cook <jcook@his.com> writes:
>There also may be some liability in publicly posting a private legal communication, I
>don't know. But I do know that spraying the net (8 newsgroups?) with your private gripe
>is kind of obnoxious and seems intended to intimidate your "opponent". If you wanted
>opinions from the group(s) about the original complaint, you should have discussed it
>with us legitimately. You may be a bit casual with your use of mass communication, and
>you may have also added to your difficulties by posting this way.
>
>--
>Jeff Cook

I am only a gonnabe lawyer, so I'm not going to express any legal opinions
regarding this dispute. However, I am going to say that I don't care much
for a scenario where a lawyer threatens litigation against someone who airs
an opinion that the lawyer is acting improperly. The First Amendment was
written precisely to permit ordinary citizens to criticize powerful members of
society without fearing legal retribution. When an attorney seeks to exploit
his stronger position vis'a'vis his ability to litigate, in order to suppress
free speech, this is not good.

In fact, I suspect (this is not a legal opinion, just a guess) that a court would
make short work of any libel case connected with this matter.

As far as the use of the internet goes, I kind of think that the internet
strengthens free speech, by giving those without ordinary media access
a public forum in which to express opinions. Nothing wrong with that, in
my opinion.

Roger J. Buffington
W6VZV
USC Law School Class of '97

rogerjb@earthlink.net

"I want to die peacefully, in my sleep, like my grandfather.
Not screaming, and in terror, like his passengers."

1440. Re: Mir Contact

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4stn35$pp2@news.mhv.net>
Source record: 21911

In article <DuvAzs.ACs@scn.org>, bd703@scn.org (SCN User) wrote:
>
>I finally managed to make a brief contact with Shannon aboard MIR at 17:04
>UTC on July 19th.
>
>I was so surprised she answered I couldn't think of much to say except for
>a greeting and telling her my name and QTH.
>
>XCVR was a 20 year old Heathkit HW-2036A and the ant was a Hustler G6-144-A,
>mounted on a roof vent pipe. Power output was about 14 watts.
>
>Kerwin, N7JGW

Congrats Kerwin! Nice to see low power stations getting a chance! Now
maybe it's MY turn!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1441. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-21 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199607222234.PAA22219@UCSD.EDU>
Source record: 21912

```
From Ham-Space Tue Jul 16 07:30:23 PDT 1996 remote from UCSD.EDU
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA23066; Tue, 16 Jul 96 13:41:04 PDT
Received: by mail.ucsd.edu; id HAA25256
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:28 -0700 for ham-space-list
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Received: by mail.ucsd.edu; id HAA25233
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:25 -0700 for ham-space-ddist
Message-Id: <199607161430.HAA25233@ mail.ucsd.edu>
Date: Tue, 16 Jul 96 07:30:23 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #212
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 16 Jul 96 Volume 96 : Issue 212

Today's Topics:
Check this out!
NORAD Two-Line Orbital Element Sets (TLE837)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 16 Jul 96 15:09:48 GMT
From: sean@Alpha.remcan.CA (Commander Scott)
Subject: Check this out!

Check this out!
Http://personal.solutions.net/sean/

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```

Date: 16 Jul 1996 02:04:36 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE837)

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #837 -
Alouette 1
1 00424U 62049A 96195.84672760 .00000039 00000-0 35264-4 0 2136
2 00424 80.4577 257.4368 0023446 328.7384 31.2363 13.67871755685986
ATS 1
1 02608U 66110A 96194.78606088 -.00000310 00000-0 10000-3 0 9733
2 02608 14.6260 352.5799 0009800 87.5178 272.5718 1.00325435 25125
ATS 3
1 03029U 67111A 96192.59042381 -.00000129 00000-0 10000-3 0 5150
2 03029 14.9131 359.5380 0009716 266.3034 130.1295 1.00273128105006
Starlette
1 07646U 75010A 96193.91392998 -.00000158 00000-0 -12681-4 0 9835
2 07646 49.8285 51.1347 0205958 312.0967 46.2571 13.82190657 82387
LAGEOS
1 08820U 76039A 96196.00766422 .00000027 00000-0 10000-3 0 2076
2 08820 109.8495 35.1996 0043748 123.3538 237.1425 6.38664527215548
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96192.42461677 .00000041 00000-0 10000-3 0 6949
2 10061 12.3950 36.8232 0009984 123.2991 106.2424 1.00269783 14674
IUE
1 10637U 78012A 96188.56861855 -.00000299 00000-0 10000-3 0 2618
2 10637 35.7646 82.8008 1369203 57.3851 306.0860 1.00234551 20128
GPS BI-01
1 10684U 78020A 96185.95606993 -.00000046 00000-0 10000-3 0 4576
2 10684 64.9837 23.3942 0059419 162.4329 197.8036 1.98069263119746
GPS BI-02
1 10893U 78047A 96193.10986887 -.00000002 00000-0 10000-3 0 2576
2 10893 63.1525 260.2372 0220445 12.1179 348.4854 2.01628491133292

```
GOES 3
1 10953U 78062A 96191.48140523 -.00000149 00000-0 10000-3 0 6776
2 10953 11.3887 39.7333 0001193 55.6695 264.5283 1.00270767 19275
SeaSat 1
1 10967U 78064A 96195.51811575 -.00000048 00000-0 28607-4 0 5009
2 10967 107.9918 229.2355 0001599 268.2436 91.8522 14.38112737945230
GPS BI-03
1 11054U 78093A 96192.22934847 -.00000046 00000-0 10000-3 0 4152
2 11054 62.8815 259.4926 0046988 210.4881 149.2731 1.93503395131155
Nimbus 7
1 11080U 78098A 96195.59881963 -.00000106 00000-0 -58125-4 0 6004
2 11080 98.9403 56.5543 0008219 256.6917 103.3322 13.83692030894829
GPS BI-04
1 11141U 78112A 96195.77204059 -.00000040 00000-0 10000-3 0 531
2 11141 65.0081 25.5761 0050515 28.7277 331.5997 1.92894645 18391
GPS BI-05
1 11690U 80011A 96191.78365581 -.00000041 00000-0 10000-3 0 380
2 11690 65.3225 24.6756 0144334 189.6592 170.1068 2.00573067134653
GPS BI-06
1 11783U 80032A 96189.50378254 -.00000013 00000-0 10000-3 0 1542
2 11783 62.2998 252.9800 0227212 29.4591 331.8749 2.03456300119245
GOES 5
1 12472U 81049A 96186.71771309 .00000045 00000-0 10000-3 0 9389
2 12472 8.2090 49.9739 0006614 43.1097 316.9311 1.00225471 13278
Cosmos 1383
1 13301U 82066A 96192.87593836 .00000026 00000-0 13087-4 0 5106
2 13301 82.9325 116.4378 0026949 171.6279 188.5327 13.68075455700614
LandSat 4
1 13367U 82072A 96196.22102251 .00092930 00000-0 20289-1 0 9642
2 13367 98.0718 246.3202 0008212 61.3064 298.8921 14.57219606744473
DMSP B5D2-1
1 13736U 82118A 96195.89333826 -.00000005 00000-0 16285-4 0 399
2 13736 98.6253 23.8499 0008262 316.6563 43.3972 14.25792217704872
IRAS
1 13777U 83004A 96196.03264266 .00000146 00000-0 13033-3 0 3718
2 13777 98.9661 20.9583 0014089 24.0475 336.1342 13.99261995357121
Cosmos 1447
1 13916U 83021A 96194.91882855 .00000045 00000-0 31477-4 0 6047
2 13916 82.9462 172.0118 0039634 80.0541 280.5092 13.74342813667276
TDRS 1
1 13969U 83026B 96190.00000000 -.00000311 00000-0 10000-3 0 6034
2 13969 9.0208 43.4770 0002052 62.8648 131.2953 1.00276394 21590
GOES 6
1 14050U 83041A 96191.17490182 -.00000258 00000-0 10000-3 0 5248
2 14050 7.0547 53.5716 0004704 32.9229 184.9434 1.00245687106412
OSCAR 10
1 14129U 83058B 96195.18218122 .00000086 00000-0 10000-3 0 4359
2 14129 26.0898 199.9837 6016060 31.5921 353.5689 2.05879130 70403
LandSat 5
1 14780U 84021A 96196.20816177 .00068222 00000-0 14998-1 0 4940
```

```
2 14780 98.3288 254.0228 0002026 182.5388 177.5799 14.57098244657869
UoSat 2
1 14781U 84021B 96193.91881453 .00000058 00000-0 17681-4 0 8970
2 14781 97.8022 183.5469 0012748 16.4343 343.7277 14.69464418661283
GPS BI-09
1 15039U 84059A 96195.77358673 -.00000047 00000-0 10000-3 0 4216
2 15039 64.6363 19.8915 0082848 19.5516 340.7915 1.92302503 87940
Cosmos 1574
1 15055U 84062A 96193.65342895 .00000032 00000-0 18688-4 0 8041
2 15055 82.9566 227.8920 0026408 275.4823 84.3320 13.73636876604342
GPS BI-10
1 15271U 84097A 96195.29193552 .00000035 00000-0 10000-3 0 1747
2 15271 62.1776 253.3759 0107097 158.6070 201.9333 1.92618634 171
Cosmos 1602
1 15331U 84105A 96192.77360393 .00000261 00000-0 27927-4 0 4878
2 15331 82.5337 90.9397 0018301 229.0009 130.9619 14.84767235636477
NOAA 9
1 15427U 84123A 96195.81883996 .00000015 00000-0 31541-4 0 7665
2 15427 98.9468 260.7583 0013870 237.5572 122.4254 14.13791073597395
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96195.74118053 .00001806 00000-0 26776-4 0 5918
2 16609 51.6505 350.3886 0009988 298.5256 61.4749 15.61496089594121
SPOT 1
1 16613U 86019A 96193.80855038 .00003042 00000-0 14317-2 0 9634
2 16613 98.8270 261.8282 0000144 284.2533 75.9182 14.19982628223894
Cosmos 1766
1 16881U 86055A 96194.34540815 .00000196 00000-0 20762-4 0 4023
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RS-10/11
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2 18312 82.5540 332.8781 0012555 146.2825 213.9133 13.84081365449524
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2 22521 31.1052 275.4693 0055673 40.3075 320.1590 15.02959156186005
UFO F1
1 22563U 93015A 96190.00000000 -.00000060 00000-0 00000+0 0 5106
2 22563 25.2792 288.3108 0006817 241.1248 135.8807 0.99253096 12245
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1 22581U 93017A 96194.87101981 -.00000099 00000-0 10000-3 0 5531
2 22581 55.2350 346.9909 0092859 63.6550 297.3490 2.00556717 24135
ARSENE
1 22654U 93031B 96185.89919393 -.00000130 00000-0 10000-3 0 3684
2 22654 3.2456 72.7830 2869933 239.7521 88.6120 1.42203385 11833
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1 22657U 93032A 96195.50472214 -.00000099 00000-0 10000-3 0 6736
2 22657 55.2296 346.8309 0082831 223.4015 135.9411 2.00572216 19475
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2 22698 89.5430 270.1231 0088808 246.2806 112.9048 14.21375505157915
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2 22700 54.1870 227.4944 0049488 357.4029 2.6404 2.00557509 22152
NOAA 13
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2 22739 99.0455 151.2823 0009997 146.5693 213.6236 14.10968007150811
GPS BIIA-22
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2 22779 54.3488 286.2824 0015856 261.1783 98.6837 2.00573888 21001
Meteor 2-21
1 22782U 93055A 96195.89752165 .00000043 00000-0 26174-4 0 4970
2 22782 82.5491 325.9680 0020955 264.1907 95.6863 13.83056701144825
UFO F2
1 22787U 93056A 96194.80799133 -.00000066 00000-0 00000+0 0 6560
2 22787 4.1201 326.9502 0003234 108.2054 218.1174 1.00268498 9084
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1 22823U 93061A 96193.91217263 -.00000044 00000-0 00000+0 0 5663
2 22823 98.6987 267.2380 0001343 74.4885 285.6440 14.20043018144743
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1 22824U 93061B 96196.24105782 -.00000012 00000-0 12955-4 0 4857
2 22824 98.5794 270.6880 0006316 146.8398 213.3179 14.27105340145797
AO-27
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2 22825 98.5774 267.4055 0008616 158.6860 201.4681 14.27698940145287
IO-26
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2 22826 98.5801 270.4617 0008759 149.9439 210.2215 14.27808037145719
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2 22829 98.5782 269.1325 0010313 141.0030 219.1890 14.28127107145530
KO-25
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2 22830 98.4677 258.6281 0012154 111.8745 248.3730 14.28111753145673
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1 22912U 93073B 96195.54967669 -.00000096 00000-0 00000+0 0 5036
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HST Array
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2 22969 82.5581 243.0432 0015002 172.4384 187.7025 13.16737285118300
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2 22970 82.5579 242.7172 0015916 169.0665 191.0806 13.16827976118351
GPS BIIA-24
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2 23027 55.2090 348.7863 0066508 204.3006 155.4182 2.00557640 17313
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1 23043U 94021A 96193.00723985 -.00000085 00000-0 10000-4 0 3757
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1 23044U 94021B 96193.82824900 -.00000086 00000-0 00000+0 0 3437
2 23044 64.6399 323.0364 0030015 201.9911 157.8762 2.13102807 17531
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1 23045U 94021C 96195.41328448 -.00000084 00000-0 00000+0 0 3529
2 23045 64.6243 322.9874 0010861 34.9517 325.1152 2.13102045 17567
GOES 8
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2 23051 0.0843 97.1278 0005090 45.1287 139.6029 1.00261698 15631
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2 23204 64.7646 203.2785 0015228 340.5552 19.4268 2.13102245 14943
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1 23205U 94050C 96195.66708694 .00000077 00000-0 00000+0 0 3083
2 23205 64.7659 203.2433 0003575 280.4891 79.5079 2.13102613 14966
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1 23233U 94057A 96195.78143459 .00000075 00000-0 64054-4 0 8465
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OKEAN 1-7
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2 23317 82.5445 34.1940 0026298 355.6852 4.4140 14.74028250 94513
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RESURS 1-3
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2 23396 65.0921 83.4452 0028971 190.8420 203.7758 2.13102613 12762
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2 23397 65.0851 83.3674 0012692 323.6169 36.3578 2.13102181 12815
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2 23533 98.8388 197.9722 0007430 350.3980 9.7047 14.12745324 67396
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2 23797 48.0390 242.0295 7071268 36.7106 355.9474 2.62358387 3297
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2 23948 0.1715 87.8152 0553889 173.2250 225.8868 1.08503299 74
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1 23951U 96040D 96194.34482006 .00056486 00000-0 66844-2 0 29
2 23951 6.9595 81.2596 7287664 180.0099 179.0648 2.29235954 55
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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End of Ham-Space Digest V96 #212
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1442. Re: RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: bperr@premier1.net
Message-ID: <4sum1k$7ai@news.premier1.net>
Source record: 21913

kharker@cs.utexas.edu (Kenneth E. Harker) spat forth this?...:

> So, 1) do I transmit on LSB or USB? and 2) how do I tell whether or
>not I'm hearing my own harmonic or a real downlink? I know the antennas
>are probably not optimal for satellite work, but it's what the club's got
Kenneth,
Transmit in USB As The Satellite Is Not Inverting Your SSB Signal From
USB To LSB As Some satellites do.
Here is a little formula to find your downlink frequency but does not
compensate for Doppler Shift. You'll have to tune around a little to
find your downlink.

F(down) = -116.5 + F(Uplink)

The -116.5 is a translation constant The formula should get you in the
ball park.

By the way you might try lowering your 2 meter xmit power if you are
overloading the 10 meter recv downlink side..
Hope this helps
Maybe i'll catch ya on rs-10 sometime!
73
Bruce Perrine WA7LZE
bperr@premier1.net
Sysop NorthWest Soft Systems BBS
206-513-1437

E-Mail
bperr@premier1.net

1443. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: "Anthony R. Gold" <tgold@tgold.dialup.access.net>
Message-ID: <838036229snz@tgold.dialup.access.net>
Source record: 21914
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <31F2CFF4.62BA@apk.net> no8m@apk.net "Steve Wolf" writes:

> If a fellow is working for two sides of an issue at the same time there
> has to be no proof of conflict. You can not prosecute and defend. There
> needs to be no proof.

Not necessarily, it must depend on how many sides there are. The
question is not whether Chris is working for two sides of an issue
but whether it is for two *opposing* sides. Is there an issue for
which he represents two parties where the advancement of one of his
clients' will come from a disadvantage to the other? If so, then
this would be a conflict. What is that issue where this now obtains
for Chris Imlay, Steve? Is the SBE petitioning for 2m? Is the ARRL
going after the TV bands? Do the parties have conflicting positions
on responsibility for EMC?

> Expressing an opinion that someone in a membership organization is
> out of line is part of the democracy of the organization ... right?

The criticism was not about membership behavior but about the
behavior of a professional employee of two membership organizations
in that employee's professional capacity. Chris did not lose his
rights to defend his professional reputation by joining one or more
of the client organizations.

Regards,
--
Tony - G3SKR / AA2PM email: tgold@panix.com
tgold@microvst.demon.co.uk
packet: g3skr@n0ary.#nocal.ca.usa.na

1444. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199607222234.PAA22217@UCSD.EDU>
Source record: 21915

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From smtp Sun Jul 14 09:43 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sun, 14 Jul 96 09:43 PDT
Received: by mail.ucsd.edu; id EAA20773
sendmail 8.6.12/UCSD-2.2-sun
Sun, 14 Jul 1996 04:30:32 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA20758
sendmail 8.6.12/UCSD-2.2-sun
Sun, 14 Jul 1996 04:30:30 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 13613
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199607141130.EAA20758@ mail.ucsd.edu>
Date: Sun, 14 Jul 96 04:30:29 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #209
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sun, 14 Jul 96 Volume 96 : Issue 209

Today's Topics:
Amateur Setups for SETI?
ARLK050 Keplerian data
KO-23 Anomaly (2 msgs)
Mir 440 Safex Beacon (2 msgs)
MIR on UHF
NASA [Re:]
NASA TV (2 msgs)
Satellite ATV?

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Sat, 13 Jul 1996 19:58:02 GMT
From: toth.22@osu.edu (Captain Zyrain)
Subject: Amateur Setups for SETI?

Anyone know of a good way of building a home-based, lowcost radio antenna to
do amateur SETI?

Thanks!

Date: 13 Jul 1996 13:56:36 -0400
From: w1aw@arrl.org
Subject: ARLK050 Keplerian data

SB KEP @ ARL $ARLK050
ARLK050 Keplerian data

ZCZC SK50
QST de W1AW
Keplerian Bulletin 50 ARLK050

Date: 13 Jul 1996 14:18:59 GMT
From: kc5egg@ix.netcom.com (Gerald Schmitt)
Subject: KO-23 Anomaly

Hi All,

I am having a bit of trouble with KO-23. I receive a strong signal
that is seen by both the radio and TNC but the TNC doesn't see it
as data. The same setup works fine on KO-25 so I think the radio
etc. are fine. Is anyone else having the same problem.

73 Jerry KK5YY

Date: Sat, 13 Jul 1996 22:13:48 -0500
From: rparsons@bga.com (Ronald G. Parsons)
Subject: KO-23 Anomaly

In article <4s8b8j$2kq@dfw-ixnews4.ix.netcom.com>,
kc5egg@ix.netcom.com(Gerald Schmitt) wrote:

> Hi All,
>
> I am having a bit of trouble with KO-23. I receive a strong signal
> that is seen by both the radio and TNC but the TNC doesn't see it
> as data. The same setup works fine on KO-25 so I think the radio
> etc. are fine. Is anyone else having the same problem.
>
> 73 Jerry KK5YY

KO-23 is down currently.

Ron W5RKN

--
Ron W5RKN

Date: 13 Jul 1996 15:20:49 GMT
From: dhend@cyberportal.net
Subject: Mir 440 Safex Beacon

Hio all the Mir space station is beaconing on the 437.925 freq it is supposed to be a repeater with a tone, but I have no ideas as to what tone
Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

Date: Sun, 14 Jul 96 01:29:55 GMT
From: trandall@mhv.net
Subject: Mir 440 Safex Beacon

In article <4s8esh$1i9@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Hio all the Mir space station is beaconing on the 437.925 freq it is supposed
> to be a repeater with a tone, but I have no ideas as to what tone
>Yuri and Shannon are at least on a beacon.. you can hear them.. 73 DAVE
>
>
>e-mail=dhend@cyberportal.net
> packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
> phone 1-603-542-2493 1-603-542-6917

Thanks for the info Dave! I hope we can more info as it's available!
What's the status of the 2 meter packet station? I miss it!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 13 Jul 1996 20:04:18 GMT
From: ka0yos@arn.net (ka0yos)
Subject: MIR on UHF

Howdy,

It sounds like the SAFEX experiment has started on MIR! Try
listening on 437.925 MHz.

73,
Joe

Date: 12 Jul 1996 20:10:52 GMT
From: rfallon@ix.netcom.com (Ray Fallon)
Subject: NASA [Re:]

jgarver@ichips.intel.com wrote

>As a taxpayer who is funding NASA, I was delighted with the payback
>when they started their TVRO service. Now that they scramble during
>the most interesting times, 4 plex the video (I can't blink that
>fast), and do other weird stuff to ruin my reception, I realize that
>they didn't have ME in mind afterall. No wonder they don't get funded
>anymore.
>
--
>jgarver@ichips.intel.com WA7LDV I don't speak for Intel

Jim, your talking about the SN2 Transponder 5 signal which is the one
that is scrambled. The Transponder 9 signal is in the clear, but
nowadays they are showing a lot of the inside of the Johnson Space
Center instead of the camera located inside the payload bay. Even then
it is still worth it. The Mir linkups have been spectacular.

- Ray WA1WZF

Date: 12 Jul 1996 16:16:43 GMT
From: jgarver@ichips.intel.com (Jim Garver)
Subject: NASA TV

In article <31E32200.45FD@prolog.net>, Dan Sndyer <dwsnyder@prolog.net> wrote:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

>Thanks for any comments!! (kind ones that is... :)

I am cross-posting and followup this to rec.video.satellite.tvro where
it more properly belongs. Somewhere there you can get the Scrounger's
Guide to TVRO, which will tell you how to set up a dish for $100.
I myself have an old dish setup suitable for this which I have not been
able to give away until recently. And NO, a General Coverage receiver
is not going to help at all, at least for NASA Select.

As a taxpayer who is funding NASA, I was delighted with the payback when they
started their TVRO service. Now that they scramble during the most
interesting times, 4 plex the video (I can't blink that fast), and do
other weird stuff to ruin my reception, I realize that they didn't have

ME in mind afterall. No wonder they don't get funded anymore.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

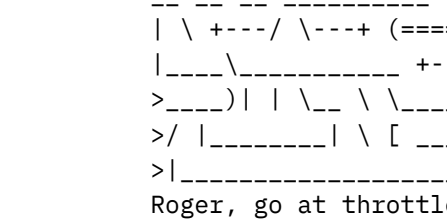
Date: 13 Jul 1996 06:21:50 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: NASA TV

In article <31E32200.45FD@prolog.net> Dan Sndyer, dwsnyder@prolog.net
writes:
>Does anyone know the basic equipment needed to pluck the NASA TV signal
>off Spacenet 2 without sinking a couple thousand in satellite Tv
>equipment? I have cable and don't care about all the other programming.
>Can the above be accomplished with a General Coverage receiver and the
>proper antenna?

Not a general coverage receiver. During shuttle missions there are many
NASA audio retransmissions by hams, most notably the Goddard Spaceflight
Center's WA3NAN amateur radio club on various shortwave frequencies. But
that's only during shuttle missions.

You don't need a couple of thousand dollars for a true satellite receiver
-- especially if you're a real ham. If you've got mechanical skills, can
crimp a couple of cables together, and if you know how to bargain for old
junk equipment (all imporant skills for hams) then you can put together
your own satellite dish.

A scrounged satellite dish can be put together for anywhere from almost
nothing to a couple of hundred dollars. My particular setup cost $500,
and that's only because I wanted a descrambler and a new receiver. Old
systems and components can be had for a song or less. There's an
excellent document "The Scrounger's Guide to TVRO" which you can get via
the Robert Smathers web site http://www.nmia.com/~roberts/ and go to the
icon "Gary's information files". Excellent information.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: Sat, 13 Jul 1996 05:26:22 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Satellite ATV?

In article <4s6vue$baq@oldfart.ecl.wustl.edu> bjl1@cec.wustl.edu (Bradley James Lindseth) writes:
>
>I was wondering if there is any fast scan ATV over amateur radio satellites? It seems like something
>neat to do since it would be like running your own satellite network. It would give one an idea of what
>the commercial satellite uplinkers do.

None of the current amateur satellites have the transponder bandwidth
or power necessary to do fast scan ATV. SSTV is possible, however, but
it is discouraged because it is a constant carrier mode and hogs the
shared transponder's power from other users.

You'd need a 22 MHz wide transponder to do the FM TV that the commercial
TV satellites do. Even VSB requires a 6 MHz transponder (and lacking
the FM enhancement factor, would need lots more transponder power to
achieve an equivalent baseband SNR).

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

Date: (null)
From: (null)

SB KEP ARL ARLK050
ARLK050 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96194.07721258 .00001820 00000-0 26941-4 0 05897
2 16609 51.6510 358.7660 0009755 289.9593 70.0330 15.61488654593860
AO-10
1 14129U 83058B 96194.21080117 .00000048 00000-0 10000-3 0 4340
2 14129 26.0924 200.1428 6015984 31.3128 353.6223 2.05879639 70381
RS-10/11
1 18129U 87054A 96193.91228971 .00000029 00000-0 15321-4 0 02587
2 18129 82.9258 130.2665 0013230 83.8478 276.4183 13.72367083453561
UO-11
1 14781U 84021B 96193.98690756 .00000056 00000-0 17273-4 0 08987
2 14781 97.8022 183.6120 0012729 16.2542 343.9070 14.69464406661297

```
RS-12/13
1 21089U 91007A 96194.08981614 .00000058 00000-0 45282-4 0 09058
2 21089 82.9223 170.8740 0028115 160.9147 199.3041 13.74072046272451
AO-13
1 19216U 88051B 96193.00850974 .00005324 00000-0 11084-2 0 02377
2 19216 57.2032 105.4888 7433728 44.6643 355.1121 2.09979169030345
UO-14
1 20437U 90005B 96193.75064845 .00000002 00000-0 17418-4 0 02009
2 20437 98.5438 276.3072 0011688 126.3926 233.8330 14.29925500337568
RS-15
1 23439U 94085A 96193.93291282 -.00000039 00000-0 10000-3 0 01473
2 23439 64.8192 343.0678 0160273 194.7545 164.8673 11.27527416063570
AO-16
1 20439U 90005D 96193.77748649 .00000009 00000-0 20380-4 0 00067
2 20439 98.5579 278.5972 0011830 127.7679 232.4576 14.29979434337582
DO-17
1 20440U 90005E 96193.79729036 .00000003 00000-0 17979-4 0 00109
2 20440 98.5606 279.2685 0011828 126.4467 233.7806 14.30121327337618
WO-18
1 20441U 90005F 96193.78766533 -.00000017 00000-0 10347-4 0 00032
2 20441 98.5601 279.1947 0012333 127.4036 232.8270 14.30090606337619
LO-19
1 20442U 90005G 96193.78160776 .00000015 00000-0 22488-4 0 00137
2 20442 98.5623 279.6939 0012704 126.1032 234.1328 14.30199798337637
FO-20
1 20480U 90013C 96194.10072277 -.00000017 00000-0 27057-4 0 09008
2 20480 99.0254 214.2204 0541222 68.0479 297.7225 12.83233979301083
AO-21
1 21087U 91006A 96193.83078958 .00000094 00000-0 82657-4 0 07353
2 21087 82.9375 303.4579 0035534 135.1483 225.2555 13.74570084273399
UO-22
1 21575U 91050B 96194.11657173 .00000026 00000-0 23040-4 0 07196
2 21575 98.3494 259.7601 0007072 186.2695 173.8405 14.37029493261641
KO-23
1 22077U 92052B 96194.05401672 -.00000037 00000-0 10000-3 0 05913
2 22077 66.0765 137.3932 0013784 291.8210 68.1338 12.86297045184000
KO-25
1 22828U 93061F 96194.13572227 .00000013 00000-0 22455-4 0 04754
2 22828 98.5758 269.4616 0010067 137.7114 222.4847 14.28146086113675
IO-26
1 22826U 93061D 96193.74002100 .00000053 00000-0 39074-4 0 05004
2 22826 98.5800 269.0164 0008599 154.6424 205.5176 14.27808494145505
AO-27
1 22825U 93061C 96194.09598696 .00000021 00000-0 26089-4 0 04985
2 22825 98.5776 269.1943 0008502 153.0806 207.0834 14.27699417145548
PO-28
1 22829U 93061G 96194.15269213 .00000019 00000-0 25006-4 0 04790
2 22829 98.5782 269.5454 0010323 139.8084 220.3864 14.28127167145599
```

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
July 16, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #209
****

1445. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: whowell@ici.net
Message-ID: <4t00fn$mm9@bashir.ici.net>
Source record: 21916
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

>Roger J. Buffington
>W6VZV
>USC Law School Class of '97
>
>rogerjb@earthlink.net
>
>"I want to die peacefully, in my sleep, like my grandfather.
>Not screaming, and in terror, like his passengers."
>

fellow hams,

I may have been wrong about ALL lawyers,
of course,
Roger ain't really a lawyer, yet.

73 Bill N1IPQ

1446. Re: STS QSL INFO NEEDED PLS

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <4sul43$1s7@news.mhv.net>
Source record: 21917

In article <4stk3c$atf@excelsior.flash.net>, jmricker@flash.net wrote:
> Hello I need the qsl info for STS-78 ...After 7 years of a vain
>effort I finally worked them on packet..So I need to qsl them...thank
>you..post it here or e-mail me at jmricker@flashnet.com thanks JIM
>

QSL them via the ARRL EAD Dept.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1447. Re: NASA TV

Newsgroup: rec.radio.amateur.space
Date: 1996-07-22 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4t0nsg$d28@sloth.swcp.com>
Source record: 21918

>Hi DAn

>Sounds like you want half a job.

>Satellites don't work like that.

Well, how about telling Dan about the other "half" of the "job" so
he can get things put together?
73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700 QRP-L# 580
Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1448. ARLK052 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-23 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk052.1996@arrl.org>
Source record: 21820
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK052
ARLK052 Keplerian data

ZCZC SK52
QST de W1AW
Keplerian Bulletin 52 ARLK052
From ARRL Headquarters
Newington, CT July 23, 1996
To all radio amateurs

SB KEP ARL ARLK052
ARLK052 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96205.46885021 .00000994 00000-0 17479-4 0 5978
2 16609 51.6506 301.3655 0010044 335.4891 24.5631 15.61528365595644
HST
1 20580U 90037B 96205.59903778 .00000312 00000-0 15591-4 0 8264
2 20580 28.4688 344.5017 0005953 192.6129 167.4309 14.91076187144024
AO-10
1 14129U 83058B 96202.95296431 -.00000016 00000-0 10000-3 0 04413
2 14129 26.0748 198.7048 6020779 33.6191 353.0521 2.05882248070563
RS-10/11
1 18129U 87054A 96205.28589436 .00000018 00000-0 29971-5 0 02526
2 18129 82.9264 121.8630 0013384 55.6942 304.5478 13.72367296455129
UO-11
1 14781U 84021B 96205.42653595 -.00000043 00000-0 62304-6 0 09165
2 14781 97.8012 194.5382 0011911 341.5114 18.5666 14.69465960662976
RS-12/13
1 21089U 91007A 96205.44936205 -.00000004 00000-0 -20717-4 0 09326
2 21089 82.9220 162.4494 0029172 128.7703 231.6065 13.74071193274017
AO-13
1 19216U 88051B 96204.91001721 .00007910 00000-0 13576-2 0 02436
2 19216 57.1802 103.0917 7435495 45.6678 355.0783 2.10138921030593
UO-14
1 20437U 90005B 96205.29631132 .00000026 00000-0 27003-4 0 1984
2 20437 98.5435 287.6356 0011934 94.6259 265.6286 14.29926589339210
```

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RS-15
1 23439U 94085A 96205.46309431 -.00000039 00000-0 10000-3 0 01606
2 23439 64.8196 324.4214 0160299 192.7109 166.9750 11.27527907064873
AO-16
1 20439U 90005D 96205.25274298 .00000015 00000-0 22769-4 0 00024
2 20439 98.5580 289.8782 0012099 95.1548 265.1012 14.29980111339224
DO-17
1 20440U 90005E 96205.27140818 .00000002 00000-0 17571-4 0 00041
2 20440 98.5605 290.5535 0012258 94.4418 265.8163 14.30121951339252
WO-18
1 20441U 90005F 96205.26202907 .00000015 00000-0 22477-4 0 11
2 20441 98.5601 290.4790 0012695 95.1587 265.1041 14.30091437339254
LO-19
1 20442U 90005G 96205.39501648 -.00000027 00000-0 64967-5 0 00060
2 20442 98.5595 291.1191 0013165 94.0998 266.1643 14.30200235339298
FO-20
1 20480U 90013C 96205.09364409 .00000013 00000-0 97337-4 0 08956
2 20480 99.0247 223.1208 0541194 43.1803 321.0439 12.83234434302492
AO-21
1 21087U 91006A 96205.33180344 .00000094 00000-0 82657-4 0 07311
2 21087 82.9386 294.9479 0036110 103.4386 257.0798 13.74570332274978
UO-22
1 21575U 91050B 96205.18747379 .00000017 00000-0 20016-4 0 07149
2 21575 98.3488 270.5000 0007670 151.4751 208.6852 14.37030411263231
KO-23
1 22077U 92052B 96205.25006977 -.00000037 00000-0 10000-3 0 06110
2 22077 66.0759 113.9524 0013779 286.2842 73.6660 12.86296595185440
KO-25
1 22828U 93061F 96205.20533153 .00000004 00000-0 19107-4 0 04693
2 22828 98.5761 280.3371 0010793 107.0629 253.1738 14.28146675115256
IO-26
1 22826U 93061D 96205.23271612 .00000021 00000-0 26151-4 0 04925
2 22826 98.5772 280.3016 0009431 121.1742 239.0356 14.27808814147143
AO-27
1 22825U 93061C 96205.23914255 -.00000017 00000-0 10669-4 0 4890
2 22825 98.5774 280.1366 0008958 120.2151 239.9917 14.27699580147136
PO-28
1 22829U 93061G 96205.22244768 .00000022 00000-0 26220-4 0 04972
2 22829 98.5775 280.4176 0010711 108.3754 251.8592 14.28128124147177

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
July 27, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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1449. FS: Yeasu FT-757GX CAT HF RIG

Newsgroup: rec.radio.amateur.space
Date: 1996-07-23 00:00:00 UTC
From: cono@hobbs.com
Message-ID: <8C50377.002B000CA5.uuout@hobbs.com>
Source record: 21821
Cross-posted to: rec.radio.swap,rec.radio.amateur.space

I have forsale a Yeaseu FT-757GX Cat HF Radio and External Antenna Tuner, Heavy duty power supply in MINT Condition! 1000.00 OBO call 201-440-6566

FT-40/41 440 HT forsale, has Quick Charger (NC-50) and exter 5 watt Battery. $275.00 for the radio $75.00 for the quick charger. $30.00 for the FNB41 5 watt battery.

I would consider a trades for:

A Kenwood TS-940AT in Good working order.
A Yeasu FT1000 in Good working order.

CALL 201-440-6566

cono@hobbs.com

......ooooo0OOOOo http://www.intac.com/~cono
___,-----.----+_________#_ The Roy Hobbs BBS cono@hobbs.com
|________| |__|__________} Node 1: 201-641-7307
ooooo oo ~ ooO-O-O-O == oo\ Node 2: 201-641-3126

1450. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-24 00:00:00 UTC
From: pacrimgolf@kuentos.guam.net
Message-ID: <4t4ssa$g9r@lehi.kuentos.guam.net>
Source record: 21822
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

If you guys want to discuss lawyers and the ARRL, fine. Go for it.
But why does this discussion need to be in six different amateur news
groups ? Why not move it to one, maybe .policy, so those of us who
want to read it can, and those of us who don't want to don't have to
delete it six times every day when we download mail ?

Thanks,
Jim KH2D

(Yes, I know I posted this to all the newsgroups.....)

1451. ARLS008 STS-79 update

Newsgroup: rec.radio.amateur.space
Date: 1996-07-24 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls008.1996@arrl.org>
Source record: 21823
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS008
ARLS008 STS-79 update

ZCZC AS16
QST de W1AW
Space Bulletin 008 ARLS008
From ARRL Headquarters
Newington, CT July 24, 1996
To all radio amateurs

SB SPACE ARL ARLS008
ARLS008 STS-79 update

If you missed out on a chance to talk to the space shuttle during the recently completed SAREX mission, the next shuttle flight, STS-79, has been rescheduled for September 15 for a nine-day mission. This, the fourth Mir docking mission, will use SAREX configuration ''M,'' which is FM voice, using the Shuttle-Mir 2-meter radio. Three schools--two in the US and one in England--have been confirmed for SAREX QSOs during STS-79. They are: Andover Middle School in Andover, Kansas, Immaculate Conception Elementary School in Celina, Ohio, and The Royal School for Girls in Surrey, England.

Three hams will be aboard space shuttle Atlantis for STS-79. Jay Apt, N5QWL, a mission specialist, has flown on three previous shuttle missions and used Amateur Radio on each flight. Carl Walz, KC5TIE, participated in SAREX from Columbia during STS-65 in July 1994, before earning his ham ticket. Flying his fifth shuttle mission is John Blaha, KC5TZQ, a mission specialist. During STS-79, Blaha will switch places with astronaut Shannon Lucid, and remain with the Mir space station for 5 months. Lucid has been aboard Mir since March 1996. Other STS-79 crew members include Commander William Readdy, Pilot Terrence Wilcutt and Mission Specialist Thomas Akers.

Shuttle mission STS-78 with the shuttle Columbia made history as it broke previous records for mission duration, spending close to 17 days in space before returning to Earth July 7. The flight's SAREX payload also was a huge success. The astronauts made all 11 scheduled SAREX contacts with school groups in the US, Australia, France and Canada, plus many unscheduled SAREX QSOs.
NNNN
/EX

1452. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-24 00:00:00 UTC
From: jrouse@infi.net
Message-ID: <4t66p7$bkl@nw101.infi.net>
Source record: 21824
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

This is certainly a good way for an attorney prohibited from advertising
his services to get more free advertising than he could possibly
imagine! I suspect, However, Chris could have meandered well into
his sunset years without having to to endure this endless stream of
utter twaddle.....

73, John KA3DBN
--
John L. Rouse Packet: ka3dbn@ka3rfe.md.usa.noa
Capital-Gazette Communications FAX: 301-464-7027
jrouse@dc.infi.net PHONE: 301-262-3700 X200
john.rouse@reporters.net 410-268-5000

1453. Can you work sats with Yaesu HTs?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: admin@hoptechno.com
Message-ID: <4t6dq6$lfi@stratus.skypoint.net>
Source record: 21825

Can one work the various ham sats with the HT-50/51s?

1454. Success and questions...

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: kharker@cs.utexas.edu
Message-ID: <kharker-2507960132230001@slip-61-12.ots.utexas.edu>
Source record: 21826

I worked my first satellite QSO today! Operating as W5EHM, the
University of Texas Amateur Radio Club station, I worked W2GG in FM19 on
RS-15 around 1748UTC. It was brief, as my 2m xmitter decided to play
tricks on me right after we exchanged rst and signal reports ("Hey! I'm
tuned to the factory default frequency! That's not right..."), but it was
exciting enough!

I'm still having trouble with what I think is my own fifth harmonic,
though. Here's the deal: as I speak into the 2m mic and tune around on
the HF rig, I can hear my own voice fairly loudly, but completely
unintelligbly until I switch to LSB on the 2m rig, at which point it comes
out exactly as I'm saying
it. This would be the undesirable signal. My own downlink, I've discovered,
is a much weaker signal, several kHz up, that kind of sounds like all the
other voices I hear on the satellite and is intelligible while xmitting
USB. The trick, then, was to pick out the downlink in spite of this
relatively (and hopefully just locally :-) strong signal.

Our downlink antenna is a Force-12 C4 10-15-20-30m beam on an
azimuth-only rotor. In this particular case, I was using our 2m vertical
for the uplink, mounted above the beams on the tower, but I've used our 13
element 2m horizontally-polarized beam on the same rotor and heard the
same unfortunate signal. I've tried power levels between 25 and 150W, and
the signal isn't affected a whole lot by changes in power level (making me
think it's a really local thing rather than something that the satellite
is sending back to me.)

So, I'm excited that I made a QSO and I'm going to try again real soon
now, but I'm wondering how I can eliminate the undesireable harmonic (if
that's what it is)? Are there any bandpass filters designed for cutting
off frequencies you're xmiting (rather than just for receiving)? Or are
there any bandpass receiving filters designed for the RS satellite
frequencies?

Hopefully I'll remember to have the tape recorder nearby next time so
I can record what the signal sounds like.

Also, and this is just random, but can RS-10 and RS-15 QSOs count for
satellite VUCC?

7 3 to all...

--

Kenneth E. Harker kharker@cs.utexas.edu
University of Texas at Austin Amateur Call: N1PVB

Department of the Computer Sciences "Long Live Peent!"
Taylor Hall TAY 2.124 Maintainer of the Linux Laptop Home Page
Austin, TX 78712-1188 USA http://www.cs.utexas.edu/users/kharker/

1455. Re: RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: kebsch@pdb.sni.de
Message-ID: <4t7kp0$jfe@nervous.pdb.sni.de>
Source record: 21827

In <kharker-1907961712350001@slip-47-2.ots.utexas.edu> kharker@cs.utexas.edu (Kenneth E. Harker) writes:

> I've been trying to work RS-10 for a while now from the University of
>Texas Amateur Radio Club station (W5EHM), and I have a few questions.
> ...

> So, 1) do I transmit on LSB or USB? and 2) how do I tell whether or
>not I'm hearing my own harmonic or a real downlink? I know the antennas
>are probably not optimal for satellite work, but it's what the club's got
>:-)

Hi Ken,

huuuugh .. something is complete wrong here ... :->)

Tell me, how you can hear the fifth harmonic of your 2m signal on 10m? :-)

Anyhow; if you want to use your 2m yagi and you don't have an elevation rotor, then you can't expect good results via RS-10. It's better to use a simple groundplane for 2m and an output power of 25..100 watt PEP. For receiving I would recommend to have a 10m dipol or a 10m groundplane available too. Especially when the sat is flying overhead then you will have big troubles to copy any signal with a good (!) beam or a good (!) quad.

And last not least: the common phone mode via all RS's is USB on the up- and downlink frequency!

Good luck .. 73 de Waldemar, DK3VN
--
E-Mail: wkebsch.pad@sni.de .. or .. Packet Radio: DK3VN @ DB0NOS.#NRW.DEU.EU
Big antennas, high in the sky, are better than small ones, low! [b9h]

1456. Re: Can you work sats with Yaesu HTs?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960725083334.10435D-100000@spacelink>
Source record: 21828

On 25 Jul 1996, pdunn wrote:

> Can one work the various ham sats with the HT-50/51s?
>
I've worked MIR with a Yaesu FT-415, mobile, and using just a rubber duck!
>

>

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

1457. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: pacrimgolf@kuentos.guam.net
Message-ID: <4t7pi3$2dq@lehi.kuentos.guam.net>
Source record: 21829
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

jrouse@infi.net (John Rouse / Capital Gazette) wrote:

> This is certainly a good way for an attorney prohibited from advertising
>his services to get more free advertising than he could possibly
>imagine! I suspect, However, Chris could have meandered well into
>his sunset years without having to to endure this endless stream of
>utter twaddle.....

>73, John KA3DBN
>--
>John L. Rouse Packet: ka3dbn@ka3rfe.md.usa.noa
>Capital-Gazette Communications FAX: 301-464-7027
>jrouse@dc.infi.net PHONE: 301-262-3700 X200
>john.rouse@reporters.net 410-268-5000

Amen Brother. But I think those guys can advertise now, at least all
the ambulance chasers in California sure are paying for a lot of TV
time.

1458. G.P.S. Info Please..

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: subbustr@whidbey.net
Message-ID: <4t8u9h$b2k@news.whidbey.com>
Source record: 21830

What type of orbit are these satalights in??

1. Geostationary
2. Geosynchronous
3. Sunsynchronous

email- subbustr@whidbey.net

1459. RS-15 Off Air??

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: ki3b@maxx
Message-ID: <7197cc$101d2.299@PIT>
Source record: 21831

Hi,

I was trying to get into RS-15 today and notice that outside the beacon
I didn't hear any signals. Is the transponder shut off or is it in another
mode?? (2 up / 15 down or something like that??)

any help would be appreciated.

73,

Joe KI3B

1460. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: Steve Wolf <no8m@apk.net>
Message-ID: <31F8306B.5F25@apk.net>
Source record: 21832
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Well, its a week or so after I posted a question and the lack of
any answer makes me wonder if the fellow should get sued.

I ask my question again ...

Is there any rock solid evidence that the SBE and ARRL are opposed
to any particular issue? By "rock solid" I mean something like a
comment on a rulemaking from the SBE that would be contrary to an
ARRL position on the issue. Or maybe a SBE article that expounds
a position that is obviously anti-amateur radio.

Is the SBE for taking away 40 meters from the amateurs? Perhaps they
want two meters?

Anyone??? Something I can get a copy of ... a magazine article ...
something??? KG7FU???

--
73,
Steve
Internet: no8m@apk.net
Amateur Radio: no8m@no8m.#neoh.oh.usa.na
MSYS Mail List: msys-request@hamnet.org ('info' for title)

1461. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: rogerjb@earthlink.net
Message-ID: <4t91dj$cbt@uruguay.it.earthlink.net>
Source record: 21833
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <4t00fn$mm9@bashir.ici.net>, whowell@ici.net (William H. Howell) writes:
>>Roger J. Buffington
>>W6VZV
>>USC Law School Class of '97
>>
>>rogerjb@earthlink.net
>>
>>"I want to die peacefully, in my sleep, like my grandfather.
>>Not screaming, and in terror, like his passengers."
>>
>
>fellow hams,
>
>I may have been wrong about ALL lawyers,
>of course,
>Roger ain't really a lawyer, yet.
>
>73 Bill N1IPQ

That is correct, Bill, and I took pains to point that out in my post, right there at the beginning. Please don't imply otherwise to those who didn't read my post...

I am a California-licensed CPA, but admission to the bar is still a year or so away...

73

Roger J. Buffington
W6VZV
USC Law School Class of '97

rogerjb@earthlink.net

"I want to die peacefully, in my sleep, like my grandfather.
Not screaming, and in terror, like his passengers."

1462. http://www.msoft.it/noaa95/

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: aef@p90.msoft.it
Message-ID: <4t6dor$fh3@server-b.cs.interbusiness.it>
Source record: 21834

http://www.msoft.it/noaa95/

NOAA95 - HRPT program

Abstract: In this page you will find some info to build by yourself a low cost ground station to receive HRPT images. All the software and hardware are homemade by Roberto Ferrari and Enrico Falconelli and are not intended for commercial purposes but for personal use only.

best regards! Enrico. <aef@p90.msoft.it>.

1463. smtp mail warning

Newsgroup: rec.radio.amateur.space
Date: 1996-07-25 00:00:00 UTC
From: postmaster@hvgtw.NL.lucent.COM
Message-ID: <199607252152.RAA25667@alig1.att.att.com>
Source record: 21835

```
Your mail to hzscg01.nl.lucent.com!ekloese is not yet delivered.
Delivery attempts continue.
---------- diagnosis ----------
---------- unsent mail ----------
From Ham-Space Wed Jul 24 04:30:45 PDT 1996 remote from ucsd.edu
Received: by kcig2.att.att.com (SMI-8.6/EMS-1.2 sol2)
id HAA25574; Wed, 24 Jul 1996 07:53:44 -0500
>Received: by kcgw2.att.com; Wed Jul 24 07:49 CDT 1996
Received: by kcgw2.att.com; Wed Jul 24 07:49 CDT 1996
Received: by mail.ucsd.edu; id EAA28042
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jul 1996 04:30:48 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28028
sendmail 8.6.12/UCSD-2.2-sun
Wed, 24 Jul 1996 04:30:46 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199607241130.EAA28028@ mail.ucsd.edu>
Date: Wed, 24 Jul 96 04:30:45 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #222
To: Ham-Space@ucsd.edu
Content-Type: text

Ham-Space Digest Wed, 24 Jul 96 Volume 96 : Issue 222

Today's Topics:
FS: Yeasu FT-757GX CAT HF RIG

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Tue, 23 Jul 96 14:47:00 -0400
From: cono@hobbs.com (CONO)
Subject: FS: Yeasu FT-757GX CAT HF RIG

I have forsale a Yeaseu FT-757GX Cat HF Radio and External Antenna Tuner, Heavy duty power supply in MINT Condition! 1000.00 OBO call 201-440-6566

FT-40/41 440 HT forsale, has Quick Charger (NC-50) and exter 5 watt Battery.

1464. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-26 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199607260958.CAA00794@UCSD.EDU>
Source record: 21836

```
From smtp Sun Jul 21 20:58 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sun, 21 Jul 96 20:58 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA23066; Tue, 16 Jul 96 13:41:04 PDT
Received: by mail.ucsd.edu; id HAA25256
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:28 -0700 for ham-space-list
Received: by mail.ucsd.edu; id HAA25233
sendmail 8.6.12/UCSD-2.2-sun
Tue, 16 Jul 1996 07:30:25 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 43011
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199607161430.HAA25233@ mail.ucsd.edu>
Date: Tue, 16 Jul 96 07:30:23 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #212
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 16 Jul 96 Volume 96 : Issue 212

Today's Topics:
Check this out!
NORAD Two-Line Orbital Element Sets (TLE837)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 16 Jul 96 15:09:48 GMT
From: sean@Alpha.remcan.CA (Commander Scott)
Subject: Check this out!
```

Check this out!
Http://personal.solutions.net/sean/

Date: 16 Jul 1996 02:04:36 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE837)

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #837 -
Alouette 1
1 00424U 62049A 96195.84672760 .00000039 00000-0 35264-4 0 2136
2 00424 80.4577 257.4368 0023446 328.7384 31.2363 13.67871755685986
ATS 1
1 02608U 66110A 96194.78606088 -.00000310 00000-0 10000-3 0 9733
2 02608 14.6260 352.5799 0009800 87.5178 272.5718 1.00325435 25125
ATS 3
1 03029U 67111A 96192.59042381 -.00000129 00000-0 10000-3 0 5150
2 03029 14.9131 359.5380 0009716 266.3034 130.1295 1.00273128105006
Starlette
1 07646U 75010A 96193.91392998 -.00000158 00000-0 -12681-4 0 9835
2 07646 49.8285 51.1347 0205958 312.0967 46.2571 13.82190657 82387
LAGEOS
1 08820U 76039A 96196.00766422 .00000027 00000-0 10000-3 0 2076
2 08820 109.8495 35.1996 0043748 123.3538 237.1425 6.38664527215548
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96192.42461677 .00000041 00000-0 10000-3 0 6949
2 10061 12.3950 36.8232 0009984 123.2991 106.2424 1.00269783 14674
IUE
1 10637U 78012A 96188.56861855 -.00000299 00000-0 10000-3 0 2618
2 10637 35.7646 82.8008 1369203 57.3851 306.0860 1.00234551 20128
GPS BI-01
1 10684U 78020A 96185.95606993 -.00000046 00000-0 10000-3 0 4576

```
2 10684 64.9837 23.3942 0059419 162.4329 197.8036 1.98069263119746
GPS BI-02
1 10893U 78047A 96193.10986887 -.00000002 00000-0 10000-3 0 2576
2 10893 63.1525 260.2372 0220445 12.1179 348.4854 2.01628491133292
GOES 3
1 10953U 78062A 96191.48140523 -.00000149 00000-0 10000-3 0 6776
2 10953 11.3887 39.7333 0001193 55.6695 264.5283 1.00270767 19275
SeaSat 1
1 10967U 78064A 96195.51811575 -.00000048 00000-0 28607-4 0 5009
2 10967 107.9918 229.2355 0001599 268.2436 91.8522 14.38112737945230
GPS BI-03
1 11054U 78093A 96192.22934847 -.00000046 00000-0 10000-3 0 4152
2 11054 62.8815 259.4926 0046988 210.4881 149.2731 1.93503395131155
Nimbus 7
1 11080U 78098A 96195.59881963 -.00000106 00000-0 -58125-4 0 6004
2 11080 98.9403 56.5543 0008219 256.6917 103.3322 13.83692030894829
GPS BI-04
1 11141U 78112A 96195.77204059 -.00000040 00000-0 10000-3 0 531
2 11141 65.0081 25.5761 0050515 28.7277 331.5997 1.92894645 18391
GPS BI-05
1 11690U 80011A 96191.78365581 -.00000041 00000-0 10000-3 0 380
2 11690 65.3225 24.6756 0144334 189.6592 170.1068 2.00573067134653
GPS BI-06
1 11783U 80032A 96189.50378254 -.00000013 00000-0 10000-3 0 1542
2 11783 62.2998 252.9800 0227212 29.4591 331.8749 2.03456300119245
GOES 5
1 12472U 81049A 96186.71771309 .00000045 00000-0 10000-3 0 9389
2 12472 8.2090 49.9739 0006614 43.1097 316.9311 1.00225471 13278
Cosmos 1383
1 13301U 82066A 96192.87593836 .00000026 00000-0 13087-4 0 5106
2 13301 82.9325 116.4378 0026949 171.6279 188.5327 13.68075455700614
LandSat 4
1 13367U 82072A 96196.22102251 .00092930 00000-0 20289-1 0 9642
2 13367 98.0718 246.3202 0008212 61.3064 298.8921 14.57219606744473
DMSP B5D2-1
1 13736U 82118A 96195.89333826 -.00000005 00000-0 16285-4 0 399
2 13736 98.6253 23.8499 0008262 316.6563 43.3972 14.25792217704872
IRAS
1 13777U 83004A 96196.03264266 .00000146 00000-0 13033-3 0 3718
2 13777 98.9661 20.9583 0014089 24.0475 336.1342 13.99261995357121
Cosmos 1447
1 13916U 83021A 96194.91882855 .00000045 00000-0 31477-4 0 6047
2 13916 82.9462 172.0118 0039634 80.0541 280.5092 13.74342813667276
TDRS 1
1 13969U 83026B 96190.00000000 -.00000311 00000-0 10000-3 0 6034
2 13969 9.0208 43.4770 0002052 62.8648 131.2953 1.00276394 21590
GOES 6
1 14050U 83041A 96191.17490182 -.00000258 00000-0 10000-3 0 5248
2 14050 7.0547 53.5716 0004704 32.9229 184.9434 1.00245687106412
OSCAR 10
```

```
1 14129U 83058B 96195.18218122 .00000086 00000-0 10000-3 0 4359
2 14129 26.0898 199.9837 6016060 31.5921 353.5689 2.05879130 70403
LandSat 5
1 14780U 84021A 96196.20816177 .00068222 00000-0 14998-1 0 4940
2 14780 98.3288 254.0228 0002026 182.5388 177.5799 14.57098244657869
UoSat 2
1 14781U 84021B 96193.91881453 .00000058 00000-0 17681-4 0 8970
2 14781 97.8022 183.5469 0012748 16.4343 343.7277 14.69464418661283
GPS BI-09
1 15039U 84059A 96195.77358673 -.00000047 00000-0 10000-3 0 4216
2 15039 64.6363 19.8915 0082848 19.5516 340.7915 1.92302503 87940
Cosmos 1574
1 15055U 84062A 96193.65342895 .00000032 00000-0 18688-4 0 8041
2 15055 82.9566 227.8920 0026408 275.4823 84.3320 13.73636876604342
GPS BI-10
1 15271U 84097A 96195.29193552 .00000035 00000-0 10000-3 0 1747
2 15271 62.1776 253.3759 0107097 158.6070 201.9333 1.92618634 171
Cosmos 1602
1 15331U 84105A 96192.77360393 .00000261 00000-0 27927-4 0 4878
2 15331 82.5337 90.9397 0018301 229.0009 130.9619 14.84767235636477
NOAA 9
1 15427U 84123A 96195.81883996 .00000015 00000-0 31541-4 0 7665
2 15427 98.9468 260.7583 0013870 237.5572 122.4254 14.13791073597395
GPS BI-11
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2 22446 54.1908 286.1826 0126762 353.3865 6.4929 2.00552162 25085
Glonass 59
1 22512U 93010A 96191.75920415 -.00000064 00000-0 10000-3 0 8077
2 22512 65.1652 83.4582 0007742 189.4419 170.5885 2.13102007 26171
Glonass 60
1 22513U 93010B 96194.04377139 -.00000051 00000-0 00000+0 0 9423
2 22513 65.1541 83.3885 0006276 194.8172 165.2153 2.13102324 26419
Glonass 61
1 22514U 93010C 96194.33756487 -.00000048 00000-0 00000+0 0 9328
2 22514 65.1729 83.3677 0010278 185.4179 174.6230 2.13102155 26420
ASTRO-D
1 22521U 93011A 96192.65558665 .00000361 00000-0 18995-4 0 5070
2 22521 31.1052 275.4693 0055673 40.3075 320.1590 15.02959156186005
UFO F1
1 22563U 93015A 96190.00000000 -.00000060 00000-0 00000+0 0 5106
2 22563 25.2792 288.3108 0006817 241.1248 135.8807 0.99253096 12245
GPS BIIA-19
1 22581U 93017A 96194.87101981 -.00000099 00000-0 10000-3 0 5531
2 22581 55.2350 346.9909 0092859 63.6550 297.3490 2.00556717 24135
ARSENE
1 22654U 93031B 96185.89919393 -.00000130 00000-0 10000-3 0 3684
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2 22654 3.2456 72.7830 2869933 239.7521 88.6120 1.42203385 11833
GPS BIIA-20
1 22657U 93032A 96195.50472214 -.00000099 00000-0 10000-3 0 6736
2 22657 55.2296 346.8309 0082831 223.4015 135.9411 2.00572216 19475
RADCAL
1 22698U 93041A 96193.73620139 .00000078 00000-0 29046-4 0 5023
2 22698 89.5430 270.1231 0088808 246.2806 112.9048 14.21375505157915
GPS BIIA-21
1 22700U 93042A 96189.48545261 .00000027 00000-0 10000-3 0 5705
2 22700 54.1870 227.4944 0049488 357.4029 2.6404 2.00557509 22152
NOAA 13
1 22739U 93050A 96195.86470861 .00000112 00000-0 87485-4 0 1060
2 22739 99.0455 151.2823 0009997 146.5693 213.6236 14.10968007150811
GPS BIIA-22
1 22779U 93054A 96194.06052818 -.00000065 00000-0 10000-3 0 6293
2 22779 54.3488 286.2824 0015856 261.1783 98.6837 2.00573888 21001
Meteor 2-21
1 22782U 93055A 96195.89752165 .00000043 00000-0 26174-4 0 4970
2 22782 82.5491 325.9680 0020955 264.1907 95.6863 13.83056701144825
UFO F2
1 22787U 93056A 96194.80799133 -.00000066 00000-0 00000+0 0 6560
2 22787 4.1201 326.9502 0003234 108.2054 218.1174 1.00268498 9084
SPOT 3
1 22823U 93061A 96193.91217263 -.00000044 00000-0 00000+0 0 5663
2 22823 98.6987 267.2380 0001343 74.4885 285.6440 14.20043018144743
STELLA
1 22824U 93061B 96196.24105782 -.00000012 00000-0 12955-4 0 4857
2 22824 98.5794 270.6880 0006316 146.8398 213.3179 14.27105340145797
AO-27
1 22825U 93061C 96192.27383554 -.00000008 00000-0 14387-4 0 4869
2 22825 98.5774 267.4055 0008616 158.6860 201.4681 14.27698940145287
IO-26
1 22826U 93061D 96195.21164730 -.00000007 00000-0 14651-4 0 4852
2 22826 98.5801 270.4617 0008759 149.9439 210.2215 14.27808037145719
HEATHSAT
1 22827U 93061E 96196.24813218 -.00000005 00000-0 15276-4 0 5470
2 22827 98.5787 271.3835 0009314 134.0842 226.1104 14.27942723145877
ITAMSAT
1 22828U 93061F 96195.74712165 .00000009 00000-0 20938-4 0 4646
2 22828 98.5761 271.0455 0010188 133.1103 227.0933 14.28146127113900
PO-28
1 22829U 93061G 96193.73232137 .00000018 00000-0 24728-4 0 4786
2 22829 98.5782 269.1325 0010313 141.0030 219.1890 14.28127107145530
KO-25
1 22830U 93061H 96194.70531321 .00000021 00000-0 25318-4 0 4974
2 22830 98.4677 258.6281 0012154 111.8745 248.3730 14.28111753145673
GPS BIIA-23
1 22877U 93068A 96191.61958599 -.00000077 00000-0 10000-3 0 4400
2 22877 55.6712 48.2660 0039366 295.1025 64.6204 2.00575671 19848
METEOSAT 6
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1 22912U 93073B 96195.54967669 -.00000096 00000-0 00000+0 0 5036
2 22912 0.1018 353.7920 0001036 76.8779 48.6397 1.00272629 8128
HST Array
1 22920U 90037C 96194.78437211 .00003677 00000-0 24188-3 0 4855
2 22920 28.4670 326.8256 0002915 27.5514 332.5217 15.04855012143289
Meteor 3-6
1 22969U 94003A 96193.91628005 .00000051 00000-0 10000-3 0 2682
2 22969 82.5581 243.0432 0015002 172.4384 187.7025 13.16737285118300
TUBSAT-B
1 22970U 94003B 96194.23062486 .00000051 00000-0 10000-3 0 2595
2 22970 82.5579 242.7172 0015916 169.0665 191.0806 13.16827976118351
GPS BIIA-24
1 23027U 94016A 96193.69163421 .00000015 00000-0 10000-3 0 3796
2 23027 55.2090 348.7863 0066508 204.3006 155.4182 2.00557640 17313
Glonass 62
1 23043U 94021A 96193.00723985 -.00000085 00000-0 10000-4 0 3757
2 23043 64.6456 323.0644 0006370 183.7419 176.2488 2.13102594 17513
Glonass 63
1 23044U 94021B 96193.82824900 -.00000086 00000-0 00000+0 0 3437
2 23044 64.6399 323.0364 0030015 201.9911 157.8762 2.13102807 17531
Glonass 64
1 23045U 94021C 96195.41328448 -.00000084 00000-0 00000+0 0 3529
2 23045 64.6243 322.9874 0010861 34.9517 325.1152 2.13102045 17567
GOES 8
1 23051U 94022A 96196.17963080 -.00000260 00000-0 10000-3 0 5509
2 23051 0.0843 97.1278 0005090 45.1287 139.6029 1.00261698 15631
MSTI 2
1 23101U 94028A 96192.59626582 .00003729 00000-0 58805-4 0 3322
2 23101 97.0821 25.8265 0009531 233.0922 126.9447 15.54133604122935
STRV-1A
1 23125U 94034B 96195.11109540 .00002811 00000-0 65489-3 0 3074
2 23125 7.0121 227.8519 7254519 83.4734 347.0667 2.32215244 16726
STRV-1B
1 23126U 94034C 96195.19848923 .00003461 00000-0 64837-3 0 2693
2 23126 7.0261 227.8492 7258241 83.4819 347.0781 2.32190379 16764
Nadezhda 4
1 23179U 94041A 96194.13331499 .00000026 00000-0 10657-4 0 2031
2 23179 82.9463 218.1057 0038064 54.4704 305.9989 13.75682360100224
Glonass 65
1 23203U 94050A 96195.08155353 .00000082 00000-0 00000+0 0 3126
2 23203 64.7721 203.2532 0006343 164.1050 195.9551 2.13102214 14959
Glonass 66
1 23204U 94050B 96194.84595240 .00000084 00000-0 00000+0 0 3327
2 23204 64.7646 203.2785 0015228 340.5552 19.4268 2.13102245 14943
Glonass 67
1 23205U 94050C 96195.66708694 .00000077 00000-0 00000+0 0 3083
2 23205 64.7659 203.2433 0003575 280.4891 79.5079 2.13102613 14966
DMSP B5D2-7
1 23233U 94057A 96195.78143459 .00000075 00000-0 64054-4 0 8465
2 23233 98.8265 254.1642 0013596 103.5059 256.7626 14.12719581 96585
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OKEAN 1-7
1 23317U 94066A 96196.18827965 .00000100 00000-0 11713-4 0 1673
2 23317 82.5445 34.1940 0026298 355.6852 4.4140 14.74028250 94513
ELEKTRO
1 23327U 94069A 96192.65603699 -.00000113 00000-0 00000+0 0 1746
2 23327 0.1242 159.0829 0005078 290.9546 151.0986 1.00269518 6230
RESURS 1-3
1 23342U 94074A 96194.19895717 .00000022 00000-0 11621-4 0 5214
2 23342 97.9644 250.6619 0001063 74.6876 285.4448 14.69846269 90483
Glonass 68
1 23396U 94076A 96193.67891507 -.00000055 00000-0 00000+0 0 2847
2 23396 65.0921 83.4452 0028971 190.8420 203.7758 2.13102613 12762
Glonass 69
1 23397U 94076B 96196.15614032 -.00000029 00000-0 00000+0 0 2751
2 23397 65.0851 83.3674 0012692 323.6169 36.3578 2.13102181 12815
Glonass 70
1 23398U 94076C 96194.16280946 -.00000050 00000-0 00000+0 0 2938
2 23398 65.0827 83.4134 0002887 292.0513 67.9712 2.13101916 12789
LUCH (Altair-2)
1 23426U 94082A 96194.03505903 -.00000285 00000-0 00000+0 0 3454
2 23426 1.4124 267.5999 0002528 206.0342 284.5119 1.00273423 5751
RS-15
1 23439U 94085A 96193.84421919 -.00000039 00000-0 10000-3 0 1464
2 23439 64.8192 343.2111 0160244 194.7754 164.8460 11.27527416 63567
NOAA 14
1 23455U 94089A 96195.79398475 .00000026 00000-0 38679-4 0 6724
2 23455 98.9455 141.1908 0009276 160.9680 199.1839 14.11597939 79206
Glonass 71
1 23511U 95009A 96193.18317340 -.00000085 00000-0 00000+0 0 2053
2 23511 64.6631 323.3306 0006312 206.7157 153.2469 2.13103416 10484
Glonass 72
1 23512U 95009B 96193.30225803 -.00000009 00000-0 10000-3 0 2220
2 23512 64.6652 323.3304 0004592 332.3693 27.6427 2.13101078 10496
Glonass 73
1 23513U 95009C 96195.94066058 -.00000081 00000-0 00000+0 0 2335
2 23513 64.6581 323.2542 0013491 197.9323 162.0155 2.13102755 10545
GMS 5
1 23522U 95011B 96192.78261336 -.00000299 00000-0 10000-3 0 1327
2 23522 0.3945 348.4923 0001504 160.9583 201.1478 1.00262389 4684
DMSP B5D2-8
1 23533U 95015A 96195.85352431 .00000016 00000-0 32167-4 0 5881
2 23533 98.8388 197.9722 0007430 350.3980 9.7047 14.12745324 67396
OSC 1
1 23545U 95017A 96194.21821667 .00000257 00000-0 90019-4 0 1486
2 23545 69.9753 112.1060 0012978 159.5452 200.6198 14.45367242 67275
OSC 2
1 23546U 95017B 96194.25136083 .00000198 00000-0 73274-4 0 1682
2 23546 69.9776 112.1145 0012556 151.8951 208.2861 14.45312450 67289
Microlab 1
1 23547U 95017C 96195.24762022 .00000192 00000-0 71307-4 0 1208
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2 23547 69.9788 109.5944 0012140 151.8151 208.3634 14.45555690 67432
OFEQ 3
1 23549U 95018A 96195.90582610 .00005363 00000-0 11969-3 0 2794
2 23549 143.3665 31.0222 0223153 3.2440 356.9734 15.16174160 70424
GFZ-1
1 23558U 86017JE 96192.56703099 .00002015 00000-0 28279-4 0 1409
2 23558 51.6519 355.4156 0005830 322.1517 37.9065 15.62338295593661
ERS-2
1 23560U 95021A 96194.22071135 -.00000019 00000-0 90000-5 0 2531
2 23560 98.5456 267.9301 0001227 92.0431 268.0893 14.32248934 64156
Spektr
1 23579U 95024A 96195.86918056 -.00008877 00000-0 -95435-4 0 3872
2 23579 51.6502 349.7402 0010104 300.5965 59.4024 15.61480965 65606
GOES 9
1 23581U 95025A 96195.47293507 .00000073 00000-0 10000-3 0 2073
2 23581 0.3588 267.6454 0000801 302.1018 117.4712 1.00279286 4184
Helios 1A
1 23605U 95033A 96194.70907880 .00000082 00000-0 24612-4 0 2435
2 23605 98.1217 130.0505 0001661 74.7837 285.3549 14.63849635 54295
UPM SAT 1
1 23606U 95033B 96194.89071587 .00000139 00000-0 33329-4 0 1912
2 23606 98.1022 131.3687 0008750 98.0047 262.2148 14.67261891 54489
CERISE
1 23607U 95033C 96194.89268630 .00000049 00000-0 17424-4 0 1020
2 23607 98.1042 131.2323 0007312 95.1834 265.0203 14.66951383 54500
TDRS 6
1 23613U 95035B 96191.33959907 .00000087 00000-0 00000+0 0 1804
2 23613 0.7283 83.0810 0002207 108.3864 47.6769 1.00284127 3601
Glonass 74
1 23620U 95037A 96195.72465620 .00000076 00000-0 00000+0 0 1588
2 23620 64.8226 203.0895 0018475 173.8262 186.2354 2.13102816 7576
Glonass 75
1 23621U 95037B 96193.55567068 .00000094 00000-0 00000+0 0 1600
2 23621 64.8360 203.1629 0018288 184.9034 175.1221 2.13102051 7520
Glonass 76
1 23622U 95037C 96194.08314271 .00000091 00000-0 00000+0 0 1591
2 23622 64.8291 203.1452 0036797 168.5205 191.6065 2.13102556 7531
Prognoz-M2
1 23632U 95039A 96191.29100520 -.00000351 00000-0 00000+0 0 650
2 23632 70.0180 250.0730 8283667 322.3890 318.4490 0.26374400 902
SICH-1
1 23657U 95046A 96193.03495944 .00000129 00000-0 16361-4 0 920
2 23657 82.5331 178.6089 0027632 336.5491 23.4456 14.73481294 46341
RADARSAT
1 23710U 95059A 96194.52901988 -.00000018 00000-0 10000-4 0 1595
2 23710 98.5782 200.8556 0001056 72.5816 287.5505 14.29980542 35869
Glonass 77
1 23734U 95068A 96193.26235628 .00000095 00000-0 00000+0 0 1387
2 23734 64.8294 203.0899 0019523 318.9164 40.9860 2.13102151 4486
Glonass 78
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1 23735U 95068B 96195.34941544 .00000080 00000-0 00000+0 0 1317
2 23735 64.8303 203.0044 0008444 224.2259 135.7516 2.13125300 4521
Glonass 79
1 23736U 95068C 96194.90462883 .00000084 00000-0 00000+0 0 1137
2 23736 64.8147 203.0385 0008190 209.9606 150.0336 2.13102071 4519
XTE
1 23757U 95074A 96192.56859372 .00000451 00000-0 88843-5 0 707
2 23757 22.9899 252.6382 0012789 339.4614 20.5354 14.97666703 28974
1996010D
1 23797U 96010D 96195.98889783 .03880115 26844-5 61431-2 0 1381
2 23797 48.0390 242.0295 7071268 36.7106 355.9474 2.62358387 3297
Soyuz TM-23
1 23798U 96011A 96195.86918056 -.00008877 00000-0 -95435-4 0 1230
2 23798 51.6502 349.7402 0010104 300.5965 59.4024 15.61480965 22365
Polar
1 23802U 96013A 96194.66047275 .00000038 00000-0 00000+0 0 272
2 23802 86.1076 25.8056 6569551 285.1631 14.9772 1.36677393 1909
1996010E
1 23824U 96010E 96196.12565281 .00000944 00000-0 29360-2 0 783
2 23824 47.6579 245.1272 7266381 34.2386 356.1545 2.21699237 3217
GPS BIIA-25
1 23833U 96019A 96194.32653576 -.00000099 00000-0 10000-3 0 477
2 23833 54.6893 347.0290 0036078 148.4575 211.7772 2.00564233 2182
Priroda
1 23848U 96023A 96195.86917850 -.00008164 00000-0 -87258-4 0 760
2 23848 51.6502 349.7403 0010101 300.7717 59.2166 15.61481984 12698
MSX
1 23851U 96024A 96195.52062811 -.00000047 00000-0 00000+0 0 492
2 23851 99.3768 175.3202 0006967 83.1158 277.0639 13.97682018 11176
Progress M-31
1 23860U 96028A 96195.86917850 -.00008164 00000-0 -87258-4 0 680
2 23860 51.6502 349.7403 0010101 300.7717 59.2166 15.61481984 10869
MSTI 3
1 23868U 96031A 96195.06258963 .00000597 00000-0 13879-4 0 371
2 23868 97.1219 25.0569 0013790 82.3707 277.9102 15.46190471 8815
Gorizont 32
1 23880U 96034A 96194.37747179 .00000085 00000-0 00000+0 0 349
2 23880 1.3866 283.7046 0015261 329.3428 226.3000 1.00279378 485
1996034E
1 23886U 96034E 96189.25599693 .00001894 00000-0 55090-3 0 131
2 23886 47.2236 271.6590 7326138 11.2577 359.0828 2.22719251 967
1996034F
1 23887U 96034F 96194.28291783 .00000417 00000-0 61452-3 0 128
2 23887 47.2623 270.5358 7307560 12.3503 358.8360 2.22270943 1078
1983063A
1 23906U 83063E 96193.50544300 .00000554 00000-0 19879-3 0 81
2 23906 82.0235 181.8961 0045133 107.9550 252.6562 14.31868659680013
INTELSAT 709
1 23915U 96035A 96196.05722267 -.00000298 00000-0 00000+0 0 276
2 23915 0.0366 284.7303 0002070 287.4404 43.5318 1.00268854 314
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1996035B
1 23916U 96035B 96169.43042824 -.00000133 00000-0 00000+0 0 35
2 23916 1.3619 23.8149 1571082 336.2246 198.8749 1.24514823 51
TOMS-EP
1 23940U 96037A 96193.76417451 -.00010559 00000-0 00000+0 0 144
2 23940 97.3702 98.9181 0013598 245.9888 114.0535 15.21063398 393
1996037B
1 23941U 96037B 96195.75458948 .00002651 00000-0 81782-4 0 124
2 23941 97.3807 100.7195 0425983 126.0735 238.0718 14.76418769 1691
APSTAR 1A
1 23943U 96039A 96195.97615284 -.00000330 00000-0 00000+0 0 223
2 23943 0.0681 242.6568 0004030 221.6003 313.3486 1.00269705 99
1996039B
1 23944U 96039B 96192.57484316 .00005750 00000-0 13794-2 0 33
2 23944 27.0510 78.2150 7606233 181.9772 170.4737 1.89548382 146
ARABSAT 2A
1 23948U 96040A 96195.55911560 -.00000117 00000-0 00000+0 0 155
2 23948 0.1715 87.8152 0553889 173.2250 225.8868 1.08503299 74
TURKSAT 1C
1 23949U 96040B 96196.27442786 -.00000149 00000-0 10000-4 0 145
2 23949 0.1899 80.9625 0692825 172.2161 166.0258 1.10859250 63
1996040C
1 23950U 96040C 96193.75210374 -.00000399 00000-0 00000+0 0 10
2 23950 6.9469 81.5588 7292111 179.4378 49.9644 2.29092215 33
1996040D
1 23951U 96040D 96194.34482006 .00056486 00000-0 66844-2 0 29
2 23951 6.9595 81.2596 7287664 180.0099 179.0648 2.29235954 55
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End of Ham-Space Digest V96 #212
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1465. ARLS009 Ariane 501 report

Newsgroup: rec.radio.amateur.space
Date: 1996-07-26 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls009.1996@arrl.org>
Source record: 21837
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS009
ARLS009 Ariane 501 report

ZCZC AS17
QST de W1AW
Space Bulletin 009 ARLS009
From ARRL Headquarters
Newington, CT July 26, 1996
To all radio amateurs

SB SPACE ARL ARLS009
ARLS009 Ariane 501 report

A board of inquiry has blamed a software glitch for the June 4 failure of the Ariane 501 launcher after some 40 seconds of flight. The Ariane 502 launcher was scheduled to carry the Phase 3D Amateur Radio satellite aloft this fall. The board's findings could delay that schedule, however, since it's not certain at this point how long it will take to correct the problems and test the revised systems.

The board determined that the rocket's inertial guidance system stopped ''talking'' to the engines, and the thrust nozzles responded by shifting abruptly to an ''extreme position.'' This caused the rocket to veer off at a wild angle. Auto-destruct occurred seconds later.

''The failure of Ariane 501 was caused by the complete loss of guidance and attitude information 37 seconds after start of the main engine ignition sequence (30 seconds after liftoff). This loss of information was due to specification and design errors in the software of the inertial reference system,'' the board concluded. ''The extensive reviews and tests carried out during the Ariane 5 development programme did not include adequate analysis and testing of the inertial reference system or of the complete flight control system, which could have detected the potential failure.''
NNNN
/EX

1466. Re: G.P.S. Info Please..

Newsgroup: rec.radio.amateur.space
Date: 1996-07-26 00:00:00 UTC
From: ken.thompson@Symbios.COM
Message-ID: <ken.thompson.1357.000CCC4F@Symbios.COM>
Source record: 21838

In article <4t8u9h$b2k@news.whidbey.com> subbustr@whidbey.net (DAVE M . SCHERTZER) writes:
>From: subbustr@whidbey.net (DAVE M . SCHERTZER)
>Subject: G.P.S. Info Please..
>Date: 25 Jul 1996 23:00:01 GMT

>What type of orbit are these satalights in??

>1. Geostationary
>2. Geosynchronous
>3. Sunsynchronous

None of the above.

The system is defined with 24 (there are more right now) birds in four
different orbit planes all of which are at a 55 degree inclination. They are
out at about 11,000 miles and thus have about a 12 hour period

1467. Att: HADJOPAN,SIRAIT-INDONESIA -Email me plse!!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: subbustr@whidbey.net
Message-ID: <4td7al$h1a@news.whidbey.com>
Source record: 21839
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.misc,rec.radio.homebrew.rec.radio.policy,rec.radio.amateur.space,rec.radio.shortwave,rec.radio.amateur.antenna

Looking fer Mr.Hadjopan,Sirait
Jakarta, Timuir
Indonesia

Pse email me concerning your request. Or if anyone
can locate him?? Email me -subbustr@whidbey.net

Tx de VE7LFA-W7

1468. Helix Antenna Gain Meas and New Receive Tests

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: mwcook@cris.com
Message-ID: <4te143$15p@herald.concentric.net>
Source record: 21840
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

Helix Antenna Gain Meas and New Receive Tests

The test of the 5 foot, no-screen helix prototype at Central States was most positive. In fact, the gain was over 1 dB higher than the model predicted. I will continue using the gain shown by AO for all Mars Observer link caculations.

I found that the GaAs Fet preamp used in my last series of receive test had a poor solder joint in the front end which resulted in a much higher NF than the 0.5 stated. I reran the receive test and also factored in the new receive levels expected from the Mars Observer. The results were very encouraging. A -173 dBm signal level in a 100 deg K system produces an excellent trace using the 16x integration mode of FFTDSP. At this setting, the update rate is once every 8 seconds. A full screen will require only 30 minutes.

Assuming 0.5 dB coax/combiner loss, two 10ft antennas Helix antennas would provide 18 dBic. With the new receive levels, I think this system would provide an excellent chance of detection. In fact, just two 5 ft Helix should be enough for detection.

With the 16x integration mode, Doppler Chirp correction will not be necessary. At that integration mode, the display trace will have a slope showing the Doppler Chirp which should help confirm that it is from the Mars Observer. A 30 minute period will fill the screen and the trace will show a linear slope of aprox 100 Hz.

Full details and pictures of the receive test results and the helix design are available from my webpage at http://www.webcom.com/af9y

1469. Where can I find table of ham sats with...

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: phil@hoptechno.com
Message-ID: <4te3uf$qoq@stratus.skypoint.net>
Source record: 21841

Where might I find a table with all the ham-capable sats? With freqs, modes, etc.

Phil ki0dm

1470. Sarex worked list

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tct7n$2ob@news.monad.net>
Source record: 21842

STS-78 SAREX packet worked list

CALL TIME QSO#
------ ---- ---
1. 7M1QOP 2158 645
2. AA5OQ 1552 842
3. AB4EG 1132 46
4. AD4OR 0752 1074
5. AE0G 1614 164
6. CT1BXX 0945 927
7. CT1DNF 1148 65
8. EA8BRW 1319 432
9. F1ISJ 0813 866
10. F1JKJ 1017 14
11. F1OKN 1017 15
12. F6AIU 648
13. F6KSY 0632 1232
14. F9ZY 1016 13
15. IK0RCY 1153 73
16. IK0YUJ 651
17. JA5DTP 2336 297
18. JA7TQK 2209 228
19. JE2AQQ 2138 1050
20. JF1AJE 2157 644
21. JH0ISW 1650 1194
22. JH2NIT 2003 1048
23. JJ2RYW 2332 471
24. JR5EBL 2206 225
25. JR8XPV 2209 227
26. K0PP 1235 1003
27. K0RZ 1234 1001
28. K1RMA 1057 1332
29. K2OWE 1126 739
30. K5VAS 1124 307
31. KA0DJR 0929 896
32. KA3HPQ 1123 722
33. KA6UCD 1610 147
34. KB0KBM 0931 900
35. KB2RCT 1131 353
36. KB2UVQ 0927 1119
37. KB5GON 1237 1007
38. KB5VHG 1126 320
39. KB9DD 1610 150
40. KC4APN 1616 179

41. KC4NHB 0752 1073
42. KC5ILO 0928 893
43. KC7DAZ 1233 999
44. KC7DBA 1609 143
45. KD1SM 0924 1292
46. KD4GHQ 1134 52
47. KD6VXJ 1916 221
48. KE4IAM 1134 50
49. KE4LQF 1211
50. KE4OV 1751 200
51. KE6HPZ 1704 1352
52. KF5RD 1614 168
53. KF9WW 1259 406
54. KG3N 1136 57
55. KG5IT 0928 892
56. KG8JA 1134 49
57. KK4NW 1055 1150
58. KO4GA 1754 215
59. KW7E 1100 942
60. N0WTA 1251 756
61. N1ERY 0926 1297
62. N1HRK 1137 64
63. N1JEZ 1437 601
64. N1PPP 1122 714
65. N2KPC 0933 907
66. N2NRD 1309 121
67. N2OIJ 1310 124
68. N2UME 1311 128
69. N4TAE 1556 853
70. N5SRY 0946 664
71. N5TD 1119 699
72. N6JMQ 1249 746
73. N7HKW 1237 1006
74. N7UFT 1259 404
75. N8AAQ 1308 114
76. N8DEU 1432 566
77. N8NYU 1433 570
78. N8OCX 1103 947
79. N8ULU 1129 340
80. N9AB 1308 115
81. N9BMT 1122 712
82. N9JGQ 1130 343
83. N9PKI 1432 563
84. OA4CK 2056 635
85. PU3VHQ 2105 639
86. VE1CLB 0935 923
87. VE1JC 1311 129
88. VE1KK 1133 360
89. VE2ZAZ 0936 925
90. VE3EFX 1132 354

91. VE3KNG 1105 958
92. VE3OQZ 1106 966
93. VK1ZQR 1037 826
94. VK2BTS 1058 32
95. VK2CM 0846 1267
96. VK2DOR 0923 6
97. VK2KUR 0924 8
98. VK2THU 789
99. VK2WDH 0855 873
100. VK2YLO 1058 33
101. VK2ZM 1228 384
102. VK3KOS 0912 658
103. VK3YIC 785
104. VK6DM 1052 28
105. VK6JKR 1349 513
106. W2UH 1057 1331
107. W4JXM 1120 701
108. W5HUQ 1124 730
109. W5IU 1103 950
110. W5RKN 1305 106
111. W7ZXQ 1256 394
112. WA4JAV 1125 313
113. WA5MYI 1103 1182
114. WA5NOM 0927 890
115. WA5PIE 1101 943
116. WA6LIE 1908 624
117. WA6LXB 1906 619
118. WB2YLR 0931 902
119. WB4FIN 1432 567
120. WB4VNT 1107 970
121. WB6LLO 1704 1351
122. WB9AWX 1904 770
123. WB9TPN 1059 1157
124. WD4KPG 0928 1120
125. WD6EFM 1249 747
126. WD6GYU 1607 136
127. WF1F 1101 1345
128. WG0I 1054 1322
129. WG6G 1903 764
130. XE1KK 1302 97
131. XE1LM 1130 43
132. XE1RCS 1303 100
133. ZL1AKJ 0917 661
134. ZL1CMR 0902 884
135. ZL1MO 0911 814
136. ZL2AYO 0922 497
137. ZL3ADH 0928 10
138. ZL3UCP 1058 302
139. ZP6RO 2101 636
140. ZS5MMD 1821 288

141. ZS5NAC 1646 284
142. ZS5TM 1821 289
143. ZS6ADS 1504 612
144. ZS6BMN 1514 132
145. ZS6HQ 1505 616
146. ZS6RSW 1924 1207

Gil Carman

Thanks to wb9awx

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

1471. Earn $10,000+\month Working At Home!!

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: logon@my.bbs
Message-ID: <4te2r6$p67@ns1.autonet.net>
Source record: 21843
Cross-posted to: rec.pyrotechnics,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb

```
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$$$ 1-800-223-6477 $$$

///////// your sponsor's FCI ID # is SH1885969 \\\\\\\
```

1472. Safex operational?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tcthg$2ob@news.monad.net>
Source record: 21844

Quoted from Packet bulletin..

Date: Fri, 26 Jul 96 10:01:00 EDT
Message-ID: <53935@KJ6FY> (19445@WA1WOK)
From: N6JLH@KJ6FY.#NOCAL.CA.USA.NOAM
To: SPACE@USBBS
Subject: SAFEX REPEATER OPEN
Path: WA1WOK!WB1DSW!W0RLI!K7IQI!KC7KFE!KI7SO!W7OEK!WB7AWL ...

To operate in repeater mode you need:

downlink: 437.950 MHz
uplink: 435.750 MHz with 141.3 Hz CTCSS
ID: RR0DL Repeater

Please also check 437.925 MHz for the beacon (voice recorder).

This next week the Beacon wl be on - so take a listen -

The doppler is [+ & -] 10 kc's - so program your rig
for this -

I have wrked the repeater with 25 watts and 35 elms (sic)

I have NOT been able to work this with a mobile rig
and a 5/8's wave , even on a 75 deg pass -

Rember MIRa moves very fast across the Earth - so make your
contacts as short as you can.

For QSL cards --
DF0VR in Germany
If you need any other info

N6JLH@N0ARY.#NOCAL.CA.USA OR
doc@volcano.net

N6JLH
DAVE

WA1WOK - 3 Users >

This information disagrees with previously published data and I haven't had a chance to
check it out.. good luck hope to qso.. DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

1473. Re: RS-10 help

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <31F98E2C.26EA@isocor.com>
Source record: 21845

Kenneth E. Harker wrote:
>
> I've been trying to work RS-10 for a while now from the University of
> Texas Amateur Radio Club station (W5EHM), and I have a few questions.
> First, a quick summary of the equipment - A Kenwood HF rig using a Force
> 12 C-4 beam antenna as the downlink, and an Icom 2m all-mode into a 13
> element beam as the uplink. Both beams are mounted on the same tower, the
> 2m antenna being a few feet above the HF beam, and both are horizontal
> (not inclined above the horizon, that is.) Both beams perform quite well
> for terrestrial QSOs.
>
> I can hear RS-10 just fine. Every pass I can hear the CW beacon, and
> on the reasonably good passes, I can hear other ops in QSO. But when I
> try to transmit and find my own downlink, I will hear something, but it
> always seems to have the following happen:
>
> 1) If I take the 2m frequency and divide it by the 10m frequency, it
> always comes out to about 4.996.
>
> 2) The signal is unintelligible unless I transmit on the lower sideband.
>
> The latter one may be explained by the fact that you maybe I should
> transmit on lower sideband? I've never been sure about this. But the
> first one, coupled with the fact that occasionally I can hear this long
> after the bird should have been long gone, seems to indicate to me that
> maybe I'm hearing my own fifth harmonic.
>
> So, 1) do I transmit on LSB or USB? and 2) how do I tell whether or
> not I'm hearing my own harmonic or a real downlink? I know the antennas
> are probably not optimal for satellite work, but it's what the club's got
> :-)
>
> --
> ---
> Kenneth E. Harker kharker@cs.utexas.edu
> University of Texas at Austin Amateur Call: N1PVB
> Department of the Computer Sciences "Long Live Peent!"
> Taylor Hall TAY 2.124 Maintainer of the Linux Laptop Home Page
> Austin, TX 78712-1188 USA http://www.cs.utexas.edu/users/kharker/
> --Hi Ken,

Your 10m receiver front end is being overloaded by the 2m uplink. A good
HF low pass filter connected to the 10m receiver will reduce the problem.

John, KD6OZH

1474. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-27 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <31F993CA.22C@isocor.com>
Source record: 21846
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

James S. Kaplan wrote:
>
> ARRL lawyer to sue member
>
> The following is a copy of a message I received today from
> ARRL General Counsel Christopher D. Imlay N3AKD:
>
> To: James S. Kaplan, KG7FU
> Copies: Mary Lou Brown, NM7N
> Terry Baun
> John Poray
> Date: July 16, 1996
> Re: Your article, SBE Chapter 124 Newsletter, July, 1996
> **********
>
> Jim, I have just finished reading your article in the July,
> 1996 Water Cooled Newsletter, page 6. In it, you argue that two of
> my clients, the American Radio Relay League, Inc. and the Society
> of Broadcast Engineers, Inc. should cooperate in certain government
> relations projects, specifically spectrum protection. You note that
> I serve as the General Counsel for both organizations. You then
> jump from that argument to the following, which I quote:
>
> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
> perhaps both ARRL and SBE should be seeking more
> effective counsel. No offense Chris, but we have work to
> do. We should not only be sending a message to the FCC
> and Congress, but to other radio industries.
>
> (emphasis in original)
>
> It is not useful for me to educate you on the subject of your
> article to correct the errors in it, and I do not intend to do so.
> What I do intend, however, is for you to print a retraction, in
> unambiguous terms, in a form acceptable to me, and to furnish to
> me, in writing, an assurance that such will be printed in the next
> Chapter Newsletter for Chapter 124. Failing that, I am going to sue
> you in the District of Columbia for libel.
>
> I have no intention of allowing you to falsely allege that I
> have a conflict of interest in representing two of my best clients,
> especially in an SBE publication. You are not entitled to damage my

> reputation as a lawyer, which you have done in your article, or to
> infer (without any basis at all) that I have violated the canons of
> ethics governing attorneys, by which I govern my actions.
>
> I will await your response.
>
> Chris Imlay, N3AKD
>
> And here is my reply:
>
> Dear Mr. Imlay:
>
> Thank you for reading my column in the SBE Chapter 124 Newsletter
> "Water Cooled".
>
> I will not be giving you a retraction for any of my statements
> published in the July 1996 issue as you have requested. My statements
> are my personal opinions and views. I do apologize if you feel you
> have been hurt or damaged by my statements. My intent is to spur
> thought and action, not to personally attack. If your actions require
> others to think or act, don't you think they have the right to be
> informed? I believe my statements to be true and have been given
> no reason to retract them. My statements, by the way, are my own
> and don't necessarily reflect the views or opinions of Chapter 124,
> it's officers or members.
>
> I am a member in good standing of both groups and do many hours of
> unpaid work for the benefit of both groups and their members. I take
> personal offense at the threat of lawsuit by their counsel. It is
> unprofessional and you are certainly coming close to conflict with
> your fiduciary duty to both groups by proposing to sue a member. Perhaps
> it is you who owe me, and the Society of Broadcast Engineers and the
> American Radio Relay League an explanation for your actions and your
> lack of action in certain critical spectrum protection matters.
>
> After much discussion with SBE and ARRL BOD persons and members I have
> decided that the best way to deal with this matter is to offer you the
> chance to refute my statements or rebut, in your own words, in my column
> for publication in the next issue. In other words, please give yourself
> the chance to "educate me on the subject of my article to correct the
> errors in it".
>
> I know you'll also agree that, if you choose to pursue litigation, the
> proper forum for legal action would be an Oregon court as the column was
> written and published here.
>
> Sincerely,
>
> James S. Kaplan KG7FU
> Member SBE

> Member ARRL
> kg7fu@combined.com
> http://users.aol.com/kg7fu/home.htm
> KG7FU@N7DXT.#EUGEN.OR.USA.NOAM

James,

I don't see a conflict of interest here. Many lawyers represent competing companies. In fact, you generally seek a lawyer with experience in your industry.

The lawyer can never divulge information about one client to another, so he can't recommend actions to either about the other unless one client asks him to talk to the other. There is no conflict of interest unless one of his clients decides to take legal action against another and asks his advice. At that point, most lawyers tell both of their clients to hire another lawyer to handle that legal action.

Conflict of interest means that he is breaching confidentiality or using knowledge of one client to benefit the other. Just the suspicion of this can cause his clients to leave. Proof gets him disbarred. No wonder he is pissed off.

73,

John

1475. Re: Can you work sats with Yaesu HTs?

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jul28.131331.5725@ke4zv.atl.ga.us>
Source record: 21847

In article <4t6dq6$lfi@stratus.skypoint.net> pdunn@hoptechno.com writes:
>Can one work the various ham sats with the HT-50/51s?

Not very well. The doppler requires you to be able to tune the
radio to follow it, but the HT has too coarse a tuning step,
minimum 5 kHz, to track the doppler properly. And some of the
sats require SSB receiving capability, so that obviously rules
out the HT. You can work MIR, and sometimes the Shuttle, with
a HT (and perhaps an amplifier).

Gary

--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1476. Re: Success and questions...

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Jul28.132035.5811@ke4zv.atl.ga.us>
Source record: 21848

In article <kharker-2507960132230001@slip-61-12.ots.utexas.edu> kharker@cs.utexas.edu (Kenneth E. Harker) writes:
>
> I'm still having trouble with what I think is my own fifth harmonic,
>though. Here's the deal: as I speak into the 2m mic and tune around on
>the HF rig, I can hear my own voice fairly loudly, but completely
>unintelligbly until I switch to LSB on the 2m rig, at which point it comes
>out exactly as I'm saying
>it. This would be the undesirable signal. My own downlink, I've discovered,
>is a much weaker signal, several kHz up, that kind of sounds like all the
>other voices I hear on the satellite and is intelligible while xmitting
>USB. The trick, then, was to pick out the downlink in spite of this
>relatively (and hopefully just locally :-) strong signal.

This is *not* a harmonic. A harmonic is a *multiple* of the
transmitting frequency. You're listening at a *fraction* of
the transmitting frequency, so this can't be a harmonic.

What it likely is, is fundamental overload or an IMD mix.
Fundamental overload should show up all over the band,
however, and not show sideband inversion, so the more
likely problem is an IMD mix (that can happen *because*
of fundamental overload, however).

Make sure the VHF and HF antennas are well separated. Make
sure the coaxes aren't tightly bundled together. And add
a lowpass filter to the HF rig. One or more of those steps
should fix the problem (unless it is power supply coupling,
make sure the power supplies for the two radios are separate,
and well decoupled for RF).

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1477. Satellite Gateway Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: dmart@cnj.digex.net
Message-ID: <4tg1a2$g7p@cnj.digex.net>
Source record: 21849

I have a theoretical question that I would like to present to the group. In the future I would like to set up a satellite gateway to a local repeater. I would like to keep things as simple as possible as the equipment would be located at a remote site along with a standard uhf repeater. Antenna control would be accomplished with a Trackbox as I don't have the room to leave a pc at the site. The gateway would operate on a single frequency and won't be frequency agile, as I said before I want this to be simple with little or no maintenance once it is installed. One question that comes up is doppler. I naturally would wish the system to be "locked" on two discreet uplink and downlink frequencies. I know that I would have to establish contact through a satellite to hear my downlink signals and than leave the frequencies at that point. As the bird changes its orbit and the doppler changes would the calibration I've done hold or would my uplink frequency and downlink frequencies drift so that a recalibration would have to be done? I know that computer control can tune both radios, but, I'd like to keep the equipment at the remote site down to a minimum. Naturally I don't want to see my signal and the stations I will be talking to drift all over the band. In this case I will assume that the system would have little if any drift do to temperature etc. I would like to know if doppler would be any factor to consider with regard to drift under unattended operations? I would like to try this on higher frequencies than mode b or j when the Phase-III bird successfully launches and is working. This is a dream now and definitely a project for the far future. At this point I would like to explore the theoretical aspect as of now. Any comments, ideas, or suggestions would be appreciated. Thanks in advance.

Dave Marthouse N2AAM
Internet: dmart@cnj.digex.net

--
Dave Marthouse
Internet: dmart@cnj.digex.net

1478. RADIO AMTEUR CALLBOOK

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: Juan Flores <j.flores@codetel.net.do>
Message-ID: <31FBC05F.185B@codetel.net.do>
Source record: 21850

Would somebody please email me the snail mail address of the Radio
Amateur Callbook.

Thank you.

Juan Flores
j.flores@codetel.net.do

1479. Re: G.P.S. Info Please..

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <Dv91JK.BnK@pe1chl.ampr.org>
Source record: 21851

In <4t8u9h$b2k@news.whidbey.com> subbustr@whidbey.net (DAVE M . SCHERTZER) writes:

>What type of orbit are these satalights in??

>1. Geostationary
>2. Geosynchronous
>3. Sunsynchronous
You forgot:
4. None of the above

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1480. Repeater operational on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-07-28 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tfpdg$oh4@news.monad.net>
Source record: 21852

Hi just a quick one to let you know the Mir repeater is on and is operational, there were many contact being made at 9:10 this
morning, over the central part of the country..
73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

1481. Re: Repeater operational on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-07-29 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4thsa3$lvj@host-3.cyberhighway.net>
Source record: 21853

dhend@cyberportal.net wrote:

>Hi just a quick one to let you know the Mir repeater is on and is operational, there were many contact being made at 9:10 this
>morning, over the central part of the country..
>73 DAVE
>
>e-mail=dhend@cyberportal.net
> packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
> phone 1-603-542-2493 1-603-542-6917
>
>
>

Hi Dave,

Could you be a bit more specific? I was unaware that a "repeater" was even aboard the MIR. I know that they carry an ICOM mobile 2m radio for phone and packet, but their having an actual repeater onboard is big news! Could you pass along the output freq and offset for those of us who are obviously MIR news challenged. And here I thought I was keeping on top of space stuff..

73's

John (still trying for a Shannon contact) Jordan KB7VZL

1482. Repeater needed for Reno NV area.

Newsgroup: rec.radio.amateur.space
Date: 1996-07-29 00:00:00 UTC
From: id4eagle1@aol.com
Message-ID: <4thvu9$jtn@newsbf02.news.aol.com>
Source record: 21854

Hello,

This is KE6WBO, and I am requesting help and guidance
on the following issue:

I am involved in an amature rocket flight which will be
taking place next month August the 17th. The rocket
carries a 10w ATV package which will be broadcasting
on 440 Mhz. It also carries a Trimble GPS unit which will have its data
video overlaid on the video.

The launch will take place from Black Rock dry lake bed,
which is roughly 130mi NNE of Reno. The projected altitude will be
somewhere between 90 - 105k'; over
20 mi.

I need to find out who operates repeaters in the area.
How do I contact them to see if they would be willing to
repeat the flight? Are there any ham magazines which might be interested
in a story?

Also, I am working on a helix recieving antenna. I have already built the
helix and the reflector. The helix is copper tubbing, and the reflector
is made from Al wire mesh which is mounted in a screen door frame. I am
about to make the maching section, 75 ohm coax, and little odds and ends
to complete it. I don't have a Bird meter or any way of tunning the
antenna. If any of you in the San Fransicso area would be willing to help
me with the tuning I would appreciate it and mention your name in any
magazine write ups :)

I live in Martinez CA which is about 30 mi NE of San Fransisco CA. I can
be contacted by email on AOL.

I am also looking to by a used 440 recieving antenna (backup for the
flight) and a used bird meter. Oh, the reaso n why I want the helix to
be used is to avoid polarization recieving problems. I will not know the
orientation of the rocket, so having the helix is the logical approach :)
If you can think of another, please let me know :)

Ok, I hope my message gets some useful replies :)

Jonathan Dunbar
KE6WBO

1483. Mir repeater info

Newsgroup: rec.radio.amateur.space
Date: 1996-07-29 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4ti526$3qv@news.monad.net>
Source record: 21855

many people have requested this information so here it is
Date: Fri, 26 Jul 96 10:01:00 EDT
Message-ID: <53935@KJ6FY> (19445@WA1WOK)
From: N6JLH@KJ6FY.#NOCAL.CA.USA.NOAM
To: SPACE@USBBS
Subject: SAFEX REPEATER OPEN
Path: WA1WOK!WB1DSW!W0RLI!K7IQI!KC7KFE!KI7SO!W7OEK!WB7AWL ...

To operate in repeater mode you need:

downlink: 437.950 MHz
uplink: 435.750 MHz with 141.3 Hz CTCSS
ID: RR0DL Repeater

Please also check 437.925 MHz for the beacon (voice recorder).

This next week the Beacon wl be on - so take a listen -

The doppler is [+ & -] 10 kc's - so program your rig
for this -

I have wrked the repeater with 25 watts and 35 elms

I have NOT been able to work this with a mobile rig
and a 5/8's wave , even on a 75 deg pass -

Rember MIRa moves very fast across the Earth - so make your
contacts as short as you can.

For QSL cards --
DF0VR in Germany
If you need any other info

N6JLH@N0ARY.#NOCAL.CA.USA OR
doc@volcano.net

N6JLH
DAVE

I have been trying to operate it with a 5 watt ht into a 22 element cross-polarized beam to no avail.. good luck.. hear a lot of people
with a lot of good equipment using it though Best luck Dave H. N1PPP
WA1WOK - 3 Users >

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www/cyberportal.net/dhend/dave1.html

1484. more safex information

Newsgroup: rec.radio.amateur.space
Date: 1996-07-29 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tj8lj$5vv@news.monad.net>
Source record: 21856

```
MIR
1 16609U 86017A 96207.38876011 .00000338 00000-0 10000-4 0 6011
2 16609 51.6500 291.6915 0010535 342.4066 17.6436 15.61532273595947
KVANT 1
1 17845U 87030A 96208.02869303 .00001619 00000-0 24608-4 0 6942
2 17845 51.6503 288.4696 0010655 345.2430 14.6068 15.61536532530187

--------------------[KO-23:1FA09]--------------------
From: DF5DP
To: ALL
Subject: SAFEX SUMMARY
Keywords: MIR DL2MDE DARC
----------------------------------------
To : ALL
From: DF5DP
Time: 100727UTC
Date: 22 Jul 1996
-----------------

(by DL2MDE)

The SAFEX II Station Call RR0DL
==============================
is now working on bord of the Russian Space Station MIR
=======================================================

With the following words Shannon Lucid gave a message on the frequency
437.925 MHz from the MIR space station on the weekend July 13./14., 1996:

"Thanks for the Radio SAFEX, we just turned it on and the best wishes
from the crew of MIR 21. Hope this is of use to you. Many thanks
for the experiment."

Herewith we have reached the first result of our work on the SAFEX project.
Since the construction and the installation on the space station MIR is
finished successfully, we now verify the different modes of the equipment.

The first contact in the QSO-mode was between W5RRR and the MIR station
and the first contact between ground stations via the SAFEX repeater
were IV3WLQ, LY3BH and DF0VR.

Two very important things:
For working via the repeater you must use CTCSS tones. We will publish
the CTCSS tones after checkout.
The Doppler-shift is plus/minus 10 kHz, that means in the begin and the
end of all passes you have a difference of 20 kHz referred to the normal
frequency.
```


+++
+ The Amateur Radio Space Experiment SAFEX II +
+ New Amateur Radio Station RR0DL in Space Station MIR +
+ +
+ by Thomas Kieselbach, DL2MDE +
+++

The international amateur radio community always tries to use also the
manned space flight missions. Thus far, this has occured on several
American and Russian space missions. Years ago the Russians installed
an amateur radio station at the MIR space station. This radio station
operates in the 145 MHz band in voice and packet modes. After the
Russian-German space operation MIR-92 it was proposed to expand the
existing equipment in order to accommodate current communication
technologies. The launch is now planned for spring 1996.

An agreement was made between NPO Energia, Russian radio amateurs,
Deutscher Amateur Radio Club (DARC) and the Ham Radio Group at
the German Aersospace Research Establishment (DLR) in Feburary
1994 to install a new amateur system to the space station MIR. This
system will be mounted to the "Priroda" module and will be comprised
of various components which operate on different radio amateur bands.
On the German side support was given by the Deutsche Agentur fuer
Raumfahrtangelegenheiten (DARA). The costs are shared, whereby the
German side covers the costs for the development and fabrication
(DARA, DARC) and the Russians for the installation at the "Priroda"
module and its operation.

The system is comprised of two main parts with auxiliary equipment:
1. Radio equipment in the 430 MHz amateur band (Duplex Shift 2.2 MHz).
2. Radio equipment in the L/S band (Uplink 1265 MHz/Downlink 2410 MHz).

The first covers primarily the desire for HAM communication and the
second for experiments in future techniques.

History
=======
In the past there has been participation of radio amateurs during several
German space missions:

1985: DP0SL at the first German Spacelab-Mission;
1992: DP1MIR at the Russian-German Mission MIR-92;
1993: DP0SL at the second German Spacelab-Mission;
1994: DP3MIR at the Russian-ESA Misson EUROMIR 94;
1995: DP0MIR at the Russian-ESA Mission EUROMIR 95.

In 1993 first discussions and negotiations with the Russian partners
(NPO Energia) and the Russian radio amateurs took place, which led to
an agreement in March 1994 concerning a new HAM-radio-station on
MIR. In May 1994 DARA promised to participate on financing the
project. In August 1994 an agreement between the partners was signed

for the start of RR0DL in late summer 1995 (postponed to spring 1996).

Project Requirements

The experience of earlier missions showed that astronauts and cosmonauts are very busy and overloaded with work. Therefore the new equipment must offer technical arrangements which permit amateur radio activities without active crew operation. In amateur radio one is concerned with many technical areas. The new equipment will satisfy the desire for both communication and experiments.

The conception on the Russian side had to be fulfilledin detail, but they were very generous. That can be seen from a payload of 30 kilogram, three external antennas and an electrical power of 50 Watts/24 hours with peaks up to 300 Watts for a maximum of 2 hours/day. The technical demands for all parts of the equipment are very high. What does not correspond is not going to be launched. In addition there was a tight time table for the realization of the project.

Concept

The equipment for the RRODL consists of two main parts with several additinal devices.
Radio equipment in the 430 MHz band: Duplex with a 2.2 MHz frequency shift, modified as communication system for the MIR crew.
Radio equipment in the L/S-band: Uplink 23 cm, downlink 12 cm, designed as an experimental system, transponder operation, amateur television (ATV), and future experiments.

There exists already a 2 meter amateur radio station on the MIR space station. It is, however, installed into another module of the station. It is planned to install a 144 MHz-radio, which will be switched by a diplexer, in order to make operation possible from RR0DL on 2 m or crossband.

430-MHz-Equipment

The 430 MHz installation corresponds to a large extend to FM repeater technology. At first it simplified the matter for us that a standard product (ICOM 4020) could be modified. To this device several modifications and additions had to be undertaken. Besides to the additinal features there is installed:

- Diplex filter and switches for 2 meters
- Filter for 70 cm duplex-mode
- Packet Radio TNC for duplex-digipeater
- Digital voice recorder
- Digital voice identification
- changeover of the supply voltage to 28 Volts
- Frequency and operating control system / mode control

The device in its original housing (425mm width x 149mm height x 368mm depth) is built for rack mounting. The handling will be done by

the MIR crew, it is also possible to use remote control from the ground station (Moscow, R3K and Oberpfaffenhofen, DF0VR).

Mode-1: Relay Operation
==========
On-board frequency: 437.950 MHz;
Ground frequency: 435.750 MHz,
accordingly 2.2 MHz frequency shift,
CTCSS tone for operation. 141.3 pl.(n6jlh)

The possibility for FM voice communications covering Europe is achieved. It depends on the users whether these communications can be realized. Radio discipline has first priority. For a special ground station working in undisturbed broadcast mode is possible by using special techniques.

Mode-2: Data Operation (Packet Radio)
==========
On-bord frequency: 437.975 MHz
Ground frequency: 435.775 MHz,
accordingly 2.2 MHz frequency shift,
no CTCSS tone operation.

Previous experience was gathered using packet radio on the MIR space station. The new device operates at 9600 Bd and echoes every data packet. With this concept, a higher data rate than with the former equipment can be achieved on one hand by the data speed, on the other hand the collisions of packets will be reduced to a minimum. There is also a lap-top PC available at the station for mailbox operation.

Mode-3: QSO-Operation of the MIR Crew
==========
On-board frequency: 437.925 MHz;
Ground frequency: 435.725 MHz,
accordingly 2.2 MHz frequency shift,
CTCSS tone for operation.

The cosmonauts can perform regular QSOs and can also carry out special functions with this device. Certainly in QSO operation it is very valueable that at the on-board frequency there are no other signals to be heart (communications discipline!).

In additionion, the cosmonauts have three other possibilities to use RR0DL:

1. In special cases a CTCSS tone can be switched to the transmission of RR0DL and DTMF tones can be used. The crew applies this in case they want to contact specific prepared stations. This is planned for emergency use, contacts with control centers and their families. Ground stations can be equipped accordingly, so that the cosmonaut can dial into a telephone system with DTMF tones in order to reach his XYL or another OM. If this is noticed other hams should not disturb!

2. Furthermore a digital voice recorder will be built into RR0DL.
With that device the cosmonauts have the possibility to
transmit a message worldwide. They record a text on the
digital voice recorder and this text will be transmitted in
regular intervals (duration up to 2 min, then 2 min breake). The
German DLR Ham Radio Group added an identical device to
the already existing 2-m-equipment. The last messages
transmitted from MIR were New Year Wishes (1994),
Greetings to the HAM Fair Friedrichshafen (1994) and at the
EUROMIR 95 Mission.

3. Picture transmission, this part is new in the concept for
RR0DL. A system was developed for transmitting pictures in
digital form. The crew on-board of MIR can take pictures with
a still-video-camera and these can be stored in a lap-top PC.
The basis for the picture transmitting protocol is the AX.25
packet protocol. The picture pixels are transmitted in pseudo-
random kind. With this system recognition of pictures after
only 30 % transmission is possible. Missing pixels will be
mathematically added at the end of transmission. Transmission
time for one picture is 3 minutes. Amateurs can receive the
picture with a normal packet TNC with 9K6 modem and a
special software version from JVFAX (not available yet).

Ground Station for 430 MHz
==========
A normal FM-transceiver with an omni-directional antenna can be used
as ground station. Improved and easier is the operation, if
1. directional antennas
2. computer control for antennas and transceiver
3. CTCSS device
4. scanner operation for the SAFEX frequencies
5. narrow frequency intervals are available.

It has to be considered that the Doppler shift at 430 MHz can be up to 10
kHz. Special information for receiving equipment in future are given in
the mailboxes.

L/S-Band device
==========
This equipment is planned for experiments on amateur radio. The basic
module is working as a transponder with 10 MHz bandwidth, uplink
1265 MHz, downlink 2410 MHz. It is possible to plug different
experimental modules into the basic module. The ATV group at the
University of Bremen will develop and built the ATV equipment and also
the L/S-band basic part.

Experimental modules operate at the intermediate frequency 70 MHz, the
other parameters will be published later. So the possibility for the HAM
community is given, that in the future other communication experiments
at the MIR station can be realized.

Project SAFEX II Fact Sheet

Space AmateurFunk EXperiment
Amateur Radio Equipment for the Russian Space Station MIR

QRV on: 2 meters: RX and TX (Simplex)
70 cm: RX and TX (Duplex)
23 cm: uplink and 12 cm downlink
for voice, data, picture and ATV transmission

Transmit frequencies in the 430 MHz band:

437.925 MHz: direct frequency with the space station MIR,
QSO's with the cosmonauts, picture transmission and
automatically transmitted messages from the MIR crew;

437.950 MHz: repeater (relay operation); voice contacts between
ground stations;

437.975 MHz: data transmission; packet radio direct over greater
distances, mailbox operation with store and forward.

The ground stations transmit on a 2.2 MHz lower frequency. The Doppler
shift can be up to 10 kHz; the correction must be done at the ground
station.

Frequencies for the L/S-band-equipment:

Uplink: 1.265 Ghz
Downlink: 2.410 Ghz
Bandwidth: 10 MHz, linear translation or signals of the space station
(for example amateur television)

SAFEX-II Mission dates: launch spring 1996 as permanent service.

Callsign: RR0DL

Weight: up to 30 kg

Power supply: 50 Watts over a 24 hour period as well as additionally up
to 300 Watts for 2 hours from the on-board supply (28 V).

Operation: Under the control of the cosmonauts; additionally a remote
control is possible from Moscow (R3K) and Oberpfaffenhofen (DF0VR).
SAFEX-II is a project of the German Amateur Radio Club (DARC)
carried out by different groups under project management of the Ham
Radio Group at the German Aerospace Research Establishment (DLR)
Oberpfaffenhofen.

Project leader: Thomas Kieselbach, DL2MDE
email-address: hams.df0vr@dlr.de
++

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743

phone 1-603-542-2493 1-603-542-6917

This country, with its institutions, belongs to the people who inhabit. Whenever they shall grow weary of the existing Government, they can exercise their constitutional right of amending it, or their revolutionary right to dismember or overthrow it.
-- Abraham Lincoln (1809-1865)

1485. NORAD Two-Line Orbital Element Sets (TLE844)

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4tjvse$rta@blackbird.afit.af.mil>
Source record: 21857

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #844 -
Alouette 1
1 00424U 62049A 96208.57384203 .00000042 00000-0 39013-4 0 2166
2 00424 80.4595 244.8765 0022616 296.1480 63.7337 13.67872684687727
ATS 1
1 02608U 66110A 96203.75684393 -.00000287 00000-0 10000-3 0 9740
2 02608 14.6250 352.4859 0009359 90.3734 269.7859 1.00322132 25214
ATS 3
1 03029U 67111A 96210.32737449 -.00000122 00000-0 10000-3 0 5207
2 03029 14.9138 359.3467 0009180 266.2495 53.1933 1.00273316105172
Starlette
1 07646U 75010A 96207.86835028 -.00000151 00000-0 -60193-5 0 9869
2 07646 49.8284 356.0685 0206298 358.2903 1.7269 13.82190632 84316
LAGEOS
1 08820U 76039A 96208.53495676 .00000039 00000-0 10000-3 0 2105
2 08820 109.8533 39.4907 0043404 122.6232 237.8704 6.38664440216342
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96210.51020472 .00000047 00000-0 10000-3 0 7020
2 10061 12.4231 36.6280 0011316 125.8154 152.5885 1.00276205 14851
IUE
1 10637U 78012A 96203.57484028 -.00000264 00000-0 10000-3 0 2645
2 10637 35.8038 82.5824 1371096 57.8364 320.6746 1.00230121 20285
GPS BI-01
1 10684U 78020A 96209.68520960 -.00000013 00000-0 10000-3 0 4622
2 10684 64.9940 22.6943 0060216 161.3517 198.8759 1.98069339120219

```
GPS BI-02
1 10893U 78047A 96210.46861755 .00000064 00000-0 10000-3 0 2590
2 10893 63.1269 259.6491 0229158 14.0193 346.6518 2.01628536133644
GOES 3
1 10953U 78062A 96205.28892313 -.00000132 00000-0 10000-3 0 6830
2 10953 11.4071 39.5875 0001438 62.3632 202.2377 1.00270642 19419
SeaSat 1
1 10967U 78064A 96207.69096363 -.00000057 00000-0 25733-4 0 5032
2 10967 107.9922 254.4205 0001799 259.0967 100.9969 14.38114321946989
GPS BI-03
1 11054U 78093A 96203.08172637 .00000025 00000-0 10000-3 0 4167
2 11054 62.8306 259.1324 0047005 180.5680 179.5164 1.93505197129317
Nimbus 7
1 11080U 78098A 96208.68685350 -.00000113 00000-0 -64893-4 0 6031
2 11080 98.9403 68.9992 0008359 219.2328 140.8221 13.83690351896639
GPS BI-04
1 11141U 78112A 96204.58515399 -.00000017 00000-0 10000-3 0 559
2 11141 65.0061 25.3319 0050631 29.0109 331.3088 1.92894662 18560
GPS BI-05
1 11690U 80011A 96209.73217493 -.00000011 00000-0 10000-3 0 458
2 11690 65.3313 24.1401 0143990 189.7145 170.0463 2.00573530135019
GPS BI-06
1 11783U 80032A 96210.63843039 .00000074 00000-0 10000-3 0 1567
2 11783 62.2904 252.2679 0227421 29.9051 331.4912 2.03456546119674
GOES 5
1 12472U 81049A 96201.68313085 .00000070 00000-0 10000-3 0 9407
2 12472 8.2383 49.8233 0006891 45.9522 314.1680 1.00230521 13429
Cosmos 1383
1 13301U 82066A 96209.25851477 .00000045 00000-0 35206-4 0 5147
2 13301 82.9320 104.4286 0028209 126.9294 233.4448 13.68075859702855
LandSat 4
1 13367U 82072A 96210.77831910 .00000019 00000-0 14075-4 0 9792
2 13367 98.0697 260.4288 0007839 19.6174 340.5326 14.57179488746594
DMSP B5D2-1
1 13736U 82118A 96210.56016717 .00000006 00000-0 20997-4 0 506
2 13736 98.6229 38.2781 0007777 271.4961 88.5328 14.25794047706960
IRAS
1 13777U 83004A 96211.04879470 -.00000237 00000-0 -13339-3 0 3853
2 13777 98.9679 35.6601 0013611 342.9543 17.1158 13.99256619359223
Cosmos 1447
1 13916U 83021A 96207.87774868 .00000003 00000-0 -13071-4 0 6079
2 13916 82.9449 162.4248 0039584 45.2055 315.2301 13.74342338669054
TDRS 1
1 13969U 83026B 96211.05805899 -.00000307 00000-0 10000-3 0 6093
2 13969 9.0438 43.4519 0002325 46.2976 189.6280 1.00269822 21801
GOES 6
1 14050U 83041A 96205.29126257 -.00000236 00000-0 10000-3 0 5275
2 14050 7.0854 53.5608 0005156 16.1901 256.0447 1.00241398106551
OSCAR 10
1 14129U 83058B 96206.35271028 -.00000093 00000-0 10000-3 0 4422
```

```
2 14129 26.0656 198.1452 6021432 34.5100 352.8654 2.05883338 70634
LandSat 5
1 14780U 84021A 96211.17868639 -.00000016 00000-0 67713-5 0 5063
2 14780 98.3271 268.9908 0003051 131.8134 228.3324 14.57055202660045
UoSat 2
1 14781U 84021B 96210.53350787 .00000036 00000-0 13951-4 0 9017
2 14781 97.8018 199.4198 0011631 324.6122 35.4290 14.69467267663728
GPS BI-09
1 15039U 84059A 96210.33406384 -.00000024 00000-0 10000-3 0 4269
2 15039 64.6420 19.4946 0083097 19.6457 340.7699 1.92304354 88223
Cosmos 1574
1 15055U 84062A 96210.55242584 .00000025 00000-0 10760-4 0 8083
2 15055 82.9558 215.4273 0026039 225.1635 134.7405 13.73637465606666
GPS BI-10
1 15271U 84097A 96208.27088979 .00000075 00000-0 10000-3 0 1773
2 15271 62.1750 252.9866 0108243 158.6525 201.8892 1.92618147 422
Cosmos 1602
1 15331U 84105A 96210.22823087 .00000102 00000-0 91221-5 0 4911
2 15331 82.5334 74.5867 0020043 167.3109 192.8607 14.84770143639069
ERBS
1 15354U 84108B 96210.45389875 -.00000155 00000-0 73898-5 0 2047
2 15354 56.9963 213.3749 0001860 74.5291 285.5953 14.94968146643013
NOAA 9
1 15427U 84123A 96210.82232810 -.00000009 00000-0 18832-4 0 7849
2 15427 98.9471 275.7692 0014403 191.6983 168.3853 14.13793864599515
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96211.22856179 .00001791 00000-0 26557-4 0 6054
2 16609 51.6496 272.3425 0010919 356.9492 3.1433 15.61551042596541
SPOT 1
1 16613U 86019A 96209.52180536 -.00000045 00000-0 00000+0 0 9693
2 16613 98.8282 277.5076 0001701 104.5104 255.6262 14.19980562226030
Cosmos 1766
1 16881U 86055A 96207.22618355 .00000155 00000-0 15788-4 0 4050
2 16881 82.5194 135.1032 0017780 207.7251 152.3021 14.83749821539487
EGP
1 16908U 86061A 96208.20509486 -.00000083 00000-0 10000-3 0 1037
2 16908 50.0127 237.0480 0011336 113.9922 246.2101 12.44414921121266
NOAA 10
1 16969U 86073A 96210.83800855 .00000046 00000-0 38038-4 0 7163
2 16969 98.5253 206.7123 0012016 231.6240 128.3861 14.24995985512535
MOS-1
1 17527U 87018A 96208.66572974 -.00000043 00000-0 00000+0 0 4371
2 17527 98.9340 269.7783 0018858 218.1840 141.8017 14.00400880480518
GOES 7
1 17561U 87022A 96201.40931832 -.00000164 00000-0 10000-3 0 9791
2 17561 3.1305 68.9321 0005560 318.5834 323.0505 1.00272792 17625
Kvant-1
```

```
1 17845U 87030A 96210.84457861 -.00003180 00000-0 -30113-4 0 6986
2 17845 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493530620
DMSP B5D2-3
1 18123U 87053A 96210.51824786 -.00000012 00000-0 15967-4 0 5315
2 18123 98.7689 40.1366 0014654 132.7903 227.4535 14.15447947470341
RS-10/11
1 18129U 87054A 96207.83766292 .00000044 00000-0 31245-4 0 2396
2 18129 82.9263 119.9770 0013388 49.3351 310.8963 13.72367615455471
Meteor 2-16
1 18312U 87068A 96210.38157508 .00000038 00000-0 20530-4 0 4977
2 18312 82.5546 319.4031 0013712 102.0990 258.1706 13.84082134451871
Meteor 2-17
1 18820U 88005A 96210.87723786 .00000004 00000-0 -10040-4 0 14
2 18820 82.5400 13.9360 0016556 165.2563 194.9086 13.84759318429295
DMSP B5D2-4
1 18822U 88006A 96210.10260684 -.00000021 00000-0 89271-5 0 3088
2 18822 98.3824 40.2106 0005153 247.5506 112.5127 14.23195877440399
Glonass 34
1 19163U 88043A 96209.88291678 .00000005 00000-0 10000-3 0 976
2 19163 65.2813 84.4641 0007049 155.3275 204.7855 2.13102275 63106
Glonass 36
1 19165U 88043C 96209.00144234 -.00000001 00000-0 10000-3 0 5025
2 19165 65.2504 84.4527 0003697 0.9896 359.0921 2.13102038 63708
METEOSAT 3
1 19215U 88051A 96203.60149760 -.00000064 00000-0 10000-3 0 2700
2 19215 3.3305 67.5511 0002980 100.6638 259.3698 0.96947295 17519
AO-13
1 19216U 88051B 96209.66773852 .00006547 00000-0 12074-2 0 2486
2 19216 57.1851 102.0225 7437542 46.0520 355.0208 2.10219067 30698
OKEAN 1
1 19274U 88056A 96208.60549929 .00000165 00000-0 17602-4 0 1061
2 19274 82.5137 234.6959 0020472 359.9842 0.1368 14.82499368435211
Meteor 3-2
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2 19336 82.5402 139.5137 0016886 135.1195 225.1299 13.16978132384486
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2 19531 99.1877 229.9234 0012498 120.3239 239.9169 14.13098600404310
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2 19548 2.5786 71.7259 0004499 102.5283 96.1611 1.00271839 15949
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2 19749 65.2257 83.9797 0007247 257.7648 102.2260 2.13101566 58721
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2 19802 55.3409 109.0111 0019344 186.4962 173.5193 2.00549321 54530
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2 19822 75.0739 101.2994 3742041 76.8000 321.6249 7.92554861169788
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2 19851 82.5209 250.7463 0012577 228.1515 131.8572 13.84414410374095
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2 19883 0.0431 86.7775 0003674 56.8936 303.1477 1.00268857199760
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2 20061 54.1998 284.8446 0159014 220.6796 138.1554 2.00562746 52247
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2 20305 82.5562 95.5957 0006995 190.5794 169.5207 13.04434552323676
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2 20826 82.5258 253.0108 0014949 50.9783 309.2707 13.83633975294289
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2 21217 64.9171 322.2091 0010986 225.4128 134.5187 2.13101544 41308
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2 21218 64.9138 322.1262 0010142 342.5823 17.4198 2.13102599 41399
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1 21655U 91056A 96207.72897683 .00000051 00000-0 10000-3 0 9051
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DMSP B5D2-6
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1 22012U 92038A 96210.12061792 .00000174 00000-0 12676-4 0 7340
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Glonass 58
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TDRS 5
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2 22739 99.0466 166.4202 0010848 106.6555 253.5796 14.10968203152930
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2 22782 82.5495 315.7059 0020854 225.7879 134.1568 13.83057188146615
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SPOT 3
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2 23968 26.8831 307.2554 6691747 173.4515 204.3128 3.04301620 10
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1486. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: dcopeland@gxl.com
Message-ID: <31fd8a74.0@news3.paonline.com>
Source record: 21858

psgeorge@infinet.com (Paul S. George) wrote:

>I have a question... Is there a consensus as to what is the best (feature,
>price, etc.) satellite tracking program available (PC or Mac)? I've been
>using WinOrbit (shareware) and it does a reasonable job, but it does lack
>a few features such as tracking multiple satellites in the same window and
>the ability to interface with an antenna Az/El controller.

>If anyone out there is using one or has an opinion as to which one is
>best, I would certainly be interested in your opinion.

>Thanks!

>--
>Paul S. George n8xqv (psgeorge@infinet.com)

I would stay away from NOVA. When it comes time for an update they
will change the name and you must pay full price!
Try LOGSAT PRO. It is a great program and has free updates on the net.
Just want to keep others from making the NOVA mistake like I did!

dcopeland@woodtech.com

1487. Re: Repeater operational on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: Mark de Hoo <mdehoo@tip.nl>
Message-ID: <31FE0D03.274C@tip.nl>
Source record: 21859

Dear Dave,

Do you have more info on this ?
freqs, mods ?

--
Best regards,

Mark de Hoo

E-mail : mdehoo@tip.nl
Home page : http://www.tip.nl/users/mdehoo/index.htm
AX25 : PA3GTY@PI8RYS.#NH1.NLD.EU

1488. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: ericr@access2.digex.net
Message-ID: <ericr.838732517@access2>
Source record: 21860

dcopeland@gxl.com writes:

>I would stay away from NOVA. When it comes time for an update they
>will change the name and you must pay full price!
>Try LOGSAT PRO. It is a great program and has free updates on the net.
>Just want to keep others from making the NOVA mistake like I did!

>dcopeland@woodtech.com

I am really distressed by this reply. I have tried all of the tracking programs available for DOS since Oscar-7, and find NOVA to be a commendable piece of software.

I can't speak to Logsat Pro, but I can tell you that none of the others I have purchased have *ever* charged me for updates. Not for InstantTrack, not for Nova, not for any of the AMSAT-UK programs. In fact, NOVA users get updates free on the Internet, as do users of most of the other pieces of software out there.

If you don't like the features or operation of NOVA or any other piece of software, that's fine. But to trash a piece of software for a fictional reason, please keep that to yourself!

Eric WD3Q
Washington, DC
wd3q@amsat.org

1489. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: rogerjb@earthlink.net
Message-ID: <4tlu0e$d10@chile.it.earthlink.net>
Source record: 21861
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <31F993CA.22C@isocor.com>, "John B. Stephensen" <john.stephensen@isocor.com> writes:
>There is no conflict of interest unless
>one of his clients decides to take legal action against another and asks
>his advice. At that point, most lawyers tell both of their clients to
>hire another lawyer to handle that legal action.

I don't know where you get your information, but it is both uninformed and incorrect. The ABA Model Rules of Professional Conduct Sections 2.0-2.2 makes it quite clear that if two clients are adverse in an action, the lawyer cannot represent either, unless one gives the lawyer permission to represent the other.

>Conflict of interest means that he is breaching confidentiality or using
>knowledge of one client to benefit the other.

No, that's not what it means. It means that the lawyer cannot diligently represent one client without failing to diligenly represent the other. (My words, but that's the gist of it.)

>Just the suspicion of this
>can cause his clients to leave. Proof gets him disbarred. No wonder he is
>pissed off.

Wrong again. Disbarment is not always the sanction imposed on a lawyer who violates the rules. Sanctions usually are less severe, such as a public reprimand, or other punitive, non-disbarment stuff.

73, John.

Roger J. Buffington
W6VZV
USC Law School Class of '97

rogerjb@earthlink.net

"I want to die peacefully, in my sleep, like my grandfather.
Not screaming, and in terror, like his passengers."

1490. Re: Satellite Gateway Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4tlscn$or5@tilde.csc.ti.com>
Source record: 21862

Dave, I would like to set up a satellite gateway too. I believe you shouldn't rule out the use of a computer at the site. A 286 should do the job just fine and cost next to nothing (don't need a color monitor,a printer, or a mouse.)

I'm surprised that there haven't been more articles posted on this subject. A gateway would be a good way to generate more interest in the Hamsats. A setup that could be used from a mobile or talkie would be a lot of fun.

Let me know if you get some email on this subject. I could use any info that comes in.

Ken K5MBV

1491. ARLK053 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk053.1996@arrl.org>
Source record: 21863
Cross-posted to: rec.radio.info,rec.radio.amateur.space

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SB KEP @ ARL $ARLK053
ARLK053 Keplerian data

ZCZC SK53
QST de W1AW
Keplerian Bulletin 53 ARLK053
From ARRL Headquarters
Newington, CT July 30, 1996
To all radio amateurs

SB KEP ARL ARLK053
ARLK053 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
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RS-10/11
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RS-12/13
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AO-13
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RS-15
1 23439U 94085A 96210.69602088 -.00000039 00000-0 10000-3 0 01645
2 23439 64.8199 315.9557 0159788 191.8001 167.9155 11.27528320065469
AO-16
1 20439U 90005D 96210.78045244 -.00000012 00000-0 12219-4 0 00112
2 20439 98.5578 295.3113 0012139 79.7741 280.4809 14.29980400340013
DO-17
1 20440U 90005E 96210.72860504 -.00000001 00000-0 16457-4 0 00118
2 20440 98.5603 295.9198 0012312 78.9601 281.2958 14.30122380340035
WO-18
1 20441U 90005F 96210.71934284 -.00000022 00000-0 81953-5 0 00077
2 20441 98.5599 295.8451 0012751 81.0852 279.1779 14.30091612340031
LO-19
1 20442U 90005G 96210.78195321 -.00000002 00000-0 15939-4 0 00142
2 20442 98.5591 296.4165 0013341 79.1684 281.0998 14.30201078340067
FO-20
1 20480U 90013C 96210.55106116 .00000016 00000-0 10450-3 0 09035
2 20480 99.0247 227.5408 0540955 30.8302 332.3418 12.83234359303199
AO-21
1 21087U 91006A 96210.71834448 .00000094 00000-0 82657-4 0 07455
2 21087 82.9393 290.9640 0036521 88.8637 271.6703 13.74570406275716
UO-22
1 21575U 91050B 96210.68810698 -.00000005 00000-0 12670-4 0 07229
2 21575 98.3484 275.8350 0007927 135.5016 224.6798 14.37030803264025
KO-23
1 22077U 92052B 96210.77034499 -.00000037 00000-0 10000-3 0 06203
2 22077 66.0765 102.3955 0014127 287.9854 71.9613 12.86296925186151
KO-25
1 22828U 93061F 96210.74013099 -.00000015 00000-0 11193-4 0 04780
2 22828 98.5750 285.7726 0011000 91.8898 268.3544 14.28147014116046
IO-26
1 22826U 93061D 96210.69875002 -.00000030 00000-0 54905-5 0 05015
2 22826 98.5782 285.6694 0009567 105.2884 254.9354 14.27808760147924
AO-27
1 22825U 93061C 96210.70559278 -.00000011 00000-0 13028-4 0 04962
2 22825 98.5752 285.5011 0009133 104.4053 255.8148 14.27699981147913
PO-28
1 22829U 93061G 96210.75732005 .00000003 00000-0 18561-4 0 05016
2 22829 98.5771 285.8529 0010960 93.3358 266.9078 14.28128510147965

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
August 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1492. Logsat is one of the best

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tlpif$lrv@news.monad.net>
Source record: 21864

There are many tracking programs out there, and many are commendable but on a fast computer none compare in ease of operation,
flexibility, and the ability to personalize the displays to your own preference, I wouldn't reccomend it for a slow 486 (25 mhz sx) but it is literally
astounding in its flexibility to open different views and different projections. The shareware is too crippled to even use, but the real version is
so amazing I can't imagine you won't be thrilled.

It simply dwarfs other tracking programs... 73 DAVE

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

There are a thousand hacking at the branches of evil to one who is
striking at its root.
-- Henry David Thoreau

1493. more Safex info

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <4tkos5$kkc@news.monad.net>
Source record: 21865

To: SAFEX@USBBS
Subject: RR0DL MIR REPEARTER
Path: WA1WOK!WB1DSW!W0RLI!N6IYA!KA6EYH!W6PW!KA6FUB!KJ6FY

Clearance of SAFEX Repeater RR0DL
++++++++++++++++++++++++++++++++
The SAFEX Repeater RR0DL is operating since 12.07.96 onboard the
space station MIR. Worldwide tests have been performed successfully.
From now on the repeater is open to all hams for tests/QSO.
The frequencies are 437.950 MHz downlink / 435.750 MHz
uplink. The repeater works with a CTCSS subtone of 141.3 Hz.

The following recommendations have to be considered:

1. As in any radio contact it is most important to firstly
LISTEN and then TRANSMITTING (discipline).
2. For the purpose of testing of other mods a turn over
is possible at any time. In this case please do not work
via the repeater.
3. After opening the repeater a short "squelch tail" can be
registered, at this time the repeater is open and other
stations without CTCSS subtone can also work via the repeater.
4. The sensibility of the equipment STRONGLY depends on the
attitude of the space station. Due to this reason it can be
that you cannot make a contact.
5. In the repeater mode it is also possible to contact the MIR
crew if one of them takes the mike.
6. A power output of about 25 watts is sufficient. QSO's have been
performed even with hand helds.
7. The Doppler shift has to be considered on both Rx and Tx sites.
Otherwise other stations will be disturbed.
8. Test reports about experiences / contacts are wellcome via packet
or e-mail. Unfortunately we cannot answer on each report directly.

Tips

1. A good method can be introduced here:
Programming of receiver and transmitter frequencies (+CTCSS) or shift
respectively in steps of 2 khz. A contact can be performed by simple
switching over between the channels observing the Doppler shift by
a satellite programme.

CH Rx (MHz) Tx (MHz) or Shift (MHz)
10 437.959 435.741 2.218
11 437.957 435.743 2.214
12 437.955 435.745 2.210

13 437.953 435.747 2.206
14 437.951 435.749 2.202
15 437.949 435.751 2.198
16 437.947 435.753 2.194
17 437.945 435.755 2.190
18 437.943 435.757 2.186
19 437.941 435.759 2.182

2. A pass of MIR space station is possible either northern
or southern with respect to a ground station. Due to the
limitation of the rotors at 0 or 180 grad there is a problem.
We have solved this situation by means of a 4 pole change-over
switch. With two of the switch's contacts the steering cables for
up and down can be interchanged. The other two contacts are used to
interchange the power lines for the potentiometer. The change of
rotor's limit can now be performed by appropriate adjusting in the
satellite programme and switch turn over. With this method good
expierences have been made at DF0VR.

****
* S_pace SAFEX Team *
* A_mateur HAM RADIO GROUP (DF0VR) in der *
* F_unk Deutschen Forschungsanstalt *
* E fuer Luft- und Raumfahrt *
* X_periment D-82234 Wessling / Oberpfaffenhofen *
* *
* DF0VR Packet: DF0VR@DB0AAB.#BAY.DEU.EU *
* e-mail: HAMS.DF0VR@DLR.DE *
****
* SAFEX-Principal Investigator Thomas Kieselbach, DL2MDE *
* Packet: DL2MDE@DB0AAB.#BAY.DEU.EU *
* e-mail: THOMAS.KIESELBACH@DLR.DE *
* *
* SAFEX-International Coordinator Joerg Hahn, DL3LUM *
* Packet: DL3LUM@DB0AAB.#BAY.DEU.EU *
* e-mail: JOERG.HAHN@DLR.DE *
****

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

There are a thousand hacking at the branches of evil to one who is
striking at its root.
-- Henry David Thoreau

1494. MIDWAY on SATELLITE

Newsgroup: rec.radio.amateur.space
Date: 1996-07-30 00:00:00 UTC
From: ah0w@primenet.com
Message-ID: <4tm1om$irr@nnrp1.news.primenet.com>
Source record: 21866

The August 1996 DXpedition to the Midway Atoll National
Wildlife Refuge, KH4 (OC-030), is pleased to announce
that the operation will now include satellite modes.

Joining our team as satellite operator is Pat Guerin NH6UY
of Honolulu who is well experienced in satellite operating from
a number of other Pacific DXpeditions.

The rest of the team, W2UE, UA3AB and WA7LNW join with
me in welcoming Pat to Midway!

QSL route for the Midway operation is Bob Johnson KE7LZ.

73/DX

Frank Smith
AH0W/OH2LVG

1495. Re: NOVA

Newsgroup: rec.radio.amateur.space
Date: 1996-07-31 00:00:00 UTC
From: pmarkham@sun.lssu.EDU
Message-ID: <199607311648.MAA01666@sun.lssu.edu>
Source record: 21770

I would stay away from NOVA. When it comes time for an update they
will change the name and you must pay full price!
Try LOGSAT PRO. It is a great program and has free updates on the net.
Just want to keep others from making the NOVA mistake like I did!

dcopeland@woodtech.com

If you are using your registered version of NOVA for DOS, and you wish
to change to NOVA for WINDOWS/95?, which are new programs for
what are essentially different operating systems, NOT UPDATES, I
will purchase your DOS version that you are unhappy with if we can
agree on a price.

Pete/wa4hei

1496. Re: MIDWAY on SATELLITE

Newsgroup: rec.radio.amateur.space
Date: 1996-07-31 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.SOL.3.93.960731182411.29263B-100000@spork.callamer.com>
Source record: 21771

Hi Frank and the group. I would be most interested in working you guys
from Midway. I was KM6AX from 1955 to 1956 and now am the area
coordinator for AMSAT in Central Calif! Congrats! Cliff K7RR ex W6HDO

On 30 Jul 1996, Frank R. Smith wrote:

>
> The August 1996 DXpedition to the Midway Atoll National
> Wildlife Refuge, KH4 (OC-030), is pleased to announce
> that the operation will now include satellite modes.
>
> Joining our team as satellite operator is Pat Guerin NH6UY
> of Honolulu who is well experienced in satellite operating from
> a number of other Pacific DXpeditions.
>
> The rest of the team, W2UE, UA3AB and WA7LNW join with
> me in welcoming Pat to Midway!
>
> QSL route for the Midway operation is Bob Johnson KE7LZ.
>
> 73/DX
>
> Frank Smith
> AH0W/OH2LVG
>
>
>

1497. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-31 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <71f7cc$039e.3a2@GRAYLADY>
Source record: 21772

In article <ericr.838732517@access2>
Eric Rosenberg <ericr@access2.digex.net> wrote:
> dcopeland@gxl.com writes:
>
> >I would stay away from NOVA. When it comes time for an update they
> >will change the name and you must pay full price!
> >Try LOGSAT PRO. It is a great program and has free updates on the net.
> >Just want to keep others from making the NOVA mistake like I did!
>
> >dcopeland@woodtech.com
>
> I am really distressed by this reply. I have tried all of the tracking
> programs available for DOS since Oscar-7, and find NOVA to be a
> commendable piece of software.
>
> I can't speak to Logsat Pro, but I can tell you that none of the others I
> have purchased have *ever* charged me for updates. Not for InstantTrack,
> not for Nova, not for any of the AMSAT-UK programs. In fact, NOVA users
> get updates free on the Internet, as do users of most of the other pieces
> of software out there.
>
> If you don't like the features or operation of NOVA or any other piece of
> software, that's fine. But to trash a piece of software for a fictional
> reason, please keep that to yourself!
>
> Eric WD3Q
> Washington, DC
> wd3q@amsat.org
>
>
>
>
>
I agree with WD3Q and find that it runs great on widows 3.1 as well as 95 and
I am waiting for the new version to have the radio control in it befor I get
it..
Rick N1HID

1498. LogSat Tracking Program and Tracking Hardware Interface

Newsgroup: rec.radio.amateur.space
Date: 1996-07-31 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4tnuft$11p@tilde.csc.ti.com>
Source record: 21867

Anyone using LogSat with Antenna control other than Kansas City Tracker?

I am interested in using the program, but don't know whether The KCT will be my choice of tracking hardware. LogSat supports KCT, but I haven't found any reference to other hardware compatability in the documentation.

Ken K5MBV

1499. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-07-31 00:00:00 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <4to3cu$a43@freenet-news.carleton.ca>
Source record: 21868

(dcopeland@gxl.com) writes:
> psgeorge@infinet.com (Paul S. George) wrote:
>
>>--
>>Paul S. George n8xqv (psgeorge@infinet.com)
>
> I would stay away from NOVA. When it comes time for an update they
> will change the name and you must pay full price!
> Try LOGSAT PRO. It is a great program and has free updates on the net.
> Just want to keep others from making the NOVA mistake like I did!
>
> dcopeland

This is untrue! Registered users of Nova can get free upgrades
via the Internet at URL http://www.webcom.com/~w9ip/

1500. Stand-Alone vs Internal Card Satellite Tracking Hardware

Newsgroup: rec.radio.amateur.space
Date: 1996-08-01 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4tqugs$f4f@tilde.csc.ti.com>
Source record: 21773

Does anyone know of a comprehensive comparison of types
and brands of external box and PC card tracking hardware? If
so,please point me to it. I like the SaTrack IV box, but
also like the Logsat software which works with the Kansas
City Tracker PC card, so anything that would guide me to the best
system would help. There are probably some other programs and
hardware that should be considered, but information is hard to
find. Magazine reviews of equipment aren't much help since they
all seem to be written by the manufacturer's marketing department!

Ken K5MBV

1501. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-08-01 00:00:00 UTC
From: psgeorge@infinet.com
Message-ID: <psgeorge-0108961652270001@cmh-p073.infinet.com>
Source record: 21774

In article <4to3cu$a43@freenet-news.carleton.ca>,
ae517@FreeNet.Carleton.CA (Russ Renaud) wrote:

> (dcopeland@gxl.com) writes:
> > psgeorge@infinet.com (Paul S. George) wrote:
> >
> >>--
> >>Paul S. George n8xqv (psgeorge@infinet.com)
> >
> > I would stay away from NOVA. When it comes time for an update they
> > will change the name and you must pay full price!
> > Try LOGSAT PRO. It is a great program and has free updates on the net.
> > Just want to keep others from making the NOVA mistake like I did!
> >
> > dcopeland
>
> This is untrue! Registered users of Nova can get free upgrades
> via the Internet at URL http://www.webcom.com/~w9ip/

The above post from Russ Renaud that I am replying to implies that I wrote
to stay away from Nova. First off, my portion of the post was not
included in the above message... 2nd, I don't know anything about Nova so
I wouldn't have posted this message. Russ, you should learn how to reply
properly to a post before you start cutting and pasting!

--
Paul S. George n8xqv (psgeorge@infinet.com)

1502. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-08-02 00:00:00 UTC
From: dcopeland@gxl.com
Message-ID: <3201efa0.0@news3.paonline.com>
Source record: 21775

ae517@FreeNet.Carleton.CA (Russ Renaud) wrote:

> (dcopeland@gxl.com) writes:
>> psgeorge@infinet.com (Paul S. George) wrote:
>>
>>>--
>>>Paul S. George n8xqv (psgeorge@infinet.com)
>>
>> I would stay away from NOVA. When it comes time for an update they
>> will change the name and you must pay full price!
>> Try LOGSAT PRO. It is a great program and has free updates on the net.
>> Just want to keep others from making the NOVA mistake like I did!
>>
>> dcopeland

>This is untrue! Registered users of Nova can get free upgrades
>via the Internet at URL http://www.webcom.com/~w9ip/

This is not quite true. You will get minor bug fixes for free but when there is new features to NOVA they simply change the name and you will be charged for it again.

I first purchased the product when it was called REAL TRACK and thought it was a good product. I called Mike and and asked about the chance for a Windows version. He told me a new version would be out and I would not want Windows. At Dayton last year I let him talk me into this new version with a new name (so he could charge again) even though I wanted a Windows product. Now he has a Windows version of the same product. I asked him about an upgrade price for current users. He told me none would be offered! When I returned from Dayton I boxed all his stuff up and returned it to him and told him I did not want to support him or his product. In the letter I told him I was not asking for a free lunch, just a reduced price for current users who want to upgrade.

He responded by email and told me there would be no upgrade price. Everyone will have to pay full price.

I then called LOGSAT PRO and asked them how they would handle this problem. They said it would have been a free upgrade!!!

So you see this is not just a flam post, I gave them a chance to make it right and they refused.

So stay away from NOVA !!!!!!!!!!

dcopeland@woodtech.com

1503. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-08-02 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <3202D41D.2F0B@wco.com>
Source record: 21776

dcopeland@gxl.com wrote:
>
> ae517@FreeNet.Carleton.CA (Russ Renaud) wrote:
>
> > (dcopeland@gxl.com) writes:
> >> psgeorge@infinet.com (Paul S. George) wrote:
> >>
> >>>--
> >>>Paul S. George n8xqv (psgeorge@infinet.com)
> >>
> >> I would stay away from NOVA. When it comes time for an update they
> >> will change the name and you must pay full price!
> >> Try LOGSAT PRO. It is a great program and has free updates on the net.
> >> Just want to keep others from making the NOVA mistake like I did!
> >>
> >> dcopeland
> >
> >This is untrue! Registered users of Nova can get free upgrades
> >via the Internet at URL http://www.webcom.com/~w9ip/
>
> This is not quite true. You will get minor bug fixes for free but when
> there is new features to NOVA they simply change the name and you will
> be charged for it again.
>
> I first purchased the product when it was called REAL TRACK and
> thought it was a good product. I called Mike and and asked about the
> chance for a Windows version. He told me a new version would be out
> and I would not want Windows. At Dayton last year I let him talk me
> into this new version with a new name (so he could charge again) even
> though I wanted a Windows product. Now he has a Windows version of
> the same product. I asked him about an upgrade price for current
> users. He told me none would be offered! When I returned from Dayton I
> boxed all his stuff up and returned it to him and told him I did not
> want to support him or his product. In the letter I told him I was not
> asking for a free lunch, just a reduced price for current users who
> want to upgrade.
>
> He responded by email and told me there would be no upgrade price.
> Everyone will have to pay full price.
>
> I then called LOGSAT PRO and asked them how they would handle this
> problem. They said it would have been a free upgrade!!!
>
> So you see this is not just a flam post, I gave them a chance to make

> it right and they refused.
>
> So stay away from NOVA !!!!!!!!!!
>
>
> dcopeland@woodtech.com

yes,logsat is great,but i'm still waiting for my user manual that
was supposed to be here in december.

1504. Re: homepage revised

Newsgroup: rec.radio.amateur.space
Date: 1996-08-02 00:00:00 UTC
From: Vesa.Tervo@nmp.nokia.com
Message-ID: <4ts7n5$iqc@nmp02.nmp.nokia.com>
Source record: 21777
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.ham-radio.packet,rec.ham-radio.swap

In article <31FFFC41.3F54@pactitle.com>, booth@pactitle.com says...
>
>I just revised my homepage if you want to check it out.
>new stuff!

This might also be of some interest:

http://www.geocities.com/CapeCanaveral/3491/

73 de Wes :)

1505. Russian Space IP Opportunity

Newsgroup: rec.radio.amateur.space
Date: 1996-08-02 00:00:00 UTC
From: glenne@sr.hp.com
Message-ID: <4ttfbn$t8s@canyon.sr.hp.com>
Source record: 21778

Recently Karen, RA3APW, and Leo, UA3CR, were invited by Serge Krikalev, U5MIR, and Serge Samburov, RV3DR, to visit the Russian Space Control Center. U5MIR is currently the deputy chief of Russian space flights and RV3DR is the manager of the Russian space amateur radio program. They were able to have a long talk about future amateur experiments in space, particularly relating to digital radio networking.

Karen brought up the possibility of marrying the existing PACSAT protocols and hardware with amateur TCP/IP networking protocols. He suggested that if this combination were put into place on the oribiter and also at amateur Internet/satellite gateways around the world, perhaps one in each time zone, it could be possible to maintain fulltime IP connectivity with the orbiting MIR.

In addition to offering continuous IP access to MIR from anywhere in the amateur world, such an experiment might be useful for discovering and developing necessary protocols for mobile IP operation; an area where amateurs might have considerable interest and one where we may be able to contribute significantly to the state of the art. Because much, if not all, of the required hardware is already in use, the bulk of the initial task would seem to be in adapting software to allow running IP over PACSAT.

Karen and other Russian amateurs are interested in this project. U5MIR and RV3DR, are supportive of the concept and there would be licensed amateurs aboard the spacecraft. U5MIR is scheduled to be on board the next generation of spacecraft, the ALPHA, which is an international space project. He is interested in applying this idea to ALPHA flights.

A group of Russian amateurs have begun to design low cost satellite ground station hardware for use at the gatways. They are seeking comments on the idea and others to help in making it a reality. Clearly the project will require the help and cooperation of amateurs worldwide.

If you are interested in helping to further develop this project please contact Karen,RA3APW, at:

karen@gw.ra3apw.ampr.org
or sysop@ampr.demos.su
or via KO-23, KO-25 satellites

Also, if you know of someone who might be interested and able to help, please forward this note to them.

This note was written and posted for ra3apw by n6gn.

1506. Aan Adriaan uit Apeldoorn, laat meisje uit Leiderdorp met rust

Newsgroup: rec.radio.amateur.space
Date: 1996-08-03 00:00:00 UTC
From: sorry@nergens.com
Message-ID: <4tv8gt$a96@news.xs4all.nl>
Source record: 21779

"Beste" Adriaan.
We weten meer dan voldoende van je uitspattingen op het net.
Ook weten we dat je via deze groep mail post namens haar.
Ze wil niets meer met je te maken hebben en jij hebt nu ook een
vriendin met kind.
Laat haar met rust !
De volgende maatregel is een klacht en mailbomb bij je provider, eens
kijken hoe lang je je internet aansluiting nog kan misbruiken.
Bestel ook niet namens of voor haar een band van de conventie zoals je
pas hebt gedaan.
Laat haar met rust !!!
We hebben je e-mail naam en provider.
Doe normaal, bemoei je met je eigen zaken en wij laten je verder met
rust.
Zo niet ??
Je bent gewaarschuwd en ligt sneller van internet dan je denkt.

een vriend.

1507. ARLK054 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-03 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk054.1996@arrl.org>
Source record: 21780
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK054
ARLK054 Keplerian data

ZCZC SK54
QST de W1AW
Keplerian Bulletin 54 ARLK054
From ARRL Headquarters
Newington, CT August 3, 1996
To all radio amateurs

SB KEP ARL ARLK054
ARLK054 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96215.45228744 .00001843 00000-0 27128-4 0 06619
2 16609 51.6491 251.0530 0010587 12.3077 347.8177 15.61572190597136
AO-10
1 14129U 83058B 96215.09485848 .00000099 00000-0 10000-3 0 04458
2 14129 26.0429 196.7065 6022919 36.9589 352.2336 2.05879197070813
RS-10/11
1 18129U 87054A 96215.27424369 .00000054 00000-0 42900-4 0 02660
2 18129 82.9264 114.4819 0013204 30.7476 329.4449 13.72367990456499
UO-11
1 14781U 84021B 96215.43619891 .00000105 00000-0 25501-4 0 09050
2 14781 97.8020 204.1059 0011339 308.3023 51.7173 14.69469024664449
RS-12/13
1 21089U 91007A 96215.35253811 .00000003 00000-0 -13604-4 0 09091
2 21089 82.9221 155.1062 0030085 101.9450 258.5083 13.74071821275371
AO-13
1 19216U 88051B 96214.89927956 .00015489 00000-0 19978-2 0 2523
2 19216 57.1788 100.8865 7438668 46.5940 355.2560 2.10350046 30836
UO-14
1 20437U 90005B 96215.23256644 -.00000011 00000-0 12573-4 0 02094
2 20437 98.5432 297.3847 0011903 66.2079 294.0352 14.29927051340634
RS-15
1 23439U 94085A 96215.39678691 -.00000039 00000-0 10000-3 0 01695
2 23439 64.8200 308.3553 0159723 190.9709 168.7716 11.27528307065993
```

```
AO-16
1 20439U 90005D 96215.25859515 -.00000029 00000-0 55561-5 0 00074
2 20439 98.5579 299.7133 0012164 67.4835 292.7630 14.29980363340656
DO-17
1 20440U 90005E 96215.27626774 -.00000009 00000-0 13138-4 0 00168
2 20440 98.5602 300.3921 0012445 66.5256 293.7232 14.30122453340680
WO-18
1 20441U 90005F 96215.26710170 -.00000007 00000-0 14245-4 0 00104
2 20441 98.5598 300.3173 0012831 69.2147 291.0408 14.30091961340687
LO-19
1 20442U 90005G 96215.25940467 -.00000016 00000-0 10640-4 0 00114
2 20442 98.5602 300.8223 0013319 66.3053 293.9522 14.30201136340709
FO-20
1 20480U 90013C 96215.07290052 -.00000012 00000-0 43270-4 0 09056
2 20480 99.0244 231.2012 0540835 20.5890 341.6137 12.83234106303779
AO-21
1 21087U 91006A 96215.30417861 .00000094 00000-0 82657-4 0 07349
2 21087 82.9391 287.5704 0036721 76.9628 283.5624 13.74570476276348
UO-22
1 21575U 91050B 96215.21394333 -.00000017 00000-0 86833-5 0 07255
2 21575 98.3484 280.2259 0008075 122.4433 237.7533 14.37030920264679
KO-23
1 22077U 92052B 96215.12436568 -.00000037 00000-0 10000-3 0 06222
2 22077 66.0772 93.2824 0014320 287.5697 72.3753 12.86296940186717
KO-25
1 22828U 93061F 96215.22401720 -.00000004 00000-0 15956-4 0 04790
2 22828 98.5748 290.1759 0011106 79.3186 280.9244 14.28147336116681
IO-26
1 22826U 93061D 96215.25377660 .00000264 00000-0 12422-3 0 04988
2 22826 98.5748 290.1421 0010012 92.9257 267.3064 14.27810014148571
AO-27
1 22825U 93061C 96215.26096536 -.00000037 00000-0 24511-5 0 05005
2 22825 98.5767 289.9747 0009280 92.8551 267.3693 14.27699972148564
PO-28
1 22829U 93061G 96215.24126501 .00000005 00000-0 19204-4 0 05010
2 22829 98.5731 290.2541 0010938 80.3054 279.9376 14.28128899148606

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
August 6, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1508. Website updated

Newsgroup: rec.radio.amateur.space
Date: 1996-08-03 00:00:00 UTC
From: CSanders@RedRose.net
Message-ID: <CSanders-0308961420260001@205.246.83.177>
Source record: 21781
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.space

```
New and improved Web site! www.QTH.com/N3TLJ *Curt's Cyber Corner*
* faster loading home page
* aminated GIF
* for Ham Radio operators -- new URL form for updating/adding new sites
also with 262 selected new Ham Radio links added since mid-June 96.
Come visit! Netscape or Internet Explorer recommended to appreciate the site.
```

1509. Re: Satellite Tracking Program

Newsgroup: rec.radio.amateur.space
Date: 1996-08-04 00:00:00 UTC
From: William Karl <wkarl@magnum.wpe.com>
Message-ID: <01bb81f7$49347360$51066fcf@wkarl>
Source record: 21782

```
--
William Karl <wkarl@magnum.wpe.com>
Cooperstown, NY
"Often wrong, but never in doubt"

dcopeland@gxl.com wrote in article <3201efa0.0@news3.paonline.com>...
> ae517@FreeNet.Carleton.CA (Russ Renaud) wrote:
>
>
> > (dcopeland@gxl.com) writes:
> >> psgeorge@infinet.com (Paul S. George) wrote:
> >>
> >>>--
> >>>Paul S. George n8xqv (psgeorge@infinet.com)
> >>
> >> I would stay away from NOVA. When it comes time for an update they
> >>
>
> So stay away from NOVA !!!!!!!!!!
>
>
> dcopeland@woodtech.com
>
>

FYI--ur Realtrak registration number won't work on Nova. I tried it.
W2BY
```

1510. GPS data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-05 00:00:00 UTC
From: w9sz@prairienet.org
Message-ID: <4u5e3p$jbm@vixen.cso.uiuc.edu>
Source record: 21783

Does anyone know where to find data on the GPS system (such as accuracy, basics on how it works, etc)?

Is there a WWW site somewhere that has this information?

Please respond directly to me. Thanks.

73, Zack W9SZ

--
"You can't be optimistic with a misty optic" - Rex Luscus

1511. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-08-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4u5cra$sk3@blackbird.afit.af.mil>
Source record: 21784

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1512. NORAD Two-Line Orbital Element Sets (TLE846)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4u5chc$si4@blackbird.afit.af.mil>
Source record: 21785

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #846 -
Alouette 1
1 00424U 62049A 96217.57060098 .00000042 00000-0 39013-4 0 2181
2 00424 80.4602 236.0020 0022106 272.0475 87.8138 13.67873109688959
ATS 1
1 02608U 66110A 96217.71158845 -.00000290 00000-0 10000-3 0 9765
2 02608 14.6159 352.3217 0009004 94.1228 266.0115 1.00317271 25354
ATS 3
1 03029U 67111A 96216.32689406 -.00000133 00000-0 10000-3 0 5226
2 03029 14.9145 359.2868 0008665 265.2865 59.9630 1.00273294105231
Starlette
1 07646U 75010A 96216.76160013 -.00000130 00000-0 11413-4 0 9881
2 07646 49.8281 320.9766 0206060 27.6326 333.5345 13.82190646 85548
LAGEOS
1 08820U 76039A 96217.46066176 .00000020 00000-0 10000-3 0 2128
2 08820 109.8500 42.5467 0043411 119.7383 240.7581 6.38664462216917
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96217.40381115 .00000039 00000-0 10000-3 0 7075
2 10061 12.4344 36.5456 0011186 126.6306 120.4570 1.00278409 14924
IUE
1 10637U 78012A 96214.53347110 -.00000068 00000-0 10000-3 0 2667
2 10637 35.7440 82.4842 1375020 57.9649 314.6824 1.00226159 3230
GPS BI-01
1 10684U 78020A 96214.73398832 -.00000049 00000-0 10000-3 0 4635
2 10684 65.0028 22.5443 0060107 161.5382 198.6964 1.98069253120315

```
GPS BI-02
1 10893U 78047A 96216.42018069 .00000010 00000-0 10000-3 0 2607
2 10893 63.1226 259.4486 0231355 14.5174 346.1863 2.01628691133768
GOES 3
1 10953U 78062A 96213.51415509 -.00000149 00000-0 10000-3 0 6853
2 10953 11.4184 39.4911 0001799 81.9937 271.8279 1.00270263 19499
SeaSat 1
1 10967U 78064A 96215.89893500 -.00000055 00000-0 26249-4 0 5054
2 10967 107.9908 271.4114 0002065 267.2761 92.8159 14.38115249948163
GPS BI-03
1 11054U 78093A 96214.45089824 -.00000052 00000-0 10000-3 0 4188
2 11054 62.8799 258.8530 0049461 176.0765 183.9976 1.93504317131372
Nimbus 7
1 11080U 78098A 96217.14708304 -.00000029 00000-0 11703-4 0 6056
2 11080 98.9394 77.0421 0008415 195.1064 164.9842 13.83690399897806
GPS BI-04
1 11141U 78112A 96215.47192456 -.00000050 00000-0 10000-3 0 562
2 11141 65.0000 25.0314 0050598 29.0091 331.2759 1.92894566 18777
GPS BI-05
1 11690U 80011A 96214.71784234 -.00000047 00000-0 10000-3 0 475
2 11690 65.3341 23.9912 0143953 190.0707 169.6729 2.00573644135118
GPS BI-06
1 11783U 80032A 96210.63843039 .00000074 00000-0 10000-3 0 1567
2 11783 62.2904 252.2679 0227421 29.9051 331.4912 2.03456546119674
GOES 5
1 12472U 81049A 96214.65249732 .00000058 00000-0 10000-3 0 9434
2 12472 8.2606 49.6935 0007397 46.5390 313.6279 1.00235117 13554
Cosmos 1383
1 13301U 82066A 96217.74233862 -.00000005 00000-0 -23767-4 0 5161
2 13301 82.9324 98.2103 0028696 104.5336 255.9002 13.68075340704016
LandSat 4
1 13367U 82072A 96217.23296210 .00000017 00000-0 13666-4 0 9814
2 13367 98.0694 266.6832 0007605 0.2973 359.8223 14.57180246747536
DMSP B5D2-1
1 13736U 82118A 96218.13919590 .00000018 00000-0 25871-4 0 563
2 13736 98.6233 45.7346 0007642 246.4125 113.6250 14.25795084708047
IRAS
1 13777U 83004A 96218.05635462 -.00000246 00000-0 -13962-3 0 3911
2 13777 98.9679 42.5200 0013343 323.4074 36.6176 13.99253536360201
Cosmos 1447
1 13916U 83021A 96215.88605797 .00000002 00000-0 -13734-4 0 6090
2 13916 82.9453 156.5036 0039340 23.5777 336.7161 13.74342351670158
TDRS 1
1 13969U 83026B 96218.19466320 -.00000314 00000-0 10000-3 0 6152
2 13969 9.0437 43.2547 0002020 72.8404 219.3627 1.00266552 21872
GOES 6
1 14050U 83041A 96217.24228082 -.00000250 00000-0 10000-3 0 5290
2 14050 7.0983 53.3367 0004882 23.7075 241.5004 1.00238458106679
OSCAR 10
1 14129U 83058B 96218.00894279 .00000108 00000-0 10000-3 0 4444
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2 14129 26.0363 196.2298 6024972 37.7098 352.0577 2.05880476 70871
LandSat 5
1 14780U 84021A 96218.18323160 .00001958 00000-0 44506-3 0 5211
2 14780 98.3274 275.9950 0005161 140.8712 219.2860 14.57064807661090
UoSat 2
1 14781U 84021B 96214.95954776 .00000139 00000-0 31266-4 0 9029
2 14781 97.8018 203.6497 0011616 310.5096 49.5098 14.69469277664372
GPS BI-09
1 15039U 84059A 96215.01403043 -.00000054 00000-0 10000-3 0 4272
2 15039 64.6562 19.3598 0083287 19.6630 340.5463 1.92302292 88312
Cosmos 1574
1 15055U 84062A 96214.92285995 .00000055 00000-0 42837-4 0 8095
2 15055 82.9555 212.2029 0026199 212.3626 147.5924 13.73637941607266
GPS BI-10
1 15271U 84097A 96213.46247443 .00000046 00000-0 10000-3 0 1782
2 15271 62.1733 252.8322 0108199 158.7007 201.8345 1.92618062 525
Cosmos 1602
1 15331U 84105A 96214.33916014 .00000166 00000-0 16620-4 0 4920
2 15331 82.5320 70.7342 0020484 153.8707 206.3548 14.84771526639671
ERBS
1 15354U 84108B 96215.06786835 .00000072 00000-0 28011-4 0 2050
2 15354 56.9940 194.9295 0002393 62.4001 297.7276 14.94969671643708
NOAA 9
1 15427U 84123A 96218.11174995 .00000051 00000-0 50672-4 0 7921
2 15427 98.9469 283.0618 0014734 170.7735 189.3706 14.13795647600549
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96217.24413562 .00001443 00000-0 22556-4 0 6113
2 16609 51.6491 242.0271 0010794 18.2822 341.8550 15.61596209597418
SPOT 1
1 16613U 86019A 96215.72255236 -.00000045 00000-0 00000+0 0 9715
2 16613 98.8273 283.6919 0001908 96.6657 263.4737 14.19980826226911
Cosmos 1766
1 16881U 86055A 96215.79087999 .00000121 00000-0 11679-4 0 4075
2 16881 82.5189 127.0754 0018823 177.6090 182.5227 14.83751425540755
EGP
1 16908U 86061A 96216.47737391 -.00000083 00000-0 10000-3 0 1055
2 16908 50.0126 211.6149 0011320 134.1101 226.0667 12.44415147122290
NOAA 10
1 16969U 86073A 96218.00000245 .00000046 00000-0 37795-4 0 7243
2 16969 98.5244 213.6701 0012263 208.7588 151.2917 14.24997517513551
MOS-1
1 17527U 87018A 96216.73926507 -.00000043 00000-0 00000+0 0 4407
2 17527 98.9338 277.6702 0018970 196.1362 163.9230 14.00405649481648
GOES 7
1 17561U 87022A 96217.30156039 -.00000183 00000-0 10000-3 0 9965
2 17561 3.1595 68.8813 0005621 320.0734 298.4400 1.00270409 17785
Kvant-1
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1 17845U 87030A 96217.82008717 -.00004084 00000-0 -40339-4 0 7068
2 17845 51.6508 239.1237 0010853 21.7710 338.3736 15.61591145597501
DMSP B5D2-3
1 18123U 87053A 96218.01124279 .00000004 00000-0 24226-4 0 5406
2 18123 98.7692 47.5057 0014897 112.0180 248.2577 14.15448795471407
RS-10/11
1 18129U 87054A 96216.22204318 .00000041 00000-0 28400-4 0 2414
2 18129 82.9265 113.7815 0013192 28.3138 331.8729 13.72367914456621
Meteor 2-16
1 18312U 87068A 96214.79131386 -.00000019 00000-0 -30184-4 0 4980
2 18312 82.5553 315.9066 0013897 91.2307 269.0448 13.84081730452486
Meteor 2-17
1 18820U 88005A 96217.88602399 .00000026 00000-0 97044-5 0 77
2 18820 82.5398 8.3582 0016980 145.7886 214.4373 13.84759810430260
DMSP B5D2-4
1 18822U 88006A 96217.55488449 -.00000010 00000-0 13829-4 0 3134
2 18822 98.3825 47.3081 0005119 222.1073 137.9712 14.23196502441455
Glonass 34
1 19163U 88043A 96216.92181207 -.00000031 00000-0 10000-3 0 986
2 19163 65.2846 84.2264 0007214 157.1325 202.9753 2.13102268 63256
Glonass 36
1 19165U 88043C 96216.04034123 -.00000022 00000-0 10000-3 0 5047
2 19165 65.2517 84.2159 0004015 359.5841 0.4889 2.13102052 63851
METEOSAT 3
1 19215U 88051A 96217.01094021 -.00000118 00000-0 10000-3 0 2710
2 19215 3.3644 67.5422 0003056 96.8769 263.3048 0.96947720 17643
AO-13
1 19216U 88051B 96214.89927956 .00015489 00000-0 19978-2 0 2523
2 19216 57.1788 100.8865 7438668 46.5940 355.2560 2.10350046 30836
OKEAN 1
1 19274U 88056A 96217.51484483 .00000215 00000-0 23749-4 0 1081
2 19274 82.5133 226.3550 0019722 331.1063 28.9063 14.82502799436534
Meteor 3-2
1 19336U 88064A 96215.80987594 .00000051 00000-0 10000-3 0 5009
2 19336 82.5434 133.4450 0017645 115.0044 245.2922 13.16977943385617
Glonass 39
1 19503U 88085C 96216.53964026 -.00000059 00000-0 10000-3 0 3944
2 19503 65.5637 323.1185 0005679 156.6931 203.3660 2.13101740 61357
NOAA 11
1 19531U 88089A 96218.08899741 .00000016 00000-0 33658-4 0 6087
2 19531 99.1847 237.4762 0012693 101.0891 259.1708 14.13099484405353
TDRS 2
1 19548U 88091B 96217.71714262 -.00000212 00000-0 10000-3 0 2249
2 19548 2.5903 71.7330 0011013 123.1517 101.9671 1.00270052 16015
Glonass 40
1 19749U 89001A 96217.51566290 -.00000036 00000-0 10000-3 0 6112
2 19749 65.2222 83.7251 0007001 252.9812 107.0097 2.13101528 58880
Glonass 41
1 19750U 89001B 96218.03992878 -.00000039 00000-0 10000-3 0 5197
2 19750 65.2420 83.7808 0006228 240.2063 119.8036 2.13101823 58914
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GPS BII-01
1 19802U 89013A 96217.00396087 -.00000039 00000-0 00000+0 0 2668
2 19802 55.3467 108.7324 0019438 185.1830 174.8584 2.00549278 54674
Akebono
1 19822U 89016A 96217.55641845 .00011460 00000-0 59959-3 0 7595
2 19822 75.0752 95.8763 3742448 69.7232 326.2136 7.92773459170520
Meteor 2-18
1 19851U 89018A 96215.60737408 .00000061 00000-0 41373-4 0 4969
2 19851 82.5203 244.0607 0012873 202.8157 157.2434 13.84414786375259
MOP-1
1 19876U 89020B 96206.55465928 -.00000084 00000-0 10000-3 0 2065
2 19876 2.0637 71.2827 0019093 289.1070 70.5600 0.97109488 6984
TDRS 3
1 19883U 89021B 96211.36566551 -.00000282 00000-0 00000+0 0 2361
2 19883 0.0603 96.0881 0004285 75.8812 225.8008 1.00266141199546
GPS BII-02
1 20061U 89044A 96215.35487874 -.00000036 00000-0 10000-3 0 2495
2 20061 54.1703 284.4987 0159613 220.1132 138.7659 2.00561843 52419
Nadezhda 1
1 20103U 89050A 96218.07909147 .00000046 00000-0 32884-4 0 8573
2 20103 82.9542 72.6268 0036519 279.1549 80.5476 13.73868523355391
GPS BII-03
1 20185U 89064A 96217.20051737 -.00000041 00000-0 10000-3 0 2985
2 20185 55.1424 109.1897 0020649 327.9286 32.0131 2.00542972 50996
GMS 4
1 20217U 89070A 96217.98737841 -.00000388 00000-0 10000-3 0 4234
2 20217 1.8895 75.0715 0000701 223.5052 130.9755 1.00272423 25904
INTERCOSMOS 24
1 20261U 89080A 96216.56672922 .00000112 00000-0 34345-4 0 5172
2 20261 82.5915 240.4543 1240753 293.9700 53.6408 12.47343193311814
GPS BII-04
1 20302U 89085A 96217.22236031 .00000037 00000-0 10000-3 0 2617
2 20302 53.2363 224.2200 0029302 191.4049 168.5394 2.00566521 49799
Meteor 3-3
1 20305U 89086A 96218.14092660 .00000044 00000-0 10000-3 0 6152
2 20305 82.5488 90.7623 0006371 181.5987 178.5078 13.04434829324586
COBE
1 20322U 89089A 96214.86220564 -.00000255 00000-0 -13500-3 0 2324
2 20322 98.9438 229.3425 0008026 272.4458 87.5774 14.03458299343336
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Meteor 3-5
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2 21701 56.9860 277.3933 0004972 98.0268 262.1329 14.96528387267559
DMSP B5D2-6
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Glonass 53
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Glonass 54
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Glonass 57
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Glonass 58
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1 22563U 93015A 96214.13185160 -.00000153 00000-0 00000+0 0 5156
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NOAA 13
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GPS BIIA-22
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Meteor 2-21
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UFO F2
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SPOT 3
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KO-25
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TUBSAT-B
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Glonass 64
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Nadezhda 4
1 23179U 94041A 96214.93464639 .00000024 00000-0 96638-5 0 2082
2 23179 82.9452 202.6852 0037108 358.2047 1.8970 13.75683117103086
Glonass 65
1 23203U 94050A 96217.13669985 .00000066 00000-0 00000+0 0 3243
2 23203 64.7691 202.5046 0006444 162.4126 197.6041 2.13101957 15423
Glonass 66
1 23204U 94050B 96217.37032718 .00000067 00000-0 00000+0 0 3429
2 23204 64.7628 202.5230 0015541 339.4701 20.4654 2.13102138 15427
Glonass 67
1 23205U 94050C 96216.31440370 .00000059 00000-0 00000+0 0 3173
2 23205 64.7617 202.5521 0003294 278.9461 81.0115 2.13102610 15409
DMSP B5D2-7
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1 23233U 94057A 96218.09124465 .00000082 00000-0 67769-4 0 8735
2 23233 98.8208 276.1403 0013493 44.9239 315.3022 14.12724960 99734
OKEAN 1-7
1 23317U 94066A 96217.57130807 .00000065 00000-0 65177-5 0 1722
2 23317 82.5423 14.5138 0024865 286.4458 73.4022 14.74031122 97667
ELEKTRO
1 23327U 94069A 96214.74768142 -.00000121 00000-0 00000+0 0 1824
2 23327 0.1539 146.6085 0004706 315.2571 193.8164 1.00269199 6452
RESURS 1-3
1 23342U 94074A 96215.77880393 .00000086 00000-0 22435-4 0 5356
2 23342 97.9628 271.7215 0001307 83.1798 276.9550 14.69850639 93657
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1 23396U 94076A 96216.15826657 -.00000024 00000-0 10000-4 0 2943
2 23396 65.1051 82.6826 0029061 189.7288 170.2944 2.13102607 13245
Glonass 69
1 23397U 94076B 96215.39585476 -.00000015 00000-0 00000+0 0 2810
2 23397 65.0917 82.7184 0011899 323.3989 36.6014 2.13101831 13227
Glonass 70
1 23398U 94076C 96216.68733482 -.00000029 00000-0 00000+0 0 3070
2 23398 65.0841 82.6515 0002490 293.3431 66.7076 2.13102071 13269
LUCH (Altair-2)
1 23426U 94082A 96218.15680889 -.00000292 00000-0 00000+0 0 3583
2 23426 1.3529 267.7126 0001997 235.6985 322.0293 1.00263504 5999
RS-15
1 23439U 94085A 96216.72719215 -.00000039 00000-0 10000-3 0 1512
2 23439 64.8200 306.2047 0159686 190.7403 169.0092 11.27528320 66149
NOAA 14
1 23455U 94089A 96218.05061524 .00000005 00000-0 27522-4 0 6970
2 23455 98.9475 163.3858 0010445 100.0878 260.1472 14.11601289 82347
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1 23511U 95009A 96217.11534118 -.00000065 00000-0 00000+0 0 2134
2 23511 64.6460 322.4984 0006605 211.5323 148.4605 2.13103236 10994
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1 23512U 95009B 96216.76534245 -.00000062 00000-0 00000+0 0 2290
2 23512 64.6426 322.5193 0005148 316.1542 43.8372 2.13101545 10985
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1 23513U 95009C 96216.58808739 -.00000061 00000-0 10000-4 0 2412
2 23513 64.6454 322.5378 0013712 198.7908 161.1909 2.13102873 10983
GMS 5
1 23522U 95011B 96216.48757405 -.00000304 00000-0 10000-3 0 1381
2 23522 0.3839 359.8269 0000502 92.7848 175.4426 1.00277284 4921
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1 23533U 95015A 96218.02129306 .00000025 00000-0 37221-4 0 6167
2 23533 98.8423 219.8588 0006165 284.1238 75.9248 14.12747956 70524
OSC 1
1 23545U 95017A 96215.60258700 .00000210 00000-0 76636-4 0 1539
2 23545 69.9736 62.4789 0011926 126.9340 233.2874 14.45378209 70369
OSC 2
1 23546U 95017B 96218.05854409 .00000073 00000-0 37719-4 0 1806
2 23546 69.9792 56.8863 0010662 112.0107 248.2155 14.45353299 70725
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1 23547U 95017C 96217.59797827 .00000152 00000-0 59932-4 0 1253
2 23547 69.9785 57.7262 0011179 116.5807 243.6473 14.45563421 70666
OFEQ 3
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2 23549 143.3638 164.4214 0221690 188.1601 171.5433 15.16386767 73745
GFZ-1
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ERS-2
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Spektr
1 23579U 95024A 96217.82008717 -.00004084 00000-0 -40339-4 0 4068
2 23579 51.6508 239.1237 0010853 21.7710 338.3736 15.61591145597502
GOES 9
1 23581U 95025A 96217.48890671 .00000063 00000-0 10000-3 0 2219
2 23581 0.3122 267.9228 0000220 348.8220 97.6619 1.00268957 4400
Helios 1A
1 23605U 95033A 96217.67613668 .00000283 00000-0 63285-4 0 2730
2 23605 98.1230 152.6898 0001720 71.0641 289.0762 14.63825614 57656
UPM SAT 1
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2 23606 98.1042 154.4368 0008990 37.2885 322.8942 14.67268333 57907
CERISE
1 23607U 95033C 96216.03757987 .00000021 00000-0 12468-4 0 1077
2 23607 98.1058 152.1368 0007694 41.3441 318.8318 14.66953652 57607
TDRS 6
1 23613U 95035B 96217.38483573 .00000075 00000-0 00000+0 0 1930
2 23613 0.7797 82.8583 0001447 120.1311 77.5344 1.00270417 3865
Glonass 74
1 23620U 95037A 96218.24899318 .00000073 00000-0 00000+0 0 1684
2 23620 64.8233 202.3378 0018345 173.8811 186.1394 2.13102682 8056
Glonass 75
1 23621U 95037B 96217.48781807 .00000068 00000-0 00000+0 0 1711
2 23621 64.8341 202.3608 0018396 185.3015 174.6672 2.13102093 8038
Glonass 76
1 23622U 95037C 96217.07677444 .00000065 00000-0 00000+0 0 1715
2 23622 64.8290 202.3715 0036810 168.2520 191.8286 2.13102023 8027
Prognoz-M2
1 23632U 95039A 96218.43647650 .00000101 00000-0 00000+0 0 692
2 23632 69.2750 250.5060 8196733 322.4980 13.0210 0.26371600 989
SICH-1
1 23657U 95046A 96217.82133405 .00000090 00000-0 10439-4 0 988
2 23657 82.5340 155.7983 0025998 252.4766 107.3595 14.73484931 49995
RADARSAT
1 23710U 95059A 96215.66018721 -.00000018 00000-0 10000-4 0 1677
2 23710 98.5791 221.6872 0001411 78.0902 282.0439 14.29986542 38880
Glonass 77
1 23734U 95068A 96215.31748543 .00000052 00000-0 00000+0 0 1498
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2 23734 64.8300 202.3486 0019459 318.7363 41.1067 2.13101771 4956
Glonass 78
1 23735U 95068B 96217.40216695 .00000068 00000-0 00000+0 0 1452
2 23735 64.8223 202.2699 0008459 223.9631 135.9657 2.13125091 4991
Glonass 79
1 23736U 95068C 96215.55198438 .00000054 00000-0 00000+0 0 1209
2 23736 64.8157 202.3485 0008472 211.5169 148.4249 2.13101848 4952
XTE
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2 23757 22.9833 104.7355 0013373 238.0963 121.8226 14.97671860 32237
1996010D
1 23797S 96218.18783253 -.00000381 20182-5 00000+0 0 1926
2 23797 47.9089 229.8445 5212776 48.4666 0.2316 5.52263845 4102
Soyuz TM-23
1 23798U 96011A 96217.82008717 -.00004084 00000-0 -40339-4 0 1425
2 23798 51.6508 239.1237 0010853 21.7710 338.3736 15.61591145597505
Polar
1 23802U 96013A 96214.41491592 .00000059 00000-0 00000+0 0 366
2 23802 86.1757 25.6063 6558522 284.2993 15.2872 1.36676686 2177
1996010E
1 23824U 96010E 96216.42029563 .00001818 00000-0 45959-2 0 881
2 23824 47.6609 239.8570 7273108 39.1890 355.5402 2.21756239 3661
GPS BIIA-25
1 23833U 96019A 96217.75969415 -.00000091 00000-0 00000+0 0 592
2 23833 54.6836 346.0728 0037548 149.2770 210.9514 2.00564128 2653
Priroda
1 23848U 96023A 96217.82008717 -.00004084 00000-0 -40339-4 0 951
2 23848 51.6508 239.1237 0010853 21.7710 338.3736 15.61591145597501
MSX
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2 23851 99.3823 196.7455 0005929 19.3016 340.8081 13.97655915 14108
Progress M-31
1 23860U 96028A 96211.93253172 .00008205 00000-0 99499-4 0 838
2 23860 51.6501 268.7968 0010934 359.4219 0.7497 15.61563553 13376
MSTI 3
1 23868U 96031A 96214.54257765 .00000363 00000-0 91219-5 0 438
2 23868 97.1213 44.1958 0012776 16.1735 343.9919 15.46190809 11822
TOMS-EP
1 23940U 96037A 96216.65951803 .00001652 00000-0 77318-4 0 281
2 23940 97.4413 121.5436 0012665 166.8296 193.3280 15.21094730 4842
APSTAR 1A
1 23943U 96039A 96216.35665509 -.00000344 00000-0 00000+0 0 410
2 23943 0.0249 242.8482 0001724 240.2477 91.4787 1.00269721 338
ARABSAT 2A
1 23948U 96040A 96214.98321868 .00000118 00000-0 00000+0 0 464
2 23948 0.0614 236.9184 0001375 279.5530 174.2840 1.00271670 256
TURKSAT 1C
1 23949U 96040B 96217.28571181 .00000129 00000-0 00000+0 0 592
2 23949 0.0477 204.2172 0003177 282.4640 320.5555 1.00274465 272
1996040C
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1 23950U 96040C 96214.97204813 .00000860 00000-0 66019-3 0 84
2 23950 7.0851 73.1451 7338711 196.9410 110.7927 2.18496809 489
1996040D
1 23951U 96040D 96216.00578917 .00024114 00000-0 39623-2 0 66
2 23951 7.0750 72.1867 7272834 198.0715 103.7375 2.30405825 551
GPS BIIA-26
1 23953U 96041A 96217.17824415 -.00000043 00000-0 00000+0 0 188
2 23953 55.0476 106.3768 0017593 331.6559 28.3054 2.00572703 434
1996041B
1 23954U 96041B 96217.55102464 .00001185 00000-0 55704-4 0 109
2 23954 35.2524 317.9689 0075600 323.8248 35.7371 15.17534266 2960
1996041C
1 23955U 96041C 96218.08631384 .00036811 -11617-6 11036-2 0 337
2 23955 35.0281 86.6551 6037641 213.2474 87.5588 4.06165573 813
1996042A
1 23967U 96042A 96207.40420307 -.00000309 00000-0 00000+0 0 63
2 23967 26.9679 307.9637 6684871 172.9114 206.2451 3.03866450 36
1996042B
1 23968U 96042B 96207.40269171 -.00000376 00000-0 00000+0 0 46
2 23968 26.8831 307.2554 6691747 173.4515 204.3128 3.04301620 10
1996043A
1 24071U 96043A 96217.82008717 -.00004084 00000-0 -40339-4 0 109
2 24071 51.6508 239.1237 0010853 21.7710 338.3736 15.61591145597500
1996043B
1 24072U 96043B 96216.39484756 .26807532 12838-4 14270-3 0 163
2 24072 51.6265 245.3338 0003417 296.2379 63.8165 16.54813509 420
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1513. Radiation testing of micros ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-05 00:00:00 UTC
From: dac@maya.arc.nasa.gov
Message-ID: <DAC.96Aug5091845@maya.arc.nasa.gov>
Source record: 21786

Has anyone done any radiation testing of micro-controllers or micro-processors? I'm interested in both total dose and single event upset numbers. I'm specifically interested in the space environment, so reliability data from ham satellites would be useful too.

I am particularly interested in PICs, 683xx, 68K, 68HC11, 386, 486, and Mips families.

Thanks,
-Dan Christian
--

Dan Christian (415) 604-4858 dac@artemis.arc.nasa.gov

1514. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199608060014.RAA22783@UCSD.EDU>
Source record: 21787

```
From smtp Tue Jul 30 10:37 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Tue, 30 Jul 96 10:37 PDT
Received: by mail.ucsd.edu; id EAA29078
sendmail 8.6.12/UCSD-2.2-sun
Tue, 30 Jul 1996 04:43:30 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA29050
sendmail 8.6.12/UCSD-2.2-sun
Tue, 30 Jul 1996 04:43:25 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 43285
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199607301143.EAA29050@ mail.ucsd.edu>
Date: Tue, 30 Jul 96 04:43:23 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #229
To: Ham-Space@UCSD.EDU

Ham-Space Digest Tue, 30 Jul 96 Volume 96 : Issue 229

Today's Topics:
NORAD Two-Line Orbital Element Sets (TLE844)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
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Date: 30 Jul 1996 03:34:38 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE844)

The most current orbital elements from the NORAD two-line element sets are
carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/
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and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #844 -
Alouette 1
1 00424U 62049A 96208.57384203 .00000042 00000-0 39013-4 0 2166
2 00424 80.4595 244.8765 0022616 296.1480 63.7337 13.67872684687727
ATS 1
1 02608U 66110A 96203.75684393 -.00000287 00000-0 10000-3 0 9740
2 02608 14.6250 352.4859 0009359 90.3734 269.7859 1.00322132 25214
ATS 3
1 03029U 67111A 96210.32737449 -.00000122 00000-0 10000-3 0 5207
2 03029 14.9138 359.3467 0009180 266.2495 53.1933 1.00273316105172
Starlette
1 07646U 75010A 96207.86835028 -.00000151 00000-0 -60193-5 0 9869
2 07646 49.8284 356.0685 0206298 358.2903 1.7269 13.82190632 84316
LAGEOS
1 08820U 76039A 96208.53495676 .00000039 00000-0 10000-3 0 2105
2 08820 109.8533 39.4907 0043404 122.6232 237.8704 6.38664440216342
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96210.51020472 .00000047 00000-0 10000-3 0 7020
2 10061 12.4231 36.6280 0011316 125.8154 152.5885 1.00276205 14851
IUE
1 10637U 78012A 96203.57484028 -.00000264 00000-0 10000-3 0 2645
2 10637 35.8038 82.5824 1371096 57.8364 320.6746 1.00230121 20285
GPS BI-01
1 10684U 78020A 96209.68520960 -.00000013 00000-0 10000-3 0 4622
2 10684 64.9940 22.6943 0060216 161.3517 198.8759 1.98069339120219
GPS BI-02
1 10893U 78047A 96210.46861755 .00000064 00000-0 10000-3 0 2590
2 10893 63.1269 259.6491 0229158 14.0193 346.6518 2.01628536133644
GOES 3
1 10953U 78062A 96205.28892313 -.00000132 00000-0 10000-3 0 6830
2 10953 11.4071 39.5875 0001438 62.3632 202.2377 1.00270642 19419
SeaSat 1
1 10967U 78064A 96207.69096363 -.00000057 00000-0 25733-4 0 5032
2 10967 107.9922 254.4205 0001799 259.0967 100.9969 14.38114321946989
GPS BI-03
1 11054U 78093A 96203.08172637 .00000025 00000-0 10000-3 0 4167

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2 11054 62.8306 259.1324 0047005 180.5680 179.5164 1.93505197129317
Nimbus 7
1 11080U 78098A 96208.68685350 -.00000113 00000-0 -64893-4 0 6031
2 11080 98.9403 68.9992 0008359 219.2328 140.8221 13.83690351896639
GPS BI-04
1 11141U 78112A 96204.58515399 -.00000017 00000-0 10000-3 0 559
2 11141 65.0061 25.3319 0050631 29.0109 331.3088 1.92894662 18560
GPS BI-05
1 11690U 80011A 96209.73217493 -.00000011 00000-0 10000-3 0 458
2 11690 65.3313 24.1401 0143990 189.7145 170.0463 2.00573530135019
GPS BI-06
1 11783U 80032A 96210.63843039 .00000074 00000-0 10000-3 0 1567
2 11783 62.2904 252.2679 0227421 29.9051 331.4912 2.03456546119674
GOES 5
1 12472U 81049A 96201.68313085 .00000070 00000-0 10000-3 0 9407
2 12472 8.2383 49.8233 0006891 45.9522 314.1680 1.00230521 13429
Cosmos 1383
1 13301U 82066A 96209.25851477 .00000045 00000-0 35206-4 0 5147
2 13301 82.9320 104.4286 0028209 126.9294 233.4448 13.68075859702855
LandSat 4
1 13367U 82072A 96210.77831910 .00000019 00000-0 14075-4 0 9792
2 13367 98.0697 260.4288 0007839 19.6174 340.5326 14.57179488746594
DMSP B5D2-1
1 13736U 82118A 96210.56016717 .00000006 00000-0 20997-4 0 506
2 13736 98.6229 38.2781 0007777 271.4961 88.5328 14.25794047706960
IRAS
1 13777U 83004A 96211.04879470 -.00000237 00000-0 -13339-3 0 3853
2 13777 98.9679 35.6601 0013611 342.9543 17.1158 13.99256619359223
Cosmos 1447
1 13916U 83021A 96207.87774868 .00000003 00000-0 -13071-4 0 6079
2 13916 82.9449 162.4248 0039584 45.2055 315.2301 13.74342338669054
TDRS 1
1 13969U 83026B 96211.05805899 -.00000307 00000-0 10000-3 0 6093
2 13969 9.0438 43.4519 0002325 46.2976 189.6280 1.00269822 21801
GOES 6
1 14050U 83041A 96205.29126257 -.00000236 00000-0 10000-3 0 5275
2 14050 7.0854 53.5608 0005156 16.1901 256.0447 1.00241398106551
OSCAR 10
1 14129U 83058B 96206.35271028 -.00000093 00000-0 10000-3 0 4422
2 14129 26.0656 198.1452 6021432 34.5100 352.8654 2.05883338 70634
LandSat 5
1 14780U 84021A 96211.17868639 -.00000016 00000-0 67713-5 0 5063
2 14780 98.3271 268.9908 0003051 131.8134 228.3324 14.57055202660045
UoSat 2
1 14781U 84021B 96210.53350787 .00000036 00000-0 13951-4 0 9017
2 14781 97.8018 199.4198 0011631 324.6122 35.4290 14.69467267663728
GPS BI-09
1 15039U 84059A 96210.33406384 -.00000024 00000-0 10000-3 0 4269
2 15039 64.6420 19.4946 0083097 19.6457 340.7699 1.92304354 88223
Cosmos 1574
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1 15055U 84062A 96210.55242584 .00000025 00000-0 10760-4 0 8083
2 15055 82.9558 215.4273 0026039 225.1635 134.7405 13.73637465606666
GPS BI-10
1 15271U 84097A 96208.27088979 .00000075 00000-0 10000-3 0 1773
2 15271 62.1750 252.9866 0108243 158.6525 201.8892 1.92618147 422
Cosmos 1602
1 15331U 84105A 96210.22823087 .00000102 00000-0 91221-5 0 4911
2 15331 82.5334 74.5867 0020043 167.3109 192.8607 14.84770143639069
ERBS
1 15354U 84108B 96210.45389875 -.00000155 00000-0 73898-5 0 2047
2 15354 56.9963 213.3749 0001860 74.5291 285.5953 14.94968146643013
NOAA 9
1 15427U 84123A 96210.82232810 -.00000009 00000-0 18832-4 0 7849
2 15427 98.9471 275.7692 0014403 191.6983 168.3853 14.13793864599515
GPS BI-11
1 16129U 85093A 96172.46155421 .00001459 00000-0 10000-3 0 7303
2 16129 65.3192 24.2792 0158418 84.4011 277.4371 1.89384755 21989
Mir
1 16609U 86017A 96211.22856179 .00001791 00000-0 26557-4 0 6054
2 16609 51.6496 272.3425 0010919 356.9492 3.1433 15.61551042596541
SPOT 1
1 16613U 86019A 96209.52180536 -.00000045 00000-0 00000+0 0 9693
2 16613 98.8282 277.5076 0001701 104.5104 255.6262 14.19980562226030
Cosmos 1766
1 16881U 86055A 96207.22618355 .00000155 00000-0 15788-4 0 4050
2 16881 82.5194 135.1032 0017780 207.7251 152.3021 14.83749821539487
EGP
1 16908U 86061A 96208.20509486 -.00000083 00000-0 10000-3 0 1037
2 16908 50.0127 237.0480 0011336 113.9922 246.2101 12.44414921121266
NOAA 10
1 16969U 86073A 96210.83800855 .00000046 00000-0 38038-4 0 7163
2 16969 98.5253 206.7123 0012016 231.6240 128.3861 14.24995985512535
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2 17845 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493530620
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2 18123 98.7689 40.1366 0014654 132.7903 227.4535 14.15447947470341
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1 18129U 87054A 96207.83766292 .00000044 00000-0 31245-4 0 2396
2 18129 82.9263 119.9770 0013388 49.3351 310.8963 13.72367615455471
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2 18312 82.5546 319.4031 0013712 102.0990 258.1706 13.84082134451871
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2 18820 82.5400 13.9360 0016556 165.2563 194.9086 13.84759318429295
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2 19163 65.2813 84.4641 0007049 155.3275 204.7855 2.13102275 63106
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2 19274 82.5137 234.6959 0020472 359.9842 0.1368 14.82499368435211
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2 19336 82.5402 139.5137 0016886 135.1195 225.1299 13.16978132384486
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2 19750 65.2352 84.1917 0006209 242.2973 117.7096 2.13101823 58659
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2 19802 55.3409 109.0111 0019344 186.4962 173.5193 2.00549321 54530
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2 20061 54.1998 284.8446 0159014 220.6796 138.1554 2.00562746 52247
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2 20305 82.5562 95.5957 0006995 190.5794 169.5207 13.04434552323676
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2 21217 64.9171 322.2091 0010986 225.4128 134.5187 2.13101544 41308
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2 22563 25.2506 288.0462 0005548 238.7168 121.3015 0.99252676122629
GPS BIIA-19
1 22581U 93017A 96205.34147734 -.00000059 00000-0 10000-3 0 5594
2 22581 55.2367 346.5691 0071130 47.7086 312.8939 2.00559492 24340
ARSENE
1 22654U 93031B 96204.88391619 -.00000116 00000-0 10000-3 0 3718
2 22654 3.2643 72.4908 2868790 240.7920 87.3144 1.42203217 12106
GPS BIIA-20
1 22657U 93032A 96208.46739649 -.00000066 00000-0 10000-3 0 6794
2 22657 55.2269 346.3094 0080797 220.9782 138.4168 2.00570598 19730
RADCAL
1 22698U 93041A 96210.56175784 .00000078 00000-0 28685-4 0 5067
2 22698 89.5391 269.2478 0089850 190.2871 169.6486 14.21376712160304
GPS BIIA-21
1 22700U 93042A 96208.43184636 .00000090 00000-0 10000-3 0 5741
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2 22700 54.1813 226.7170 0049438 357.8627 2.1765 2.00558214 22536
NOAA 13
1 22739U 93050A 96210.89818417 .00000010 00000-0 30906-4 0 1179
2 22739 99.0466 166.4202 0010848 106.6555 253.5796 14.10968203152930
GPS BIIA-22
1 22779U 93054A 96210.01409292 -.00000010 00000-0 10000-3 0 6345
2 22779 54.3403 285.6223 0016281 264.1972 95.6871 2.00575626 21322
Meteor 2-21
1 22782U 93055A 96208.84716758 .00000048 00000-0 30319-4 0 5004
2 22782 82.5495 315.7059 0020854 225.7879 134.1568 13.83057188146615
UFO F2
1 22787U 93056A 96208.30928819 -.00000059 00000-0 00000+0 0 6614
2 22787 4.1169 326.6259 0002788 127.7383 32.5514 1.00270025 9228
SPOT 3
1 22823U 93061A 96209.90663346 -.00000044 00000-0 00000+0 0 5713
2 22823 98.6980 282.9584 0001405 34.4782 325.6486 14.20041516147016
STELLA
1 22824U 93061B 96210.19332115 -.00000043 00000-0 -90960-8 0 4884
2 22824 98.5759 284.3729 0006948 108.5459 251.6477 14.27105201147789
AO-27
1 22825U 93061C 96209.79451760 -.00000024 00000-0 76158-5 0 4908
2 22825 98.5749 284.6068 0009125 107.0186 253.1969 14.27699806147781
IO-26
1 22826U 93061D 96208.38619727 .00000049 00000-0 37430-4 0 4884
2 22826 98.5775 283.3971 0009507 111.8672 248.3551 14.27809395147595
HEATHSAT
1 22827U 93061E 96209.77178735 -.00000006 00000-0 15223-4 0 5508
2 22827 98.5778 284.6625 0009905 95.9868 264.2442 14.27943894147803
ITAMSAT
1 22828U 93061F 96208.77842976 .00000008 00000-0 20426-4 0 4672
2 22828 98.5749 283.8456 0010844 96.6705 263.5710 14.28147173115764
PO-28
1 22829U 93061G 96211.24775209 -.00000020 00000-0 91849-5 0 4823
2 22829 98.5772 286.3351 0011013 92.1260 268.1183 14.28128293148032
KO-25
1 22830U 93061H 96207.24651894 -.00000007 00000-0 14173-4 0 5003
2 22830 98.4676 270.7901 0012591 78.7117 281.5478 14.28112112147462
GPS BIIA-23
1 22877U 93068A 96202.08906656 -.00000048 00000-0 10000-3 0 4410
2 22877 55.6933 47.8499 0038055 295.9738 63.6040 2.00575280 20059
METEOSAT 6
1 22912U 93073B 96210.22694444 -.00000097 00000-0 00000+0 0 5173
2 22912 0.1059 12.9284 0001157 110.7939 253.9456 1.00273367 8273
HST Array
1 22920U 90037C 96210.76723054 .00002323 00000-0 14810-3 0 4909
2 22920 28.4688 221.8346 0003009 185.1176 174.9344 15.04930638145696
Meteor 3-6
1 22969U 94003A 96211.16499076 .00000051 00000-0 10000-3 0 2729
2 22969 82.5582 230.8743 0015984 127.7351 232.5224 13.16736807120577
TUBSAT-B
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1 22970U 94003B 96211.09824752 .00000051 00000-0 10000-3 0 2636
2 22970 82.5570 230.8142 0016684 127.7415 232.5229 13.16827774120577
GPS BIIA-24
1 23027U 94016A 96210.64396927 -.00000075 00000-0 10000-3 0 3865
2 23027 55.1214 348.1603 0066232 203.0143 156.6907 2.00557362 17531
Glonass 62
1 23043U 94021A 96210.36982675 -.00000052 00000-0 00000+0 0 3836
2 23043 64.6379 322.4654 0006365 186.3580 173.6518 2.13103102 17884
Glonass 63
1 23044U 94021B 96209.78304426 -.00000052 00000-0 00000+0 0 3484
2 23044 64.6252 322.4780 0030594 202.1516 157.7337 2.13103214 17877
Glonass 64
1 23045U 94021C 96209.02184006 -.00000052 00000-0 00000+0 0 3572
2 23045 64.6361 322.5088 0010353 32.6852 327.3952 2.13102368 17856
GOES 8
1 23051U 94022A 96200.34913486 -.00000254 00000-0 10000-3 0 5535
2 23051 0.0855 92.0250 0005228 60.6355 194.1552 1.00260339 15671
MSTI 2
1 23101U 94028A 96210.10894032 .00002873 00000-0 45426-4 0 3365
2 23101 97.0815 43.1407 0010920 162.4551 197.7071 15.54246851125656
STRV-1A
1 23125U 94034B 96208.02461962 -.00000238 00000-0 24982-4 0 3142
2 23125 7.0409 222.2252 7240217 94.0962 343.5406 2.32246494 17026
STRV-1B
1 23126U 94034C 96210.25880130 .00003256 00000-0 61487-3 0 2751
2 23126 7.0080 220.8809 7257042 96.7226 339.7969 2.32329564 17111
Nadezhda 4
1 23179U 94041A 96210.93439279 .00000037 00000-0 22581-4 0 2078
2 23179 82.9452 205.6503 0037334 9.0980 351.0845 13.75683187102537
Glonass 65
1 23203U 94050A 96208.22079626 .00000108 00000-0 00000+0 0 3180
2 23203 64.7699 202.8052 0006612 163.6998 196.3482 2.13102266 15236
Glonass 66
1 23204U 94050B 96210.33144840 .00000085 00000-0 00000+0 0 3383
2 23204 64.7613 202.7575 0015300 341.2862 18.6719 2.13102636 15274
Glonass 67
1 23205U 94050C 96210.68332089 .00000080 00000-0 00000+0 0 3156
2 23205 64.7700 202.7376 0003437 283.2602 76.7180 2.13102543 15281
DMSP B5D2-7
1 23233U 94057A 96210.79630387 .00000028 00000-0 38641-4 0 8657
2 23233 98.8257 268.9565 0013681 64.2505 296.0072 14.12722658 98704
OKEAN 1-7
1 23317U 94066A 96209.01809211 .00000068 00000-0 69515-5 0 1705
2 23317 82.5429 22.3859 0025304 314.8326 45.0826 14.74030836 96408
ELEKTRO
1 23327U 94069A 96209.91463529 -.00000109 00000-0 00000+0 0 1802
2 23327 0.1511 147.1848 0004644 312.8925 250.9871 1.00269159 6403
RESURS 1-3
1 23342U 94074A 96209.58396442 .00000008 00000-0 93805-5 0 5337
2 23342 97.9625 265.6768 0001271 76.4603 283.6744 14.69848861 92742
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Glonass 68
1 23396U 94076A 96209.11937342 .00000001 00000-0 10000-4 0 2916
2 23396 65.1015 82.9227 0028874 190.1104 169.9171 2.13102884 13094
Glonass 69
1 23397U 94076B 96208.82617710 -.00000001 00000-0 00000+0 0 2801
2 23397 65.0909 82.9441 0012329 322.6216 37.3692 2.13102310 13087
Glonass 70
1 23398U 94076C 96208.70989711 -.00000002 00000-0 00000+0 0 3039
2 23398 65.0805 82.9209 0002610 293.6670 66.3811 2.13102247 13093
LUCH (Altair-2)
1 23426U 94082A 96209.72036291 -.00000282 00000-0 00000+0 0 3510
2 23426 1.3788 267.5052 0002346 211.5260 181.2054 1.00267740 5918
RS-15
1 23439U 94085A 96207.76913030 -.00000039 00000-0 10000-3 0 1494
2 23439 64.8202 320.6930 0160040 192.2931 167.4066 11.27528120 65130
NOAA 14
1 23455U 94089A 96210.82076154 .00000040 00000-0 46406-4 0 6906
2 23455 98.9446 156.1749 0010090 120.1200 240.0979 14.11600758 81328
Glonass 71
1 23511U 95009A 96208.19942001 -.00000051 00000-0 00000+0 0 2096
2 23511 64.6518 322.8121 0006784 210.5153 149.4616 2.13103838 10804
Glonass 72
1 23512U 95009B 96210.19565312 -.00000052 00000-0 00000+0 0 2277
2 23512 64.6435 322.7484 0005074 318.5584 41.4178 2.13101746 10846
Glonass 73
1 23513U 95009C 96210.01844146 -.00000053 00000-0 10000-4 0 2394
2 23513 64.6432 322.7673 0013818 198.2406 161.7260 2.13102948 10848
GMS 5
1 23522U 95011B 96208.51582086 -.00000288 00000-0 10000-3 0 1366
2 23522 0.3898 356.2904 0001523 45.3930 228.5095 1.00280724 4849
DMSP B5D2-8
1 23533U 95015A 96210.72647149 -.00000009 00000-0 18802-4 0 6084
2 23533 98.8416 212.6565 0006532 307.2780 52.7794 14.12746656 69498
OSC 1
1 23545U 95017A 96207.15959001 .00000233 00000-0 83268-4 0 1514
2 23545 69.9741 82.0728 0012082 139.5464 220.6569 14.45373395 69143
OSC 2
1 23546U 95017B 96209.06175050 .00002229 00000-0 65002-3 0 1759
2 23546 69.9732 77.7545 0011164 125.4724 234.7509 14.45348029 69422
Microlab 1
1 23547U 95017C 96208.60249597 .00000126 00000-0 52611-4 0 1237
2 23547 69.9786 78.6021 0011356 130.1702 230.0431 14.45559551 69363
OFEQ 3
1 23549U 95018A 96209.14226877 .00004089 00000-0 86952-4 0 2874
2 23549 143.3681 111.7869 0221156 115.1352 247.2410 15.16291938 72430
GFZ-1
1 23558U 86017JE 96208.55768364 .00000973 00000-0 16706-4 0 1449
2 23558 51.6530 274.7228 0005938 20.1354 339.9874 15.62401425596167
ERS-2
1 23560U 95021A 96209.24065750 -.00000019 00000-0 90000-5 0 2581
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2 23560 98.5458 282.7298 0000942 67.6076 292.5208 14.32250133 66309
Spektr
1 23579U 95024A 96210.84457861 -.00003180 00000-0 -30113-4 0 4011
2 23579 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493 67941
GOES 9
1 23581U 95025A 96210.41933553 .00000073 00000-0 10000-3 0 2167
2 23581 0.3214 267.3236 0000321 313.2103 101.9694 1.00266715 4337
Helios 1A
1 23605U 95033A 96210.90899317 .00001426 00000-0 28224-3 0 2627
2 23605 98.1202 146.0190 0001573 79.2179 280.9200 14.63825508 56668
UPM SAT 1
1 23606U 95033B 96210.84832122 .00000467 00000-0 91377-4 0 1973
2 23606 98.1041 147.1526 0008801 60.5361 299.6835 14.67266921 56823
CERISE
1 23607U 95033C 96207.85246474 .00000038 00000-0 15355-4 0 1055
2 23607 98.1054 144.0443 0007649 60.6099 299.5867 14.66953037 56408
TDRS 6
1 23613U 95035B 96210.46016308 .00000085 00000-0 00000+0 0 1896
2 23613 0.7653 82.9490 0001397 115.7971 102.1543 1.00268061 3790
Glonass 74
1 23620U 95037A 96207.92532965 .00000110 00000-0 00000+0 0 1647
2 23620 64.8247 202.6792 0018480 174.2054 185.8358 2.13102932 7837
Glonass 75
1 23621U 95037B 96209.51044819 .00000096 00000-0 00000+0 0 1688
2 23621 64.8366 202.6294 0018444 182.8348 177.1379 2.13097720 7866
Glonass 76
1 23622U 95037C 96208.16087525 .00000109 00000-0 10000-4 0 1669
2 23622 64.8267 202.6737 0036682 168.4948 191.6148 2.13102781 7835
Prognoz-M2
1 23632U 95039A 96203.43647650 .00000044 00000-0 00000+0 0 669
2 23632 69.4750 250.4060 8226396 322.4590 29.8830 0.26352200 940
SICH-1
1 23657U 95046A 96209.40075323 .00000132 00000-0 16839-4 0 962
2 23657 82.5333 163.5462 0026299 281.6782 78.1476 14.73483616 48758
RADARSAT
1 23710U 95059A 96208.87303311 -.00000018 00000-0 10000-4 0 1641
2 23710 98.5770 214.9953 0001185 81.3020 278.8296 14.29984372 37914
Glonass 77
1 23734U 95068A 96211.09416477 .00000074 00000-0 00000+0 0 1457
2 23734 64.8294 202.4941 0019381 318.3953 41.4622 2.13101752 4869
Glonass 78
1 23735U 95068B 96209.42564100 .00000096 00000-0 00000+0 0 1396
2 23735 64.8267 202.5321 0008256 225.9103 134.0418 2.13125472 4825
Glonass 79
1 23736U 95068C 96208.51311835 .00000106 00000-0 00000+0 0 1179
2 23736 64.8156 202.5875 0008292 212.4606 147.5110 2.13102341 4802
XTE
1 23757U 95074A 96210.15694863 .00000457 00000-0 92567-5 0 743
2 23757 22.9849 132.8554 0013769 188.3554 171.6707 14.97671342 31612
1996010D
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1 23797U 96010D 96210.52092192 .00295843 23607-5 10000-3 0 1644
2 23797 47.9645 235.6566 6139359 42.5233 351.5509 3.98653674 3735
Soyuz TM-23
1 23798U 96011A 96210.84457861 -.00003180 00000-0 -30113-4 0 1377
2 23798 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493 24701
Polar
1 23802U 96013A 96206.36682967 .00000097 00000-0 00000+0 0 327
2 23802 86.1276 25.6813 6568089 284.5711 15.2142 1.36678876 2067
1996010E
1 23824U 96010E 96210.55802399 .00001146 00000-0 28862-2 0 849
2 23824 47.6778 241.3780 7271411 37.6956 355.7597 2.21730641 3532
GPS BIIA-25
1 23833U 96019A 96207.28954722 -.00000063 00000-0 10000-3 0 565
2 23833 54.6865 346.5004 0038073 147.5128 212.7317 2.00564494 2443
Priroda
1 23848U 96023A 96210.84457861 -.00003180 00000-0 -30113-4 0 904
2 23848 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493 15033
MSX
1 23851U 96024A 96210.48219492 -.00000047 00000-0 00000+0 0 595
2 23851 99.3842 190.6085 0005878 48.2473 311.9181 13.97663747 13260
Progress M-31
1 23860U 96028A 96210.84457861 -.00003180 00000-0 -30113-4 0 824
2 23860 51.6501 274.2789 0010672 357.2359 2.8164 15.61541493 13204
MSTI 3
1 23868U 96031A 96207.94137963 -.00000315 00000-0 -46560-5 0 417
2 23868 97.1219 37.7102 0013336 38.5263 321.6943 15.46188299 10801
TOMS-EP
1 23940U 96037A 96209.15456931 -.00227953 00000-0 -19901-1 0 221
2 23940 97.3743 113.2238 0124416 58.9221 272.4328 14.91970454 3687
1996037B
1 23941U 96037B 96207.20818756 .00003629 00000-0 11019-3 0 160
2 23941 97.3842 111.2308 0426481 88.5884 276.4126 14.76487049 3388
APSTAR 1A
1 23943U 96039A 96211.15553819 -.00000335 00000-0 00000+0 0 378
2 23943 0.0321 243.4990 0002303 230.0203 23.5534 1.00272228 240
1996039B
1 23944U 96039B 96203.61190525 .00006620 00000-0 18621-2 0 50
2 23944 27.1058 74.9605 7601632 187.4280 145.0574 1.89708258 355
ARABSAT 2A
1 23948U 96040A 96211.02131898 .00000127 00000-0 00000+0 0 457
2 23948 0.0663 236.6844 0001347 279.8722 184.0266 1.00269763 212
TURKSAT 1C
1 23949U 96040B 96210.93116571 .00000137 00000-0 00000+0 0 516
2 23949 0.0533 222.2917 0003249 264.0300 187.0035 1.00271555 200
1996040C
1 23950U 96040C 96197.64527618 .00001267 00000-0 90297-3 0 31
2 23950 7.0103 79.9123 7341460 183.6128 162.5605 2.18475257 104
1996040D
1 23951U 96040D 96207.78347090 .00025374 00000-0 25548-2 0 45
2 23951 7.1282 74.9319 7283980 192.2638 129.5673 2.30019955 369
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GPS BIIA-26
1 23953U 96041A 96207.17034756 -.00000029 00000-0 00000+0 0 58
2 23953 55.0345 106.7736 0017301 329.9515 29.9919 1.98990061 239
1996041B
1 23954U 96041B 96210.77461793 .00000198 00000-0 11021-4 0 83
2 23954 35.2531 0.1008 0075743 264.2205 94.9881 15.17519346 1934
1996041C
1 23955U 96041C 96210.95275736 .00030942 10602-5 90355-3 0 231
2 23955 35.0298 91.7301 6042031 205.9755 103.7870 4.05654196 526
1996042A
1 23967U 96042A 96207.40420307 -.00000309 00000-0 00000+0 0 63
2 23967 26.9679 307.9637 6684871 172.9114 206.2451 3.03866450 36
1996042B
1 23968U 96042B 96207.40269171 -.00000376 00000-0 00000+0 0 46
2 23968 26.8831 307.2554 6691747 173.4515 204.3128 3.04301620 10
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End of Ham-Space Digest V96 #229
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1515. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199608060013.RAA22747@UCSD.EDU>
Source record: 21788

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From smtp Tue Jul 30 08:50 PDT 1996 remote from caoesgis
Received: from UCSD.Edu by caoesgis.oes.ca.gov; Tue, 30 Jul 96 08:50 PDT
Received: by mail.ucsd.edu; id EAA28025
sendmail 8.6.12/UCSD-2.2-sun
Tue, 30 Jul 1996 04:30:51 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28011
sendmail 8.6.12/UCSD-2.2-sun
Tue, 30 Jul 1996 04:30:47 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.Edu
Content-Length: 15890
Content-Type: text
Sender: owner-ham-space@UCSD.Edu
Precedence: List
Message-Id: <199607301130.EAA28011@ mail.ucsd.edu>
Date: Tue, 30 Jul 96 04:30:46 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.Edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: List
Subject: Ham-Space Digest V96 #228
To: Ham-Space@UCSD.Edu

Ham-Space Digest Tue, 30 Jul 96 Volume 96 : Issue 228

Today's Topics:
more safex information
Repeater operational on Mir

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
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Date: 29 Jul 1996 20:58:27 GMT
From: dhend@cyberportal.net
Subject: more safex information

MIR
1 16609U 86017A 96207.38876011 .00000338 00000-0 10000-4 0 6011
```

2 16609 51.6500 291.6915 0010535 342.4066 17.6436 15.61532273595947
KVANT 1
1 17845U 87030A 96208.02869303 .00001619 00000-0 24608-4 0 6942
2 17845 51.6503 288.4696 0010655 345.2430 14.6068 15.61536532530187

--------------------[KO-23:1FA09]--------------------
From: DF5DP
To: ALL
Subject: SAFEX SUMMARY
Keywords: MIR DL2MDE DARC

To : ALL
From: DF5DP
Time: 100727UTC
Date: 22 Jul 1996

(by DL2MDE)

The SAFEX II Station Call RR0DL
==============================
is now working on bord of the Russian Space Station MIR
===

With the following words Shannon Lucid gave a message on the frequency
437.925 MHz from the MIR space station on the weekend July 13./14., 1996:

"Thanks for the Radio SAFEX, we just turned it on and the best wishes
from the crew of MIR 21. Hope this is of use to you. Many thanks
for the experiment."

Herewith we have reached the first result of our work on the SAFEX project.
Since the construction and the installation on the space station MIR is
finished successfully, we now verify the different modes of the equipment.

The first contact in the QSO-mode was between W5RRR and the MIR station
and the first contact between ground stations via the SAFEX repeater
were IV3WLQ, LY3BH and DF0VR.

Two very important things:
For working via the repeater you must use CTCSS tones. We will publish
the CTCSS tones after checkout.
The Doppler-shift is plus/minus 10 kHz, that means in the begin and the
end of all passes you have a difference of 20 kHz referred to the normal
frequency.

++
+ The Amateur Radio Space Experiment SAFEX II +
+ New Amateur Radio Station RR0DL in Space Station MIR +
+ +
+ by Thomas Kieselbach, DL2MDE +

++

The international amateur radio community always tries to use also the manned space flight missions. Thus far, this has occured on several American and Russian space missions. Years ago the Russians installed an amateur radio station at the MIR space station. This radio station operates in the 145 MHz band in voice and packet modes. After the Russian-German space operation MIR-92 it was proposed to expand the existing equipment in order to accommodate current communication technologies. The launch is now planned for spring 1996.

An agreement was made between NPO Energia, Russian radio amateurs, Deutscher Amateur Radio Club (DARC) and the Ham Radio Group at the German Aersospace Research Establishment (DLR) in Feburary 1994 to install a new amateur system to the space station MIR. This system will be mounted to the "Priroda" module and will be comprised of various components which operate on different radio amateur bands. On the German side support was given by the Deutsche Agentur fuer Raumfahrtangelegenheiten (DARA). The costs are shared, whereby the German side covers the costs for the development and fabrication (DARA, DARC) and the Russians for the installation at the "Priroda" module and its operation.

The system is comprised of two main parts with auxiliary equipment:
1. Radio equipment in the 430 MHz amateur band (Duplex Shift 2.2 MHz).
2. Radio equipment in the L/S band (Uplink 1265 MHz/Downlink 2410 MHz).

The first covers primarily the desire for HAM communication and the second for experiments in future techniques.

History
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In the past there has been participation of radio amateurs during several German space missions:

1985: DP0SL at the first German Spacelab-Mission;
1992: DP1MIR at the Russian-German Mission MIR-92;
1993: DP0SL at the second German Spacelab-Mission;
1994: DP3MIR at the Russian-ESA Misson EUROMIR 94;
1995: DP0MIR at the Russian-ESA Mission EUROMIR 95.

In 1993 first discussions and negotiations with the Russian partners (NPO Energia) and the Russian radio amateurs took place, which led to an agreement in March 1994 concerning a new HAM-radio-station on MIR. In May 1994 DARA promised to participate on financing the project. In August 1994 an agreement between the partners was signed for the start of RR0DL in late summer 1995 (postponed to spring 1996).

Project Requirements
====================
The experience of earlier missions showed that astronauts and cosmonauts are very busy and overloaded with work. Therefore the new equipment must offer technical arrangements which permit amateur radio

activities without active crew operation. In amateur radio one is concerned with many technical areas. The new equipment will satisfy the desire for both communication and experiments.

The conception on the Russian side had to be fulfilledin detail, but they were very generous. That can be seen from a payload of 30 kilogram, three external antennas and an electrical power of 50 Watts/24 hours with peaks up to 300 Watts for a maximum of 2 hours/day. The technical demands for all parts of the equipment are very high. What does not correspond is not going to be launched. In addition there was a tight time table for the realization of the project.

Concept
=======
The equipment for the RRODL consists of two main parts with several additinal devices.
Radio equipment in the 430 MHz band: Duplex with a 2.2 MHz frequency shift, modified as communication system for the MIR crew.
Radio equipment in the L/S-band: Uplink 23 cm, downlink 12 cm, designed as an experimental system, transponder operation, amateur television (ATV), and future experiments.

There exists already a 2 meter amateur radio station on the MIR space station. It is, however, installed into another module of the station. It is planned to install a 144 MHz-radio, which will be switched by a diplexer, in order to make operation possible from RR0DL on 2 m or crossband.

430-MHz-Equipment
=================
The 430 MHz installation corresponds to a large extend to FM repeater technology. At first it simplified the matter for us that a standard product (ICOM 4020) could be modified. To this device several modifications and additions had to be undertaken. Besides to the additinal features there is installed:

- Diplex filter and switches for 2 meters
- Filter for 70 cm duplex-mode
- Packet Radio TNC for duplex-digipeater
- Digital voice recorder
- Digital voice identification
- changeover of the supply voltage to 28 Volts
- Frequency and operating control system / mode control

The device in its original housing (425mm width x 149mm height x 368mm depth) is built for rack mounting. The handling will be done by the MIR crew, it is also possible to use remote control from the ground station (Moscow, R3K and Oberpfaffenhofen, DF0VR).

Mode-1: Relay Operation
=======================
On-board frequency: 437.950 MHz;
Ground frequency: 435.750 MHz,

accordingly 2.2 MHz frequency shift,
CTCSS tone for operation. 141.3 pl.(n6jlh)

The possibility for FM voice communications covering Europe is achieved. It depends on the users whether these communications can be realized. Radio discipline has first priority. For a special ground station working in undisturbed broadcast mode is possible by using special techniques.

Mode-2: Data Operation (Packet Radio)
=====================================
On-bord frequency: 437.975 MHz
Ground frequency: 435.775 MHz,
accordingly 2.2 MHz frequency shift,
no CTCSS tone operation.

Previous experience was gathered using packet radio on the MIR space station. The new device operates at 9600 Bd and echoes every data packet. With this concept, a higher data rate than with the former equipment can be achieved on one hand by the data speed, on the other hand the collisions of packets will be reduced to a minimum. There is also a lap-top PC available at the station for mailbox operation.

Mode-3: QSO-Operation of the MIR Crew
=====================================
On-board frequency: 437.925 MHz;
Ground frequency: 435.725 MHz,
accordingly 2.2 MHz frequency shift,
CTCSS tone for operation.

The cosmonauts can perform regular QSOs and can also carry out special functions with this device. Certainly in QSO operation it is very valueable that at the on-board frequency there are no other signals to be heart (communications discipline!).

In additionion, the cosmonauts have three other possibilities to use RR0DL:

1. In special cases a CTCSS tone can be switched to the transmission of RR0DL and DTMF tones can be used. The crew applies this in case they want to contact specific prepared stations. This is planned for emergency use, contacts with control centers and their families. Ground stations can be equipped accordingly, so that the cosmonaut can dial into a telephone system with DTMF tones in order to reach his XYL or another OM. If this is noticed other hams should not disturb!

2. Furthermore a digital voice recorder will be built into RR0DL. With that device the cosmonauts have the possibility to transmit a message worldwide. They record a text on the digital voice recorder and this text will be transmitted in regular intervals (duration up to 2 min, then 2 min breake). The German DLR Ham Radio Group added an identical device to

the already existing 2-m-equipment. The last messages
transmitted from MIR were New Year Wishes (1994),
Greetings to the HAM Fair Friedrichshafen (1994) and at the
EUROMIR 95 Mission.

3. Picture transmission, this part is new in the concept for
RR0DL. A system was developed for transmitting pictures in
digital form. The crew on-board of MIR can take pictures with
a still-video-camera and these can be stored in a lap-top PC.
The basis for the picture transmitting protocol is the AX.25
packet protocol. The picture pixels are transmitted in pseudo-
random kind. With this system recognition of pictures after
only 30 % transmission is possible. Missing pixels will be
mathematically added at the end of transmission. Transmission
time for one picture is 3 minutes. Amateurs can receive the
picture with a normal packet TNC with 9K6 modem and a
special software version from JVFAX (not available yet).

Ground Station for 430 MHz
==========
A normal FM-transceiver with an omni-directional antenna can be used
as ground station. Improved and easier is the operation, if
1. directional antennas
2. computer control for antennas and transceiver
3. CTCSS device
4. scanner operation for the SAFEX frequencies
5. narrow frequency intervals are available.

It has to be considered that the Doppler shift at 430 MHz can be up to 10
kHz. Special information for receiving equipment in future are given in
the mailboxes.

L/S-Band device
==========
This equipment is planned for experiments on amateur radio. The basic
module is working as a transponder with 10 MHz bandwidth, uplink
1265 MHz, downlink 2410 MHz. It is possible to plug different
experimental modules into the basic module. The ATV group at the
University of Bremen will develop and built the ATV equipment and also
the L/S-band basic part.

Experimental modules operate at the intermediate frequency 70 MHz, the
other parameters will be published later. So the possibility for the HAM
community is given, that in the future other communication experiments
at the MIR station can be realized.

Project SAFEX II Fact Sheet

Space AmateurFunk EXperiment
Amateur Radio Equipment for the Russian Space Station MIR

QRV on: 2 meters: RX and TX (Simplex)
70 cm: RX and TX (Duplex)
23 cm: uplink and 12 cm downlink
for voice, data, picture and ATV transmission

Transmit frequencies in the 430 MHz band:

437.925 MHz: direct frequency with the space station MIR,
QSO's with the cosmonauts, picture transmission and
automatically transmitted messages from the MIR crew;

437.950 MHz: repeater (relay operation); voice contacts between
ground stations;

437.975 MHz: data transmission; packet radio direct over greater
distances, mailbox operation with store and forward.

The ground stations transmit on a 2.2 MHz lower frequency. The Doppler
shift can be up to 10 kHz; the correction must be done at the ground
station.

Frequencies for the L/S-band-equipment:

Uplink: 1.265 Ghz
Downlink: 2.410 Ghz
Bandwidth: 10 MHz, linear translation or signals of the space station
(for example amateur television)

SAFEX-II Mission dates: launch spring 1996 as permanent service.

Callsign: RR0DL

Weight: up to 30 kg

Power supply: 50 Watts over a 24 hour period as well as additionally up
to 300 Watts for 2 hours from the on-board supply (28 V).

Operation: Under the control of the cosmonauts; additionally a remote
control is possible from Moscow (R3K) and Oberpfaffenhofen (DF0VR).
SAFEX-II is a project of the German Amateur Radio Club (DARC)
carried out by different groups under project management of the Ham
Radio Group at the German Aerospace Research Establishment (DLR)
Oberpfaffenhofen.

Project leader: Thomas Kieselbach, DL2MDE
email-address: hams.df0vr@dlr.de
++

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917

This country, with its institutions, belongs to the people who
inhabit. Whenever they shall grow weary of the existing Government,
they can exercise their constitutional right of amending it, or
their revolutionary right to dismember or overthrow it.

-- Abraham Lincoln (1809-1865)

Date: Mon, 29 Jul 1996 08:22:14 GMT
From: rb@cyberhighway.net (John Jordan)
Subject: Repeater operational on Mir

dhend@cyberportal.net wrote:

>Hi just a quick one to let you know the Mir repeater is on and is operational, there were many contact being made at 9:10 this
>morning, over the central part of the country..
>73 DAVE
>
>e-mail=dhend@cyberportal.net
> packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
> phone 1-603-542-2493 1-603-542-6917
>
>
>

Hi Dave,

Could you be a bit more specific? I was unaware that a "repeater" was even aboard the MIR. I know that they carry an ICOM mobile 2m radio for phone and packet, but their having an actual repeater onboard is big news! Could you pass along the output freq and offset for those of us who are obviously MIR news challenged. And here I thought I was keeping on top of space stuff..

73's

John (still trying for a Shannon contact) Jordan KB7VZL

End of Ham-Space Digest V96 #228
****

1516. Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: kb0nza@mail.dialnet.net
Message-ID: <4u80bt$4rg@news.dialnet.net>
Source record: 21789

Would someone please post the sharware version of "InstaTracker"
satalite tracking program here. Or, zip it down and stick it in me
E-Mail? Thanx.

Brad Cunningham KB0NZA
Springfield Mo.

kb0nza@mail.dialnet.net

1517. Re: Updated Ham Pages

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: Dave Booth <booth@pactitle.com>
Message-ID: <32078EDC.446B@pactitle.com>
Source record: 21790
Cross-posted to: va.general,uk.radio.amateur,rec.radio.amateur.space,rec.radio.amateur.packet,rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.antenna,nc.general

wa4pgm@moonstar.com wrote:
>
> I just uploaded my newest pages. Due to the length of just
> the single page I have split the page up. Check it out,
> and many thanks for the comments. Anyone like to add anything ?
> Comments direct please.
> 73 Kyle
>
> http://www.moonstar.com/~wa4pgm/

I'll go check it out!
kc6wfs
http://www.geocities.com/Hollywood/5860
--
Dave Booth

1518. IC-706/RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: aga@mandalay.west.sun.com
Message-ID: <4u89mc$hp1@newsworthy.West.Sun.COM>
Source record: 21791

Earlier this year someone posted an article dealing with Rs-10/12 operation using an IC-706. Am I correct to assume that all you need to do is program two memories one for the two meter uplink and another for the ten meter down and just use the up/down buttons on the mic to go back and forth manually? Is there a better way?

tks de tony wa6lzh

1519. Discovery of Early Martian Life

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: JB <starman@conterra.com>
Message-ID: <3207CB96.74AD@conterra.com>
Source record: 21792

Subject:
NASA Briefing Wednesday on Discovery of Early Martian Life
Date:
Tue, 6 Aug 1996 16:30:18 -0400
From:
NASANews@luna.osf.hq.nasa.gov (NASA HQ Public Affairs Office)
To:
press-release-nasa@venus.hq.nasa.gov

Donald Savage
Headquarters, Washington, DC August 6, 1996
(Phone: 202/358-1727)

James Hartsfield
Johnson Space Center, Houston, TX
(Phone: 713/483-5111)

David F. Salisbury
Stanford University, CA
(Phone: 415/723-2558)

NOTE TO EDITORS: N96-53

NASA BRIEFING WEDNESDAY ON DISCOVERY OF POSSIBLE EARLY MARTIAN LIFE

A team of NASA and Stanford scientists will discuss
its findings showing strong circumstantial evidence of
possible early Martian life, including microfossil remains
found in a Martian meteorite, at a news conference scheduled
for 1:00 p.m. EDT, August 7, at NASA Headquarters, 300 E. St.
SW, Washington, DC. The team's findings will be published in
the August 16 issue of Science magazine.

Panelists will be:

- Dr. Wesley Huntress, Jr., NASA Assoc. Administrator for Space
Science,
Washington, DC
- Dr. David McKay, principal author, NASA Johnson Space Center (JSC),
Houston, TX
- Dr. Everett Gibson, NASA JSC, Houston, TX
- Dr. Richard N. Zare, Professor of Chemistry, Stanford University, CA
- Kathy Thomas-Keprta, Lockheed-Martin, JSC, Houston, TX
- Dr. William Schopf, Professor, Department of Earth and Space
Sciences,
Univ. of California, Los Angeles

The briefing will be carried live on NASA TV with two-
way question-and-answer capability for reporters covering the
event from participating NASA centers. Audio of the
broadcast will be available on voice circuit at the Kennedy
Space Center by calling 407/867-1260.

NASA Television is broadcast on Spacenet 2,
transponder 5, channel 9, C-Band, located at 69 degrees West
longitude, with horizontal polarization. Frequency will be
on 3880.0 megahertz, with audio on 6.8 megahertz.

- end -

--
~~~~~~
The most exciting phrase to hear in science, the one that heralds new
discoveries, is not "Eureka!" (I found it!) but "That's funny ..."
-- Isaac Asimov
~~~~~~
starman@conterra.com
starman@scsu.scsu.edu
brow3600@spacelink.msfc.nasa.gov
http://www.conterra.com/starman/sbp.html

1520. ARLK055 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-06 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk055.1996@arrl.org>
Source record: 21793
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK055
ARLK055 Keplerian data

ZCZC SK55
QST de W1AW
Keplerian Bulletin 55 ARLK055
From ARRL Headquarters
Newington, CT August 6, 1996
To all radio amateurs

SB KEP ARL ARLK055
ARLK055 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96218.98031538 .00000090 00000-0 10000-3 0 04453
2 14129 26.0347 196.0728 6025469 37.9689 352.0089 2.05880910070892
RS-10/11
1 18129U 87054A 96219.21125656 .00000053 00000-0 41395-4 0 02650
2 18129 82.9263 111.5721 0012884 21.7450 338.4250 13.72367942457031
UO-11
1 14781U 84021B 96219.38558625 .00000109 00000-0 26225-4 0 09042
2 14781 97.8027 207.8823 0011358 295.7285 64.2753 14.69470240665025
RS-12/13
1 21089U 91007A 96219.35749569 .00000092 00000-0 81597-4 0 09100
2 21089 82.9228 152.1386 0030620 90.8443 269.6220 13.74072524275925
AO-13
1 19216U 88051B 96214.89927956 .00015489 00000-0 19978-2 0 2523
2 19216 57.1788 100.8865 7438668 46.5940 355.2560 2.10350046 30836
UO-14
1 20437U 90005B 96219.29103264 .00000012 00000-0 21389-4 0 02098
2 20437 98.5432 301.3673 0011929 55.5946 304.6362 14.29927634341210
RS-15
1 23439U 94085A 96219.29930886 -.00000039 00000-0 10000-3 0 01651
2 23439 64.8203 302.0465 0159733 190.2779 169.4869 11.27528364066430
AO-16
1 20439U 90005D 96219.24693864 -.00000005 00000-0 15054-4 0 00111
2 20439 98.5578 303.6340 0012191 57.2213 303.0141 14.29980797341225
```

```
DO-17
1 20440U 90005E 96219.26421531 -.00000005 00000-0 14962-4 0 00156
2 20440 98.5605 304.3150 0012383 55.5107 304.7242 14.30122749341251
WO-18
1 20441U 90005F 96219.25513501 -.00000000 00000-0 16719-4 0 00084
2 20441 98.5600 304.2400 0012818 58.1361 302.1070 14.30092189341253
LO-19
1 20442U 90005G 96219.24713350 -.00000016 00000-0 10691-4 0 00101
2 20442 98.5607 304.7460 0013294 55.8033 304.4412 14.30201224341270
FO-20
1 20480U 90013C 96219.04898873 -.00000041 00000-0 -20695-4 0 09028
2 20480 99.0240 234.4196 0540547 11.5890 349.7101 12.83233954304280
AO-21
1 21087U 91006A 96219.23489031 .00000094 00000-0 82657-4 0 07365
2 21087 82.9392 284.6617 0036550 66.3228 294.1756 13.74570613276885
UO-22
1 21575U 91050B 96219.18275061 .00000020 00000-0 21026-4 0 07245
2 21575 98.3481 284.0753 0008256 111.2159 248.9905 14.37031697265242
KO-23
1 22077U 92052B 96219.08963332 -.00000037 00000-0 10000-3 0 06191
2 22077 66.0765 84.9790 0014376 285.6263 74.3168 12.86296870187228
KO-25
1 22828U 93061F 96219.21747522 .00000026 00000-0 27715-4 0 04773
2 22828 98.5747 294.0976 0011146 68.7651 291.4715 14.28148021117253
IO-26
1 22826U 93061D 96219.24818263 -.00000050 00000-0 -28768-5 0 04998
2 22826 98.5801 294.0684 0010127 81.7045 278.5283 14.27808785149146
AO-27
1 22825U 93061C 96219.25567417 .00000032 00000-0 30347-4 0 04959
2 22825 98.5765 293.8948 0009360 81.3020 278.9219 14.27700919149132
PO-28
1 22829U 93061G 96219.23477599 .00000004 00000-0 19160-4 0 04984
2 22829 98.5755 294.1792 0010956 69.2314 291.0040 14.28129091149179
Mir
1 16609U 86017A 96219.41994650 .00001244 00000-0 20292-4 0 06244
2 16609 51.6486 231.0551 0010657 26.8190 333.3352 15.61600792597758

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
August 10, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1521. Re: Radiation testing of micros ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: rob@pe1chl.ampr.org
Message-ID: <DvrFEH.Izq@pe1chl.ampr.org>
Source record: 21794

In <DAC.96Aug5091845@maya.arc.nasa.gov> dac@maya.arc.nasa.gov (Dan Christian) writes:

>Has anyone done any radiation testing of micro-controllers or
>micro-processors? I'm interested in both total dose and single event
>upset numbers. I'm specifically interested in the space environment,
>so reliability data from ham satellites would be useful too.

The people at the UoSAT unit, University of Surrey, Guildford (UK) have
done work in this area.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

1522. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: pklein@news.seattleu.edu
Message-ID: <4ub3eh$i3k@handel.seattleu.edu>
Source record: 21795

In article <4u80bt$4rg@news.dialnet.net>,
Brad Cunningham <kb0nza@mail.dialnet.net> wrote:

> Would someone please post the sharware version of "InstaTracker"
>satalite tracking program here. Or, zip it down and stick it in me
>E-Mail? Thanx.

Instant Track is not shareware. Its author donated it to AMSAT years ago, and revenue from it goes to the amateur satellite programs. For ordering information, check www.amsat.org, or write to AMSAT.

While InstantTrack is not the newest or most feature-laden tracking program out there, it is still about the fastest and most convenient to operate real-time. I and many other people still use it for most of our day-to-day operations. And at about $50 for AMSAT members, $70 for non-members, it's a good deal.

If you want a good shareware tracking program, may I suggest STSPLUS for DOS (the author asks a very reasonable $10 or $15 for registration, and even calls this optional). The program is absolutely beautiful.

There's also WINORBIT for Windows, which is freeware.

Both these programs, and others are widely available on the AMSAT Web site, or ftp.amsat.org, or from BBS systems that feature a space/satellite, or astronomy-oriented area.

Hope this helps.

--Peter
--
Peter A. Klein (pklein@seattleu.edu) : ------==3== --- ---
Information Services, ext. 5569 : | | | | | | | |
Seattle University : @| @| @| @| @| @| @| @|

1523. Re: Repeater operational on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <3208FEBF.77CA@isocor.com>
Source record: 21796

Mark de Hoo wrote:
>
> Dear Dave,
>
> Do you have more info on this ?
> freqs, mods ?
>
> --
> Best regards,
>
> Mark de Hoo
>
> E-mail : mdehoo@tip.nl
> Home page : http://www.tip.nl/users/mdehoo/index.htm
> AX25 : PA3GTY@PI8RYS.#NH1.NLD.EU

Here is info from AMSAT:

SB SAT @ AMSAT $ANS-216.03
SAFEX REPEATER CTCSS INFO

HR AMSAT NEWS SERVICE BULLETIN 216.03 FROM AMSAT HQ
SILVER SPRING, MD, AUGUST 03, 1996
TO ALL RADIO AMATEURS BT
BID: $ANS-216.03

Uplink 437.950
Downlink 435.750
CTCSS 141.3

Doppler compensation is required on both the uplink and downlink. (+/- 10
KHz) ,The uplink doppler is opposite from the downlink doppler. You
simply
see what your adjusting on the receive side, and correct the transmit
side in
the opposite direction.

[ANS thanks Mike, N1JEZ, for this SAFEX report.]

/EX

73,

John, KD6OZH

1524. Radio Meteor Obs. Bull. July 1996: Aquarids, Capricornids

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.78.3208FCFD@vvs.innet.be>
Source record: 21797

Radio Meteor Observation Bulletin No. 36 August 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

July 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

July	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	56	81	74	73	76	96	90	133?	108	82	133?
2- 3	25	53	52	44	58	60	71	60	54	60	39
3- 4	38	42	48	55	92	86	73	86	103	60	80
4- 5	35	42	56	75	54	63	84	59	60	62	59
5- 6	49	31	53	44	53	62	65	80	48	57	49
6- 7	37	37	45	66	84	75	76	123%	84	60	44
7- 8	34	33	42	65	76	71	62	74	82	70	65
8- 9	28	21	62	51	68	76	67	71	76	69	40
9-10	30	42	79	64	64	91	94	182?	76	92	46

10-11 | 32 30 50 56 65 57 60 96 70 74 43
11-12 | 31 34 39 33 20 33 51 42 41 58 44
12-13 | 47 39 31 52 66 37 34 39 36 31 27
13-14 | - - - - - - - - - - -
14-15 | 29 44 40 59 74 74 83 82 92 66 57
15-16 | 38 74 50 63 66 68 78 48 48 50 58
16-17 | 36 48 63 79 83 71 71 91 59 56 73
17-18 | 47 63 69 68 72 78 82 82 82 72 91
18-19 | 58 % 92 99 81 105 84 99 114 - -
19-20 | % % 88 65 98 118 86 83 89 58 61
20-21 | 65 45 82 74 94 42 42 63 59 61 -
21-22 | 36 38 48 81 81 76 86 59 51 % %
22-23 | 35 48 66 138 121 119 98 94 83 75 46
23-24 | 29 61 80 102 107 116 114 89 89 63 43
24-25 | 25 33 82 80 103 109 92 97 99 72 50
25-26 | 14 46 83 113 142 % % 130 95 % %
26-27 | 34 47 63 82 106 134 136 120 122 73 58
27-28 | 23 37 87 94 131 157 182 137 122 135 %
28-29 | 31 74 76 112 212 181 162 153 125 105 -
29-30 | 47 72 85 121 149 132 121 111 85 68 51
30-31 | 57 68 112 120 97 100 113 97 76 66 57
31-01 | 42 50 81 82 89 102 101 84 75 57 47

1996 | 20h 21 22 23 00 01 02 03 04 05 06
July | UT

Notes:

. local time = UT + 2 hours.
. % sporadic E
. radiant of the delta-Aquarids S (stream maximum on July 29)
rises at 21h UT and sets at 6h30m UT.
radiant of the alpha Capricornids (stream maximum on July 30)
rises at resp. 18h30m UT and 5h UT.
. ? high count to be checked for potential sporadic E.

Maurice De Meyere / Chris Steyaert

Location: Astronomical Observatory, University of Ghent, Belgium
(3 42' 32" E, 51 01' 25" N)
Antenna (2x): 4 elements horizontal Yagi, pointed East, elevation= 30 degs
Antenna amplifier: 10dB gain
Frequency: (1)=66.29 Mhz (signal) and (2)=65.3 Mhz (interference control)
Receiver (2x): modified commercial FM receiver
Data acquisition: 12 bits PC-based A/D convertor, 250 Hz sampling rate
Interference rejection:
dual setup: receiver (1) tuned at distant transmitter, receiver (2)
tuned at empty frequency. Anticoincindence measurement rejects
registration of broadbanded spurious signals (lightnings, computers,
ignition motors, etc).

Further information:
see WWW page (additional info + observational data)
http://allserv.rug.ac.be/~hdejongh/astro/meteor/meteor.html
Data format:
results are shown as total reflection time, expressed as
a percentage. The actual number shows 10 times this value.
When no figure is shown, the equipment was either out of service,
or results could have been affected by interference, sporadic E.

| Jun 1996 | 10x % reflec. time | horiz: day | vert: time |

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	26	12	15	16	18	11	14	13	18	24	21	27	22	22	24
1	18	20	24	23	29	22	23	21	33	49	27	29	38	52	46
2	27	41	38	44	61	39	78	85	96	70	54	54	96	77	45
3	45	48	99	67	70	46	52	59	94	95	72	100	99	77	64
4	62	68	79	70	82	77	86	60	108	104	71	83	81	97	101
5	58	85	104	104	75	52	97	84	170	95	68	78	110	105	51
6	65	70	35	83	47	79	68	108	155	103	127	138	50		
7	69	89	45	87	52	47	73	105	177	63	115	117	86	82	
8	66	81	43	74	49	45	45	100	142	127	144	100	75	97	58
9	65	66	54	68	73	69	102	110	91	91	90	82	78	92	
10	38	34	69	42	51	62	97	79	55	72	75	57	64	68	
11	40	53	28	59	35	46	46	56	49	56	86	42	36	47	
12	19	27	148	33	12	24	54	26	51	51	53	31	44		
13	22	38	63	37	22	34	39	28	33	58	22	49	39	33	45
14	32	32	40	29	48	49	29	56	55	47	36	28	48	33	61
15	20	34	32	23	33	42	72	47	32	39	27	54	54	27	35
16	15	19	13	17	18	17	78	23	20	29	34	27	34	30	25
17	14	12	14	13	6	10	9	31	12	71	13	15	21	22	
18	9	5	10	5	15	7	9	9	27	18	10	8	10	25	
19	6	7	6	8	6	11	8	13	7	6	7	13	18	7	11
20	14	12	16	7	7	5	11	14	31	10	4	12	34	34	12
21	6	8	10	7	5	6	10	9	8	7	21	10	12	11	11
22	13	10	11	17	7	13	8	10	16	15	13	18	14	13	22
23	18	11	11	11	10	11	9	12	14	14	10	11	22	14	15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

. June 8 - 10: Arietids and zeta Perseids activity.

| Jun 1996 | 10x % reflec. time | horiz: day | vert: time |

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	29	21	19	24	24	24	19	38	35	36	27	43	40	30	28
1	32	32	23	34	40	33	46	45	48	50	49	54	32	37	49
2	64	48	44	54	57	62	52	65	59	76	68	68	107	50	67

```
3 | 78 74 56 69 80 108 95 79 83 92 76 78 99 83 99
4 | 74 48 38 94 83 94 83 62 67 77 70 84 128 67 116
5 | 66 36 25 80 98 93 113 59 92 63 95 67 72 87 98
6 | 59 58 41 74 98 94 111 107 65 80 71 79 72 91 93
7 | 75 37 68 72 73 93 89 107 20 84 58 77 84 91 92
8 | 72 64 66 66 84 96 108 56 68 49 69 59 89 90
9 | 83 76 49 64 61 66 102 62 61 71 61 63 73 89
10 | 49 55 46 46 50 46 76 61 43 37 65 38 69 40
11 | 38 40 30 38 34 31 54 56 26 36 24 36 64 60
12 | 30 30 28 24 38 19 44 33 16 20 27 20 32 42
13 | 35 17 25 25 38 21 43 50 22 13 27 26 35 33 43
14 | 31 25 23 18 36 25 41 48 27 31 21 39 38 32
15 | 20 18 34 23 36 24 45 37 38 58 38 41 41 41 44
16 | 34 19 32 19 28 27 33 34 29 29 18 33 46 30 21
17 | 8 16 10 18 24 15 19 42 16 19 14 18 15 14 16
18 | 7 10 9 8 16 9 13 12 17 24 24 16 22 15
19 | 9 8 9 10 21 10 13 17 34 11 13 17 15 6
20 | 10 9 9 13 10 13 21 15 28 14 17 19 26 35
21 | 12 10 20 11 28 20 13 29 18 20 19 16 16 14 34
22 | 11 17 12 13 17 15 30 20 29 20 10 17 21 17 16
23 | 21 11 11 19 18 25 16 23 32 16 12 15 22 22 25
-------------------------------------------------------------------
| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
```

. June 28: beta Taurids.

```
-----------------------------------------------------------
| Jul 1996 | 10x % reflec. time | horiz: day | vert: time |
-------------------------------------------------------------------
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
-------------------------------------------------------------------
0 | 41 26 33 24 26 46 43 32 35 32 33 31 39 30 41
1 | 51 43 41 36 46 118 55 35 29 30 66 44 38 33 24
2 | 67 56 77 39 50 77 68 60 45 50 69 74 59 72 106
3 | 73 94 47 48 59 61 80 74 100?108? 73 70 65 96 68
4 | 58 90 45 80 77 65 65 72 47 44 50 48 77 49 49
5 | 79 86 63 59 57 68 58 62 71 50 28 47 150 46
6 | 78 59 78 87 66 83 61 70 39 33 44 74 47
7 | 46 32 44 76 45 10 50 79 61 25 37 68 33
8 | 41 58 27 28 35 37 36 48 50 42 37
9 | 48 29 18 26 54 23 42 46 37 39 34
10 | 31 35 25 24 37 47 28 46 39 27 25
11 | 38 33 12 17 32 45 12 23 19 17 85 36 44
12 | 24 22 16 18 25 22 22 14 22 14 33 15 37 13
13 | 20 20 16 11 13 15 11 10 13 16 14 14 26 18
14 | 21 19 27 13 21 20 8 10 21 12 17 20 15 11
15 | 31 13 14 12 30 18 21 20 30 14 17 51 20 20
16 | 15 27 14 16 17 11 19 18 16 14 11 20 14
17 | 83 17 16 9 86 97 31 17 19 80 13 50 20 16
18 | 8 11 10 18 16 20 22 31 99 22 17 16
19 | 11 10 20 15 35 10 15 12 12 17 15 17 11 19
```

```
20 | 17 14 23 15 57 23 11 22 17 33 22 21 19 25 24
21 | 9 15 17 15 17 15 29 25 20 13 24 16 16
22 | 21 18 24 20 23 22 21 44 30 16 25 25 29 14
23 | 17 22 29 28 20 37 36 23 20 32 24 24 21 21 28
-------------------------------------------------------------
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

-----------------------------------------------------
| Jul 1996 | 10x % reflec. time | horiz: day | vert: time |
-------------------------------------------------------------------
| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
-------------------------------------------------------------------
0 | 29 29 31 29 35 33 32 25 33 51 50 43 55 72 94 74
1 | 29 35 42 25 39 44 29 41 44 74 64 71 81 99 84 73
2 | 52 47 49 62 46 63 84 69 69 81 57 81 113 114 99 102
3 | 66 46 62 82 60 35 75 60 59 96 104 92 102 108 132 91
4 | 48 45 47 88 59 39 43 38 71 69 52 68 95 93 67 66
5 | 53 33 25 48 43 51 37 40 72 54 34 58 32 48 59 58
6 | 76 27 36 32 27 27 41 31 63 86 28 32 74 61
7 | 24 37 50 27 34 22 22 59 40 32 26 32 77
8 | 50 26 26 37 37 22 25 48 61 32 35 86
9 | 52 24 32 30 41 29 29 42 36 35 28 46 48 49 70
10 | 24 26 24 34 43 32 20 26 38 33 39 21 43 42
11 | 32 10 20 33 30 20 16 16 35 46 28 23 28 38 44 42
12 | 17 14 17 19 12 27 15 34 15 20 20 15 34 52 35 22
13 | 15 10 12 29 13 47 13 24 31 12 12 14 13 20 18
14 | 19 13 12 25 20 20 10 11 10 15 14 11 23 32 23 32
15 | 11 24 9 14 12 16 13 8 17 15 12 37 31 7 8 23
16 | 14 8 17 17 14 11 16 14 11 16 14 61 11 19 16
17 | 16 18 29 19 13 11 5 18 18 12 14 19 14 19
18 | 21 11 17 19 10 15 20 27 37 17 25
19 | 14 14 19 17 24 11 12 18 24 15 24 33 38
20 | 19 20 22 11 17 18 18 19 23 25 41 26 28 28 44
21 | 26 17 16 17 24 30 15 15 23 33 38 18 30 18 34 30
22 | 26 21 24 22 20 24 26 68 40 36 32 45 44 31 41 40
23 | 18 19 21 17 17 28 17 45 39 41 43 39 45 53 58 38
-------------------------------------------------------------------
| 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
```

. lots of sporadic-E during July, fortunately not hampering much
the observations of the morning streams at the end of the month.
. delta Aquarids and alpha Capricornids activity between July 27-31.
. ? high counts to be checked for potential sporadic E.
. reports from the US of high reflection activity on July 23, 14h-17h UT
cannot be confirmed from the above observations. If it would have been
meteor activity, then the radiant wasn't placed favorably for Europe.
Sporadic E might have influenced the counts.

Paul Vauterin / comments by Chris Steyaert

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were
recorded on a pen-recorder chart.

1996 | UT
July | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
---
1 | 13 15 23 33 25 37 23 19 21 44 36 27 | 24.3 28.3
2 | 13 18 19 10 25 25 31 29 38 42 42 36 | 18.3 36.3
3 | 14 16 19 26 28 22 29 29 26 31 34 32 | 20.8 30.2
4 | 14 15 22 32 36 22 22 29 23 25 29 29 | 23.5 26.2
5 | 15 30 39 26 29 26 44 33 33 53 26 27 | 27.5 36.0
6 | 18 29 20 18 35 26 22 29 26 25 34 25 | 24.3 26.8
7 | 15 26 32 33 33 24 37 29 29 32 33 31 | 27.2 31.8
8 | 8 13 24 27 33 31 37 35 38 30 26 24 | 22.7 31.7
9 | 11 21 31 28 33 27 25 24 26 30 36 30 | 25.2 28.5
10 | 14 21 33 29 29 23 26 25 27 36 30 23 | 24.8 27.8
11 | 17 16 18 19 19 25 21 28 29 26 31 22 | 19.0 26.2
12 | 11 24 14 24 19 22 17 21 23 28 10 5 | 19.0 17.3
13 | 15 21 29 23 21 25 19 30 18 22 15 20 | 22.3 20.7
14 | 15 22 22 21 23 25 21 20 26 26 26 21 | 21.3 23.3
15 | 21 21 24 25 26 26 24 26 30 24 29 18 | 23.8 25.2
16 | 12 18 33 36 24 29 30 39 40 33 28 26 | 25.3 32.7
17 | 14 22 26 26 | 22.0
18 | 13 19 28 36 42 34 36 22 26 | 28.7 28.0
19 | 12 20 25 20 25 34 35 31 26 27 21 25 | 22.7 27.5
20 | 12 22 35 36 37 33 36 48 43 32 27 25 | 29.2 35.2
21 | 17 28 25 25 37 30 38 29 31 28 17 | 27.0 28.6
22 | 15 15 34 39 46 41 44 41 41 33 24 26 | 31.7 34.8
23 | 14 23 26 34 48 37 40 37 30 36 26 26 | 30.3 32.5
24 | 12 22 28 43 33 38 29 43 38 32 23 23 | 29.3 31.3
25 | 11 26 30 41 39 52 38 42 42 31 28 19 | 33.2 33.3
26 | 11 32 52 49 64 59 59 69 42 47 30 31 | 44.5 46.3
27 | 19 21 33 48 43 50 60 62 63 35 35 16 | 35.7 45.2
28 | 46 62 46 54 | 52.0
29 | |
30 | |
31 | 48 56 | 52.0

July | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

* (1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

- local time = JST = UT + 9 hours.

Chikara Shimoda

Observer: Kazuhiro SUZUKI
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
Frequency: 53.7505 MHz
Transmitter: JA9BOH 53.7500 MHz, cw 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

1996	UT																					
July	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
17-18	74	51	40	50	30	20	23	23	23	17	13	7	7	16	23	22	28	35						
18-19	38	51	46	49	71	63																		
19-20																								
20-21	50	47	32	26	31	28	24	22	21	9	10	11	18	22	31	43								
21-22	39	70	47	67	64	75	64	55	62	49	35	33	29	31	26	14	17	15	16	9	12	43	36	44
22-23	39	45	56	44	57	48	55	29	37	39	25	25	22	21	21	15	18	17	10	13	17	28	55	
23-24	40	29	43	49	78	49	46	37	38	32	25	22	22	24	26	18	12	15	10	11	19	24	37	41
24-25	58	34	42	47	56	49	46	42	30	28	18	23	11	18	15	14	18	11	15	15	28	38	45	
25-26	54	51	39	47	46	41	42	38	28	32	32	23	24	27	12	22	17	10	15	15	22	22	48	70
26-27	65	66	51	58	60	58	57	40	34	34	21	25	24	26	22	18	13	16	14	17	24	31	48	63
27-28	50	67	41	55	66	64	42	35	31	35	22	18	17	23	20	12	12	13	11	14	15	31	65	51
28-29	76	80	57	65	53	44	47	47	40	25	21	22	16	21	26	17	14	15	14	17	19	37	82	
29-30	89	80	70	73	84	71	32	40	38	27	22	27	22	21	24	24	14	16	16	16	18	36	61	75
30-31	92	93	78	82	87	76	54	43	45	37	34	21	23	19	17	22	14	13	17	20	26	43	59	64
31-01	80	71	49	70	64	70	50	49	47	40	42	34	27	27	28	20	16	12	15					
July	15	16	17	18	19	20	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1996	UT																							

- local time = JST = UT + 9 hours.

- delta Aquarids and alpha Capricornids activity on July 29-31.

Kazuhiro SUZUKI

2. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and it has gradually been expanded. In regularly publishing summaries of observations, potential radio observers are kept up to date of existing installations, possibilities and limitations of radio meteor observations. In the long run, there should be sufficient observing

stations to cover the whole globe, allowing to detect stream outbursts which may remain unnoticed visually.

RMOB contains typically: summaries of recent observations, equipment data, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or unsubscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

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--
Christian Steyaert (RMOB9607) 7 August 1996
--

1525. FS: Brand New Satelite Antennas and Rotor

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: Mary Ellen Powers <mpowers@ne1h.radio.org>
Message-ID: <01bb8490$7f497c20$b4c41cce@hurricane.ne1h.radio.org>
Source record: 21798
Cross-posted to: rec.radio.amateur.space,rec.radio.swap

All,

I have to following for sale, these are brand new and never used.

Yaesu 5400B Rotor
KLM 2m 22 element array (Satellite version switchable polarization)
KLM 440 40 element array (Again satellite version switchable polarization)
7 ft. Fiberglass cross arm
AEA ST-1 Satellite tracking hardware
NOVA v1.0 and 1.1 and Nova for Windows (updated to the windows version at Dayton)

Would like to keep together. Again, the Antennas are in original shipping cartons and have never been opened, the Rotor I took out of the box to look at, but it has never been out of the house. I hooked the ST-1 to the rotor and then the system to a PC and watched the rotor work, but none of it has been "on the air".

Will make a great beginning start to the antennas of a satellite station.

Would cost way over $1000.00 to purchase new. I would like to get between $600-$700 for the complete setup and Buyer pays shipping. Offers accepted. please email to ne1h@ne1h.radio.org

Thanks,
Alan Adamson
ne1h@ne1h.radio.org
Atlanta, GA - local hams could pick up and save some $$$ on shipping

1526. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-07 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4uavpm$ugs@host-3.cyberhighway.net>
Source record: 21799

kb0nza@mail.dialnet.net (Brad Cunningham) wrote:

>
>
> Would someone please post the sharware version of "InstaTracker"
>satalite tracking program here. Or, zip it down and stick it in me
>E-Mail? Thanx.
>
> Brad Cunningham KB0NZA
> Springfield Mo.
>
> kb0nza@mail.dialnet.net
>

Shareware of IT? I don't think there ever was one.. A couple years
back the program found it's way onto a shareware CD ROM, the author of
InstantTrack (Franklin Antonio) sued the CD ROM people for this
mistake.. It's possible that I am wrong that there is no SW of IT,
but I doubt it.

73's

John KB7VZL

1527. Re: IC-706/RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-08-08 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.960808115343.14458K-100000@spork.callamer.com>
Source record: 21800

If possible, I'd like to know of the IC 706 can be used in this fashion.
Rather than a personal reply to Tony, could this be placed on the
newsgroup please? Cliff Buttschardt K7RR

On 6 Aug 1996, Tony Angerame - Sun SSE wrote:

> Earlier this year someone posted an article dealing with Rs-10/12 operation using
> an IC-706. Am I correct to assume that all you need to do is program two memories
> one for the two meter uplink and another for the ten meter down and just use the
> up/down buttons on the mic to go back and forth manually? Is there a better way?
>
>
> tks de tony wa6lzh
>
>
>
>

1528. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-08 00:00:00 UTC
From: William Karl <wkarl@magnum.wpe.com>
Message-ID: <01bb854c$b3225140$4576ffcc@wkarl>
Source record: 21801

```
--
William Karl <wkarl@magnum.wpe.com>
Cooperstown, NY
"Often wrong, but never in doubt"

Peter A. Klein <pklein@news.seattleu.edu> wrote in article
<4ub3eh$i3k@handel.seattleu.edu>...
> In article <4u80bt$4rg@news.dialnet.net>,
> Brad Cunningham <kb0nza@mail.dialnet.net> wrote:
>
> > Would someone please post the sharware version of "InstaTracker"
> >satalite tracking program here. Or, zip it down and stick it in me
> >E-Mail? Thanx.
>
> Instant Track is not shareware. Its author donated it to AMSAT years
> ago, and revenue from it goes to the amateur satellite programs. For
> ordering information, check www.amsat.org, or write to AMSAT.
>
> While InstantTrack is not the newest or most feature-laden tracking
> program out there, it is still about the fastest and most convenient to
> operate real-time. I and many other people still use it for most of our
> day-to-day operations. And at about $50 for AMSAT members, $70 for
> non-members, it's a good deal.
>
> If you want a good shareware tracking program, may I suggest STSPLUS for
> DOS (the author asks a very reasonable $10 or $15 for registration, and
> even calls this optional). The program is absolutely beautiful.
>
> There's also WINORBIT for Windows, which is freeware.
>
> Both these programs, and others are widely available on the AMSAT Web
> site, or ftp.amsat.org, or from BBS systems that feature a
> space/satellite, or astronomy-oriented area.
>
> Hope this helps.
>
> --Peter
> --
> Peter A. Klein (pklein@seattleu.edu) : ------==3== --- ---
> Information Services, ext. 5569 : | | | | | | | |
> Seattle University : @| @| @| @| @| @| @| @|
>

IT is a great program with the most beautiful graphics, but it doesn't like
```

Windows 95 because of the way Windows 95 manages the time display.
So if you use Windows 95 you may be disappointed.

1529. DX attempt from rocket

Newsgroup: rec.radio.amateur.space
Date: 1996-08-09 00:00:00 UTC
From: id4eagle1@aol.com
Message-ID: <4ueuqf$pca@newsbf02.news.aol.com>
Source record: 21802

Hello,

On Friday the 16th of August, there will be a launch of
a rocket which carries a Timble GPS and ATV package.
The GPS data will be overlaid on the video. The power
output of the transmitter (Ground Plain 1/4 wave) is
10w. The frequency is 434Mhz, and the expected altitude
is 100k feet.

The launch will occur from Black Rock dry lake bed, which
is ~130mi NNE of Reno Nevada. The flight is scheduled
for 08:00.

Anyone is welcomed to tune in if they have the equipment, and/or if the
signal reaches repeaters. I would expect that line of sight, should allow
the signal to reach Reno from ~20mi up.

Please email me if you happen to recieve any signals.
Thankyou,

Jonathan Dunbar KE6WBO

1530. Help with AO-27 RS10

Newsgroup: rec.radio.amateur.space
Date: 1996-08-09 00:00:00 UTC
From: back@maine.maine.edu
Message-ID: <4ug1b1$100@service-2.agate.net>
Source record: 21803

Hello all,
I am new to making contacts via the use of satellites.
I have heard Mir 4 times and tried calling 5. No luck as of yet.
With each pass I learn a little bit more about what I have to do to get that
QSO. I was wondering at what distance hould I try to give AO-27
and Rs10 a call. I realize that they are two different birds with different
operating habbits. My concern is the distance. At what range do you all
make you contacts. (Km) ? My tracking program is a simple text output line by
line with all the necessary data. (it has worked for the Mir so far..)
Should I start calling when theyare within 800km? 1000km? 300km?
Thanks for all the help.
Jason N1RWY ARRL AMSAT 10-10

1531. Newbie help.

Newsgroup: rec.radio.amateur.space
Date: 1996-08-09 00:00:00 UTC
From: cgreenha@magnus.acs.ohio-state.edu
Message-ID: <cgreenha.575.320B74BB@magnus.acs.ohio-state.edu>
Source record: 21804

Hello all.

I am brand new into amatuer satillite work. All I know is that sombody told me I COULD do sat work with my 50 watt VHF rig, and 35 watt UHF rig.

Is this true, and if so, where do I start? Does this group have an FAQ?

Any info would be appreciated.

Thank you.

Christopher K. Greenhalgh, N8WCT
Computer/Electronic Tech. II at The Ohio State University
E-Mail: ckg+@osu.edu (cgreenha@magnus.acs.ohio-state.edu)
AX.25 : n8wct@w8cqk.#cmh.oh.usa.noam

1532. Re: Newbie help.

Newsgroup: rec.radio.amateur.space
Date: 1996-08-09 00:00:00 UTC
From: graham@southlin.demon.co.uk
Message-ID: <19960809.235614.05@southlin.demon.co.uk>
Source record: 21805

In message <cgreenha.575.320B74BB@magnus.acs.ohio-state.edu>
Christopher K. Greenhalgh wrote:

> I am brand new into amatuer satillite work. All I know is that sombody told
> me I COULD do sat work with my 50 watt VHF rig, and 35 watt UHF rig.
>
> Is this true, and if so, where do I start? Does this group have an FAQ?

Yep - 'tis all true, but you should get across to your college library and ask for references to ARRL publications. Aside from "The Satellite Experimenter's Handbook, there are extensive explanations in the regular ARRL (BIG) handbook on ham radio, and the famous antenna handbook too.

You will find histories of the OSCAR satellite ham operations, as well as what is current. When you know what "Keplers" are, and can predict the time a sat comes over the horizon, you can begin to think about what it takes to make contact with one. Working sats is not plug 'n play. You are going to have some weeks of dandy delving. Have fun..

Regards
G4WNT
--
Graham

1533. interferometers?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-09 00:00:00 UTC
From: mundaka@acca.nmsu.edu
Message-ID: <4uejn7$g80@bubba.NMSU.Edu>
Source record: 21806

Just a question that has been nagging me for awhile:

Is it possible to array used satellite antennae in such a way that they could be used as a small radio telescope? I know the baseline of a satellite dish is far too short, but it seems--to one who is unfamiliar with the topic, at any rate--possible to use today's powerful PC's to integrate the data of each dish into a useful interferometer.

On a related note, could such interferometers be grouped into <gads!> interferometers of interferometers?

The idea is to use (soon to be) obsolete dishes--and hopefully obsolete computers as well--in a relativly cheap method of doing radio astronomy (which I have a *lot* to learn about, unfortunatly.)

Thanks,
chris

--
---No hay pedo!---

1534. Re: Help with AO-27 RS10

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: lez ferguson <lezf@iol.ie>
Message-ID: <320C11FC.6E95@iol.ie>
Source record: 21807

Jason Baack wrote:
>
> Hello all,
> I am new to making contacts via the use of satellites.
> I have heard Mir 4 times and tried calling 5. No luck as of yet.
> With each pass I learn a little bit more about what I have to do to get that
> QSO. I was wondering at what distance hould I try to give AO-27
> and Rs10 a call. I realize that they are two different birds with different
> operating habbits. My concern is the distance. At what range do you all
> make you contacts. (Km) ? My tracking program is a simple text output line by
> line with all the necessary data. (it has worked for the Mir so far..)
> Should I start calling when theyare within 800km? 1000km? 300km?
> Thanks for all the help.
> Jason N1RWY ARRL AMSAT 10-10

1535. hwello

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: ja6969@avana.net
Message-ID: <NEWTNews.839705693.27107.ja6969@avana.net>
Source record: 21808

```
dk -]2903ide -[
23dpk,cx;er/lv/ldf,g;'ler;p[gto90-3459t0-345960-3945340-rwe9r0-we9r0-9we0-rf9we
0-9f0-s9df0-0-90-9s
```

1536. ARLK056 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk056.1996@arrl.org>
Source record: 21809
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK056
ARLK056 Keplerian data

ZCZC SK56
QST de W1AW
Keplerian Bulletin 56 ARLK056
From ARRL Headquarters
Newington, CT August 10, 1996
To all radio amateurs

SB KEP ARL ARLK056
ARLK056 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96222.42762107 .00009908 00000-0 11842-3 0 6187
2 16609 51.6502 215.8997 0010495 38.5270 321.6471 15.61665644598222
AO-10
1 14129U 83058B 96220.92304051 .00000021 00000-0 10000-3 0 04457
2 14129 26.0312 195.7517 6026571 38.4969 351.8988 2.05881743070933
RS-10/11
1 18129U 87054A 96221.76302337 .00000056 00000-0 44832-4 0 2434
2 18129 82.9262 109.6858 0012739 15.2186 344.9347 13.72368102457388
UO-11
1 14781U 84021B 96221.01981539 .00000089 00000-0 22956-4 0 09144
2 14781 97.8029 209.4446 0011103 288.8993 71.1008 14.69470408665265
RS-12/13
1 21089U 91007A 96221.32356391 .00000067 00000-0 55081-4 0 09232
2 21089 82.9231 150.6816 0030531 85.5302 274.9341 13.74072544276191
AO-13
1 19216U 88051B 96220.12624942 .00014666 00000-0 18293-2 0 02531
2 19216 57.1662 99.8336 7439379 47.0223 355.1161 2.10523352030914
UO-14
1 20437U 90005B 96221.25029157 .00000013 00000-0 21627-4 0 02204
2 20437 98.5431 303.2895 0011960 49.9774 310.2453 14.29927876341499
RS-15
1 23439U 94085A 96221.25057006 -.00000039 00000-0 10000-3 0 1520
2 23439 64.8215 298.8904 0159525 189.9632 169.8119 11.27528365 66652
```

```
AO-16
1 20439U 90005D 96221.27609519 .00000001 00000-0 17171-4 0 00196
2 20439 98.5578 305.6285 0012192 51.4055 308.8216 14.29981021341515
DO-17
1 20440U 90005E 96221.29317051 -.00000010 00000-0 12899-4 0 00066
2 20440 98.5605 306.3106 0012322 50.3342 309.8927 14.30122849341540
WO-18
1 20441U 90005F 96221.28413325 .00000023 00000-0 25694-4 0 00203
2 20441 98.5595 306.2337 0012744 52.1397 308.0936 14.30092592341544
LO-19
1 20442U 90005G 96221.27597612 .00000022 00000-0 25086-4 0 00018
2 20442 98.5597 306.7397 0013336 49.8606 310.3740 14.30201890341566
FO-20
1 20480U 90013C 96222.08952171 .00000007 00000-0 90092-4 0 8979
2 20480 99.0245 236.8835 0540750 4.7007 355.8889 12.83234452304679
AO-21
1 21087U 91006A 96221.27303580 .00000094 00000-0 82657-4 0 07300
2 21087 82.9391 283.1534 0036617 60.8883 299.5930 13.74570696277162
UO-22
1 21575U 91050B 96221.20196783 .00000015 00000-0 19223-4 0 07110
2 21575 98.3478 286.0331 0008296 105.2399 254.9701 14.37031958265538
KO-23
1 22077U 92052B 96221.03339137 -.00000037 00000-0 10000-3 0 06009
2 22077 66.0766 80.9093 0014445 285.1734 74.7686 12.86296972187475
KO-25
1 22828U 93061F 96222.23008357 -.00000005 00000-0 15553-4 0 4703
2 22828 98.5744 297.0552 0011222 60.6847 299.5455 14.28148133117687
IO-26
1 22826U 93061D 96222.26150456 -.00000003 00000-0 16401-4 0 4916
2 22826 98.5792 297.0262 0010137 72.7503 287.4786 14.27809464149579
AO-27
1 22825U 93061C 96221.21798689 .00000017 00000-0 24268-4 0 05066
2 22825 98.5769 295.8215 0009428 76.1534 284.0690 14.27701023149411
PO-28
1 22829U 93061G 96221.26656117 .00000023 00000-0 26551-4 0 04911
2 22829 98.5746 296.1729 0010937 63.7574 296.4730 14.28129528149469

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
August 13, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1537. RS BIRDS INFO PLEASE

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: kb0nza@mail.dialnet.net
Message-ID: <4uir1v$c8d@news.dialnet.net>
Source record: 21810

Can someone please post or e-mail me the up/downlike freq's for the RS Birds. Thanx

Brad

kb0nza@mail.dialnet.net

1538. Re: DX attempt from rocket

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4uj0e0$qgc@host-3.cyberhighway.net>
Source record: 21811

id4eagle1@aol.com (ID4 Eagle1) wrote:

>Hello,
>
>On Friday the 16th of August, there will be a launch of
>a rocket which carries a Timble GPS and ATV package.
>The GPS data will be overlaid on the video. The power
>output of the transmitter (Ground Plain 1/4 wave) is
>10w. The frequency is 434Mhz, and the expected altitude
>is 100k feet.
>
>The launch will occur from Black Rock dry lake bed, which
>is ~130mi NNE of Reno Nevada. The flight is scheduled
>for 08:00.
>
>Anyone is welcomed to tune in if they have the equipment, and/or if the
>signal reaches repeaters. I would expect that line of sight, should allow
>the signal to reach Reno from ~20mi up.
>
>Please email me if you happen to recieve any signals.
>Thankyou,
>
>Jonathan Dunbar KE6WBO

Whoa! Great idea, but you leave sooo much to ones imagination. This project is a prime candidate for a web page expalining the whole process, the people involved, the evolution of the idea, PICTURES of the rocket etc etc etc..

I'd love to read more abouth this exciting project.. If you don't have the time and/or know-how to write a web page on your rocket project, I'd be happy to do it for you (at no charge, of course.) Just send me a packet of pics and information on the project and I'll get right on it, shouldn't take more than a day of my time to put it all in HTML, including scanned pictures off my color flatbed scanner, I can then email you the whole document and pics so you can post the page to your server or I'd be happy to put it on my server. I'd then mail back to you any and all material that you send.

If your interested, drop me an email and we'll get it going!

Take Care and 73's

John Jordan KB7VZL (Salem, OR)
rb@cyberhighway.net
www.cyberhighway.net/~rb

1539. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-10 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <4uj0hu$qgc@host-3.cyberhighway.net>
Source record: 21812

"William Karl" <wkarl@magnum.wpe.com> wrote:

>>
>
>IT is a great program with the most beautiful graphics, but it doesn't like
>
>Windows 95 because of the way Windows 95 manages the time display.
>So if you use Windows 95 you may be disappointed.

Thats odd, I run IT and win95 and it doesn't even hiccup..

John KB7VZL

1540. Re: Newbie help.

Newsgroup: rec.radio.amateur.space
Date: 1996-08-11 00:00:00 UTC
From: kc4nhb@iu.net
Message-ID: <320d8dbb.6491923@news.iu.net>
Source record: 21813

On Fri, 9 Aug 1996 17:26:19 GMT, cgreenha@magnus.acs.ohio-state.edu
(Christopher K. Greenhalgh) wrote:

>Hello all.
>
>I am brand new into amatuer satillite work. All I know is that sombody told
>me I COULD do sat work with my 50 watt VHF rig, and 35 watt UHF rig.
>
>Is this true, and if so, where do I start? Does this group have an FAQ?
>
>Any info would be appreciated.
>
>Thank you.
>
>
>Christopher K. Greenhalgh, N8WCT
>Computer/Electronic Tech. II at The Ohio State University
>E-Mail: ckg+@osu.edu (cgreenha@magnus.acs.ohio-state.edu)
>AX.25 : n8wct@w8cqk.#cmh.oh.usa.noam

I am assuming (I know that is dangerous) that you are interested in
making 2 way contacts thru a satellite. I am also assuming that your
radio equipment operates in the FM mode.

There are two possibilities that quickly come to mind. First, is
AO-27. Uplink on 145.850 and downlink on 436.800 MHz (+/- a few KHz
for doppler shift). This bird has a VERY sensitive receiver, so use
LOW power on the uplink. The downlink is rather weak so a small beam
and a pre amp will help a lot.

Second, is the new Safex II repeater on Mir. Uplink is 435.750 and
downlink is 437.950 MHz (again, +/- 10 KHz doppler shift). You will
need to use a CTCSS tone of 141.3 to access this machine.

As a general rule, you should work on your receive station first.
Listen to several passes to learn operating protocols. Never transmit
unless you can clearly copy the downlink.

I highly recommend "The Satellite Experimenters Handbook" which is
available from Amsat or ARRL. The Amsat web site has a great deal of
useful information.

I also recommend joining Amsat. The newsletter is quite informative
and part of your dues goes toward building and launching satellites.

I must warn you that satellite operation can be very addictive! I
worked very hard learning code and theory so I could work DX on the HF

bands. About three years ago, when I started working satellites, I had 311 countries confirmed and I only needed 2 more on 80 meters for five band DXCC. Today, I have 311 countries and I still need the last 2 on 80!

73 de Roger Snyder, KC4NHB
kc4nhb@iu.net

1541. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-11 00:00:00 UTC
From: pklein@news.seattleu.edu
Message-ID: <4uk3un$mh5@handel.seattleu.edu>
Source record: 21814

I said:
>> While InstantTrack is not the newest or most feature-laden tracking
>> program out there, it is still about the fastest and most convenient to
>> operate real-time. I and many other people still use it for most of our
>> day-to-day operations. And at about $50 for AMSAT members, $70 for
>> non-members, it's a good deal.

In article <01bb854c$b3225140$4576ffcc@wkarl>,
William Karl <wkarl@magnum.wpe.com> wrote:

>IT is a great program with the most beautiful graphics, but it doesn't like
>Windows 95 because of the way Windows 95 manages the time display.
>So if you use Windows 95 you may be disappointed.

I've been using it at work under Win95. It works fine in full screen
mode. In a window, the disply updating is goofy, to say the least. All
the text mode stuff is fine, but when you go into graphics to show the
maps, the satellite position and access circle can loog very strange at
times.

If you're referring to the fact that when in the map screens, the text
underneath looks like gibberish, this is really a problem of the video
card, not Win95. There is now a "patch #4" for IT available on AMSAT's
web site (www.amsat.org) which fixes the problem. Alternatively, Franklin
Antonio (IT's author) recently posted on the AMSAT-bb that a little TSR
BIOS patch made available by a video card manufacturer restores the needed
functions that many recent cards have left out.

--Peter

--
Peter A. Klein (pklein@seattleu.edu) : ------==3== --- ---
Information Services, ext. 5569 : | | | | | | | |
Seattle University : @| @| @| @| @| @| @| @|

1542. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-11 00:00:00 UTC
From: William Karl <wkarl@magnum.wpe.com>
Message-ID: <01bb8771$cab60000$51066fcf@wkarl>
Source record: 21815

```
--
William Karl <wkarl@magnum.wpe.com>
Cooperstown, NY
"Often wrong, but never in doubt"

John Jordan <rb@cyberhighway.net> wrote in article
<4uj0hu$qgc@host-3.cyberhighway.net>...
> "William Karl" <wkarl@magnum.wpe.com> wrote:
>
>
> >>
> >
> >IT is a great program with the most beautiful graphics, but it doesn't
like
> >
> >Windows 95 because of the way Windows 95 manages the time display.
> >So if you use Windows 95 you may be disappointed.
>
>
> Thats odd, I run IT and win95 and it doesn't even hiccup..
>
> John KB7VZL
>
>

Hi John, My problem is that Win95 won't accept a TZ statement in the
autoexec.bat file and my version of IT does not show the correct UTC which
makes it useless except for the pretty pictures. I haven't figured out how
to beat this. I guess the solution would be to set my computer's clock to
UTC but I have been trying to avoid this. Right now with AO-13 not
accessible during "business hours" in my neck of the woods the problem is
academic. Like I say its a beautiful program. No sat. program graphics come
close. 73, W2BY
```

1543. Antennas for MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-08-11 00:00:00 UTC
From: Mark <kb9khm@expert.cc.purdue.edu>
Message-ID: <320E900B.30BD@expert.cc.purdue.edu>
Source record: 21816

I seem to have a LOT of fading while listening to the new 70cm repeater on MIR with my horz. polorized beam. I was wondering if any one had any oppinions on what type of antenna system would work best with the new repeater. I'm curious about trying circularly polarized antennas (don't have any right now, but I'd build one if that was the way to go) and wondered "if circular polorization is the way to go . . . should it be right hand or left hand?"

Any thoughts would be greatly appreciated!

Mark <KB9KHM>

1544. Re: RS BIRDS INFO PLEASE

Newsgroup: rec.radio.amateur.space
Date: 1996-08-12 00:00:00 UTC
From: wa4pgm@moonstar.com
Message-ID: <NEWTNews.839889292.17393.wa4pgm@wa4pgm.moonstar.com>
Source record: 21670

In Article<4un630$27o8@sol.caps.maine.edu>, <baack@midcoast.com> write:
Can someone please post or e-mail me the up/downlike freq's for the
> RS
> >Birds. Thanx
> >
> >
> > Brad
> >
> > kb0nza@mail.dialnet.net
>
>
> Brad..
> Go here...
> http://www.amsat.org
>
> They will have all of the information that you need.
>
>
> Jason N1RWY
>

I also have a table on my home pages for satellites.
http://www.moonstar.com~wa4pgm/
73
Kyle

1545. Re: RS BIRDS INFO PLEASE

Newsgroup: rec.radio.amateur.space
Date: 1996-08-12 00:00:00 UTC
From: baack@midcoast.com
Message-ID: <4un630$27o8@sol.caps.maine.edu>
Source record: 21817

> Can someone please post or e-mail me the up/downlike freq's for the
RS
>Birds. Thanx
>
>
> Brad
>
> kb0nza@mail.dialnet.net

Brad..
Go here...
http://www.amsat.org

They will have all of the information that you need.

Jason N1RWY

1546. Re: interferometers?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-12 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <320F810D.2B5E@erols.com>
Source record: 21818

Interfermetrics only work well if you can accurately determine your position, relative to the other station down to a reasonably small fraction of the wavelength you're using. They also only work well if you have a very accurate frequency standard. This, however, is something you can achieve with GPS. As for the latter, I have no idea how radio astronomers do it.

73,
Jake Brodsky, mailto:frussle@erols.com
PP-ASEL-IA, Cessna Cardinal N30946, Based @ MD24
Amateur Radio Station AB3A
"Beware of the massive impossible!"

1547. Re: interferometers?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-12 00:00:00 UTC
From: rbroom@usnews.com
Message-ID: <4uo3ag$cfi@clarknet.clark.net>
Source record: 21819

mundaka@acca.nmsu.edu (mundaka) wrote:

>Just a question that has been nagging me for awhile:

>Is it possible to array used satellite antennae in such a way that they
>could be used as a small radio telescope? I know the baseline of a satellite
>dish is far too short, but it seems--to one who is unfamiliar with the
>topic, at any rate--possible to use today's powerful PC's to integrate
>the data of each dish into a useful interferometer.

Yes. (grin) How, I'm still working out myself. Synchronization is
the key.

>On a related note, could such interferometers be grouped into <gads!>
>interferometers of interferometers?

Interesting idea - referring to my previous comment, a common time
base could be used.

>The idea is to use (soon to be) obsolete dishes--and hopefully obsolete
>computers as well--in a relativly cheap method of doing radio astronomy
>(which I have a *lot* to learn about, unfortunatly.)

Even new gear is pretty cheap, take a look here:
http://www.dbsdish.com/message/forsale.html and here:
http://www.datasat.com/price.html#antennas and here:
http://www.dbs-online.com/DBS/SatWarehouse/BUD/Reflectors/Orbitron.html
and ESPECIALLY here:
http://www.dbs-online.com/DBS/SatWarehouse/BUD/HH_Mounts/index.html
(they have an antenna mount that LOOKS like it would be perfect for a
drift-scan telescope, and pretty cheap, too!).

>Thanks,
>chris

Chris,

Check out the various Radio Astronomy Pages on the web (use the search
engines).

There's also the SARA group (the Society of Amateur Radio
Astronomers).

Try this link for starters: http://www.nitehawk.com/rasmit/ws1_4.html

Good Luck,

-Ralph-

1548. FS: Kantronics DataEngine and complete 96/1200 baud packet setup

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: Mary Ellen Powers <mpowers@ne1h.radio.org>
Message-ID: <01bb88bf$0a4a6780$b4c41cce@hurricane.ne1h.radio.org>
Source record: 21671
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space,rec.radio.swap

All,

I have the following for sale. All is complete and working.

1) Kantronics DataEngine
2) Tekk KS-900 UHF data radio on 441.000
3) Tekk KS-960 UHF data radio on 441.000
4) Alinco 1200T 1200 baud data radio (synth'd)
5) Pacomm TNC-2 (can't remember model number w/DCD)

All cables, power supplies, etc. Tuned, tweeked (for deviation) and ready
to go!

Looking to sell as a complete set and I would like to get around 700.00 for
the set. Please email any offers to ne1h@ne1h.radio.org

Thanks,
Alan Adamson
ne1h@ne1h.radio.org

1549. MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4upuld$4ga@tilde.csc.ti.com>
Source record: 21672

The repeater signal is strong and I hear stations loud and clear (with some QSB), but can't seem to hit it. I'm using 40 el RCP for the uplink with only 5 W from an HT (FT470). Is the tone really 141.3 as is posted previously here? As strong as the signal is, it would seem that 5W and 40 el should be sufficient. I'm thinking that the subaudible tone may not be correct. Any ideas?

Ken K5MBV mbv@ti.com

1550. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: mbv@ti.com
Message-ID: <4uqfqr$eb6@tilde.csc.ti.com>
Source record: 21673

Forgot to mention: I tried 5 and 10KHZ offsets for Doppler with no luck..

Ken K5MBV>

1551. Phase 3D bandplan

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: dhoward@mail.hol.gr
Message-ID: <4ur293$5ol@news.hol.gr>
Source record: 21674

Hello,
I am planning for the new P3D and wonder if anyone has the bandplan. I have the freq list of all the transponders, but it does not indicate what bands will work with each other and at what times. Basically, what I am looking for is what uplink freqs work with what downlink freqs. I am gearing up some systems and want to optimize for the higher microwave bands. Appreciate any info anyone can pass to me either via this forum or by email: dhoward@prometheus.hol.gr

Thanks

Dana W0BOV

1552. ARLK057 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk057.1996@arrl.org>
Source record: 21675
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK057
ARLK057 Keplerian data

ZCZC SK57
QST de W1AW
Keplerian Bulletin 57 ARLK057
From ARRL Headquarters
Newington, CT August 13, 1996
To all radio amateurs

SB KEP ARL ARLK057
ARLK057 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96226.20308683 .00003073 00000-0 40944-4 0 6220
2 16609 51.6488 196.8664 0010659 51.6874 308.5076 15.61695524598812
AO-10
1 14129U 83058B 96226.26539988 -.00000182 00000-0 10000-3 0 4469
2 14129 26.0187 194.8640 6028317 39.9473 351.5269 2.05882799 71040
RS-10/11
1 18129U 87054A 96226.21038880 .00000007 00000-0 -92581-5 0 02519
2 18129 82.9264 106.3998 0012403 3.7270 356.3975 13.72367845457997
UO-11
1 14781U 84021B 96226.39915285 .00000040 00000-0 14587-4 0 09222
2 14781 97.8035 214.5870 0010638 268.6476 91.3515 14.69471118666058
RS-12/13
1 21089U 91007A 96226.42077762 .00000041 00000-0 26828-4 0 09363
2 21089 82.9241 146.9048 0030866 72.0103 288.4412 13.74072188276898
AO-13
1 19216U 88051B 96220.12624942 .00014666 00000-0 18293-2 0 02531
2 19216 57.1662 99.8336 7439379 47.0223 355.1161 2.10523352030914
UO-14
1 20437U 90005B 96226.21841186 -.00000034 00000-0 36066-5 0 02252
2 20437 98.5427 308.1627 0011863 36.4345 323.7643 14.29927847342206
RS-15
1 23439U 94085A 96226.30610819 -.00000039 00000-0 10000-3 0 01573
2 23439 64.8184 290.7129 0159288 189.0415 170.7630 11.27528577067221
```

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AO-16
1 20439U 90005D 96226.24402847 .00000000 00000-0 16869-4 0 16
2 20439 98.5576 310.5115 0012023 37.6627 322.5389 14.29981389342224
DO-17
1 20440U 90005E 96226.26061071 -.00000006 00000-0 14291-4 0 00081
2 20440 98.5603 311.1952 0012295 37.0569 323.1457 14.30123289342258
WO-18
1 20441U 90005F 96226.25167913 -.00000011 00000-0 12385-4 0 00227
2 20441 98.5598 311.1197 0012767 36.9940 323.2112 14.30092829342252
LO-19
1 20442U 90005G 96226.24314284 -.00000024 00000-0 74901-5 0 00049
2 20442 98.5599 311.6259 0013195 36.6793 323.5294 14.30201956342276
FO-20
1 20480U 90013C 96226.53337760 .00000007 00000-0 89541-4 0 8982
2 20480 99.0238 240.4800 0540807 354.6215 4.9222 12.83234515305242
AO-21
1 21087U 91006A 96226.22281312 .00000094 00000-0 82657-4 0 07410
2 21087 82.9386 279.4874 0036630 47.6253 312.7992 13.74571096277846
UO-22
1 21575U 91050B 96226.21519680 -.00000044 00000-0 -68381-6 0 07150
2 21575 98.3473 290.8941 0008525 93.2666 266.9499 14.37031723266258
KO-23
1 22077U 92052B 96226.00941281 -.00000037 00000-0 10000-3 0 06077
2 22077 66.0767 70.4900 0014510 284.3762 75.5644 12.86297145188110
KO-25
1 22828U 93061F 96226.22353945 -.00000020 00000-0 94680-5 0 04911
2 22828 98.5743 300.9766 0011226 49.4091 310.8065 14.28148269118255
IO-26
1 22826U 93061D 96226.25590759 -.00000005 00000-0 15693-4 0 05109
2 22826 98.5787 300.9479 0010176 62.7072 297.5143 14.27809730150140
AO-27
1 22825U 93061C 96226.26393359 -.00000032 00000-0 47091-5 0 05115
2 22825 98.5765 300.7732 0009645 62.9047 297.3117 14.27700972150134
PO-28
1 22829U 93061G 96226.24093044 -.00000011 00000-0 12957-4 0 04977
2 22829 98.5753 301.0586 0010994 51.1241 309.0920 14.28129832150179

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
August 17, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1553. Re: Please Post Sharware Version of "Instatracker" =)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: William Karl <wkarl@magnum.wpe.com>
Message-ID: <01bb8943$a69ad640$55066fcf@wkarl>
Source record: 21676

```
--
William Karl <wkarl@magnum.wpe.com>
Cooperstown, NY
"Often wrong, but never in doubt"

Peter A. Klein <pklein@news.seattleu.edu> wrote in article
<4uk3un$mh5@handel.seattleu.edu>...
> I said:
> >> While InstantTrack is not the newest or most feature-laden tracking
> >> program out there, it is still about the fastest and most convenient
to
> >> operate real-time. I and many other people still use it for most of
our
> >> day-to-day operations. And at about $50 for AMSAT members, $70 for
> >> non-members, it's a good deal.
>
> In article <01bb854c$b3225140$4576ffcc@wkarl>,
> William Karl <wkarl@magnum.wpe.com> wrote:
>
> >IT is a great program with the most beautiful graphics, but it doesn't
like
> >Windows 95 because of the way Windows 95 manages the time display.
> >So if you use Windows 95 you may be disappointed.

My apologies to the group and to all the Instant Track loyalists. I did not
have the proper SET TZ+ statement in my autoexec.bat. Thanks to the several
of you who helped me with this. Check my signature for the real reason.
Bill, W2BY
```

1554. NORAD Two-Line Orbital Element Sets (TLE850)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4uqvva$4o4@blackbird.afit.af.mil>
Source record: 21677

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #850 -
Alouette 1
1 00424U 62049A 96225.90906450 .00000042 00000-0 39013-4 0 2201
2 00424 80.4586 227.7739 0021786 249.4046 110.4761 13.67873648690090
ATS 1
1 02608U 66110A 96217.71158845 -.00000290 00000-0 10000-3 0 9765
2 02608 14.6159 352.3217 0009004 94.1228 266.0115 1.00317271 25354
ATS 3
1 03029U 67111A 96225.59209924 -.00000120 00000-0 10000-3 0 5279
2 03029 14.9150 359.1857 0008868 264.6338 165.3219 1.00273091105338
Starlette
1 07646U 75010A 96225.58249368 -.00000117 00000-0 22031-4 0 9908
2 07646 49.8286 286.1709 0206089 56.7371 305.3085 13.82191042 86761
LAGEOS
1 08820U 76039A 96224.50727818 .00000029 00000-0 00000+0 0 2166
2 08820 109.8505 44.9595 0043780 117.1223 243.3913 6.38664314217368
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96225.51850243 .00000052 00000-0 10000-3 0 7120
2 10061 12.4447 36.4502 0011229 127.2145 169.4541 1.00280913 15009
IUE
1 10637U 78012A 96223.13048291 -.00000312 00000-0 10000-3 0 2685
2 10637 35.8233 82.2496 1373056 58.3375 176.4818 1.00223949 20478
GPS BI-01
1 10684U 78020A 96225.33667850 -.00000050 00000-0 10000-3 0 4656
2 10684 65.0314 22.2479 0062517 160.2896 200.1689 1.98069594120526

```
GPS BI-02
1 10893U 78047A 96225.34758042 .00000056 00000-0 10000-3 0 2611
2 10893 63.1222 259.1623 0231551 14.7812 345.9765 2.01628107133943
GOES 3
1 10953U 78062A 96225.59951377 -.00000139 00000-0 10000-3 0 6895
2 10953 11.4357 39.3591 0001611 76.1338 320.3267 1.00269332 19625
SeaSat 1
1 10967U 78064A 96224.87204672 -.00000074 00000-0 20128-4 0 5071
2 10967 107.9913 289.9733 0002119 261.9037 98.1862 14.38116581949450
GPS BI-03
1 11054U 78093A 96223.23608608 .00000057 00000-0 10000-3 0 4208
2 11054 62.8163 258.5350 0047604 181.3076 178.7620 1.93505488129707
Nimbus 7
1 11080U 78098A 96221.63028126 -.00000041 00000-0 -52565-8 0 6063
2 11080 98.9397 81.3050 0008696 182.6596 177.4514 13.83690411898426
GPS BI-04
1 11141U 78112A 96220.65614550 -.00000038 00000-0 10000-3 0 579
2 11141 65.0129 24.8915 0050332 29.1428 331.1564 1.92894553 18874
GPS BI-05
1 11690U 80011A 96222.69497688 -.00000039 00000-0 10000-3 0 498
2 11690 65.3364 23.7528 0143927 189.8015 169.9366 2.00573772135272
GPS BI-06
1 11783U 80032A 96218.99390151 .00000032 00000-0 10000-3 0 1571
2 11783 62.2856 251.9851 0228072 29.6814 331.6445 2.03456562119845
GOES 5
1 12472U 81049A 96224.62847346 .00000071 00000-0 10000-3 0 9443
2 12472 8.2770 49.5936 0007652 47.5192 312.6713 1.00238799 13653
Cosmos 1383
1 13301U 82066A 96222.20365605 -.00000005 00000-0 -23767-4 0 5170
2 13301 82.9316 94.9372 0028777 92.3213 268.1235 13.68075258704625
LandSat 4
1 13367U 82072A 96223.75626975 -.00000007 00000-0 82483-5 0 9839
2 13367 98.0692 273.0036 0007310 341.0339 19.0588 14.57180658748488
DMSP B5D2-1
1 13736U 82118A 96226.13927904 .00000025 00000-0 28919-4 0 621
2 13736 98.6243 53.6072 0007767 219.4580 140.6033 14.25796112709183
IRAS
1 13777U 83004A 96226.06501499 -.00000183 00000-0 -95748-4 0 3994
2 13777 98.9674 50.3582 0012439 300.4770 59.5165 13.99250760361321
Cosmos 1447
1 13916U 83021A 96223.89436210 .00000024 00000-0 98685-5 0 6117
2 13916 82.9458 150.5836 0038663 1.9933 358.1369 13.74342525671259
TDRS 1
1 13969U 83026B 96224.35756741 -.00000307 00000-0 10000-3 0 6170
2 13969 9.0528 43.1946 0002019 73.0157 283.8133 1.00264228 21934
GOES 6
1 14050U 83041A 96226.21547300 -.00000234 00000-0 10000-3 0 5331
2 14050 7.1101 53.1689 0007240 359.3854 264.0715 1.00235833106764
OSCAR 10
1 14129U 83058B 96220.92304051 .00000021 00000-0 10000-3 0 4457
```

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2 14129 26.0312 195.7517 6026571 38.4969 351.8988 2.05881743 70933
LandSat 5
1 14780U 84021A 96223.53965525 -.00000014 00000-0 71075-5 0 5253
2 14780 98.3250 281.3451 0003350 109.4402 250.7160 14.57056309661873
UoSat 2
1 14781U 84021B 96222.99450876 .00000073 00000-0 20131-4 0 9042
2 14781 97.8031 211.3320 0010979 281.9092 78.0876 14.69470742665557
GPS BI-09
1 15039U 84059A 96224.37449556 -.00000056 00000-0 10000-3 0 4294
2 15039 64.6628 19.0987 0083275 19.7188 340.6073 1.92302305 88492
Cosmos 1574
1 15055U 84062A 96222.93532730 .00000020 00000-0 55342-5 0 8118
2 15055 82.9556 206.2934 0026665 189.0942 170.9738 13.73637757608364
GPS BI-10
1 15271U 84097A 96223.32648173 .00000066 00000-0 10000-3 0 1819
2 15271 62.1700 252.5385 0108556 158.8496 201.6768 1.92617982 713
Cosmos 1602
1 15331U 84105A 96218.58486828 .00000207 00000-0 21459-4 0 4939
2 15331 82.5322 66.7556 0020603 140.0862 220.1873 14.84773269640301
ERBS
1 15354U 84108B 96225.90065871 -.00000171 00000-0 60250-5 0 2080
2 15354 56.9937 151.6326 0003689 55.2114 304.9156 14.94970274645322
NOAA 9
1 15427U 84123A 96225.75501898 .00000015 00000-0 31660-4 0 8034
2 15427 98.9460 290.7056 0015173 149.4730 210.7325 14.13797038601629
GPS BI-11
1 16129U 85093A 96221.04450087 -.00000040 00000-0 10000-3 0 7337
2 16129 65.3495 22.9570 0159001 84.0978 277.7203 1.89367839 22905
Mir
1 16609U 86017A 96226.20308683 .00003073 00000-0 40944-4 0 6220
2 16609 51.6488 196.8664 0010659 51.6874 308.5076 15.61695524598812
SPOT 1
1 16613U 86019A 96225.23505628 -.00000045 00000-0 00000+0 0 9748
2 16613 98.8274 293.1799 0001981 85.7791 274.3612 14.19981445228264
Cosmos 1766
1 16881U 86055A 96224.76019339 .00000121 00000-0 11600-4 0 4091
2 16881 82.5195 118.6720 0019598 148.1982 212.0416 14.83753898542087
EGP
1 16908U 86061A 96224.91027713 -.00000083 00000-0 10000-3 0 1075
2 16908 50.0100 185.6878 0011467 155.2093 204.9295 12.44415118123344
NOAA 10
1 16969U 86073A 96225.86414942 .00000032 00000-0 31877-4 0 7349
2 16969 98.5264 221.3126 0012526 184.7157 175.3908 14.24998482514670
MOS-1
1 17527U 87018A 96225.24144821 -.00000043 00000-0 00000+0 0 4448
2 17527 98.9302 285.9787 0018089 172.5076 187.6450 14.00412255482835
GOES 7
1 17561U 87022A 96226.23477463 -.00000173 00000-0 10000-3 0 100
2 17561 3.1762 69.1328 0006118 325.7914 277.1619 1.00269061 17878
Kvant-1
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1 17845U 87030A 96225.81912098 .00002357 00000-0 32843-4 0 7163
2 17845 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315532963
DMSP B5D2-3
1 18123U 87053A 96225.71629661 .00000005 00000-0 24910-4 0 5519
2 18123 98.7699 55.0847 0015127 91.2885 269.0022 14.15449392472492
RS-10/11
1 18129U 87054A 96225.77294257 .00000041 00000-0 28486-4 0 2464
2 18129 82.9263 106.7230 0012445 5.0608 355.0670 13.72368159457936
Meteor 2-16
1 18312U 87068A 96223.24932979 .00000035 00000-0 18081-4 0 5009
2 18312 82.5581 309.2024 0014040 70.3146 289.9526 13.84082572453650
Meteor 2-17
1 18820U 88005A 96225.90638565 .00000044 00000-0 25613-4 0 143
2 18820 82.5398 1.9769 0017716 123.7509 236.5343 13.84759991431377
DMSP B5D2-4
1 18822U 88006A 96225.49929240 .00000012 00000-0 23505-4 0 3194
2 18822 98.3826 54.8740 0005462 191.7150 168.3905 14.23197257442584
Glonass 34
1 19163U 88043A 96223.49146858 -.00000004 00000-0 10000-3 0 990
2 19163 65.2871 84.0053 0007215 156.5493 203.5628 2.13102257 63399
Glonass 36
1 19165U 88043C 96224.95632670 .00000009 00000-0 10000-3 0 5063
2 19165 65.2719 83.9223 0006595 132.3427 227.6873 2.13101826 64041
METEOSAT 3
1 19215U 88051A 96217.01094021 -.00000118 00000-0 10000-3 0 2710
2 19215 3.3644 67.5422 0003056 96.8769 263.3048 0.96947720 17643
AO-13
1 19216U 88051B 96220.12624942 .00014666 00000-0 18293-2 0 2531
2 19216 57.1662 99.8336 7439379 47.0223 355.1161 2.10523352 30914
OKEAN 1
1 19274U 88056A 96226.01920800 .00000205 00000-0 22517-4 0 1108
2 19274 82.5128 218.3925 0018760 302.3979 57.5406 14.82505684437796
Meteor 3-2
1 19336U 88064A 96224.16674297 .00000051 00000-0 10000-3 0 5023
2 19336 82.5431 127.5325 0018025 95.2534 265.0647 13.16978316386716
Glonass 39
1 19503U 88085C 96225.45561797 -.00000062 00000-0 10000-3 0 3969
2 19503 65.5600 322.8169 0006006 160.9576 199.0990 2.13101742 61543
NOAA 11
1 19531U 88089A 96225.80679612 .00000004 00000-0 27391-4 0 6183
2 19531 99.1842 245.3934 0012938 81.3709 278.8927 14.13100025406443
TDRS 2
1 19548U 88091B 96225.68221773 -.00000203 00000-0 10000-3 0 2255
2 19548 2.6058 71.6384 0011191 123.5367 96.8723 1.00268522 16096
Glonass 40
1 19749U 89001A 96225.02387496 .00000010 00000-0 10000-3 0 6140
2 19749 65.2409 83.4782 0006112 251.9995 108.0225 2.13101594 59042
Glonass 41
1 19750U 89001B 96224.14034532 .00000003 00000-0 10000-3 0 5202
2 19750 65.2450 83.5751 0006240 240.2783 119.7446 2.13101815 59045
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GPS BII-01
1 19802U 89013A 96225.97932581 -.00000020 00000-0 00000+0 0 2703
2 19802 55.3584 108.3735 0023921 157.7895 202.3869 2.00550444 54854
Akebono
1 19822U 89016A 96224.62074144 .00008766 00000-0 45100-3 0 7625
2 19822 75.0678 91.7721 3742562 64.3913 329.4640 7.92908215171087
Meteor 2-18
1 19851U 89018A 96224.20791930 .00000030 00000-0 13424-4 0 4989
2 19851 82.5194 237.2020 0013560 175.6716 184.4559 13.84414874376443
MOP-1
1 19876U 89020B 96219.94163620 -.00000165 00000-0 10000-3 0 2077
2 19876 2.0898 71.2527 0018888 289.4719 70.3256 0.97110599 7110
TDRS 3
1 19883U 89021B 96221.15838542 -.00000285 00000-0 00000+0 0 2386
2 19883 0.0678 97.9131 0005171 73.9343 161.1524 1.00271528199639
GPS BII-02
1 20061U 89044A 96224.32934328 -.00000016 00000-0 10000-3 0 2525
2 20061 54.1665 284.1294 0159635 220.7244 138.1500 2.00562228 52561
Nadezhda 1
1 20103U 89050A 96225.87171030 -.00000055 00000-0 -74101-4 0 8661
2 20103 82.9567 66.8771 0035741 256.2504 103.4673 13.73867500356462
GPS BII-03
1 20185U 89064A 96225.17860164 -.00000029 00000-0 10000-3 0 3024
2 20185 55.1468 108.8683 0019349 327.0940 32.8401 2.00542650 51156
GMS 4
1 20217U 89070A 96225.67210639 -.00000380 00000-0 10000-3 0 4300
2 20217 1.9045 74.9056 0001028 210.4046 38.2879 1.00268556 25986
INTERCOSMOS 24
1 20261U 89080A 96224.82812442 .00000140 00000-0 43608-4 0 5198
2 20261 82.5894 235.1773 1240403 275.1817 70.9233 12.47344294312844
GPS BII-04
1 20302U 89085A 96224.20226135 .00000041 00000-0 10000-3 0 2667
2 20302 53.2320 223.9273 0031604 188.6818 171.2786 2.00567231 49939
Meteor 3-3
1 20305U 89086A 96225.12084487 .00000044 00000-0 10000-3 0 6213
2 20305 82.5468 85.9304 0006794 163.9156 196.2140 13.04423619325490
COBE
1 20322U 89089A 96223.55982859 -.00000277 00000-0 -14907-3 0 2340
2 20322 98.9438 237.8936 0007816 247.1008 112.9335 14.03453580344552
Kvant-2
1 20335U 89093A 96225.81912098 .00002357 00000-0 32843-4 0 6633
2 20335 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315381974
GPS BII-05
1 20361U 89097A 96225.71218325 -.00000033 00000-0 10000-3 0 1058
2 20361 56.0525 51.0265 0088605 133.9497 226.8447 2.00565211 39444
COSMOS 2054 (Altair-1)
1 20391U 89101A 96223.68902961 -.00000154 00000-0 00000+0 0 3991
2 20391 3.9551 63.0113 0005025 83.1596 44.8760 1.00267688 24540
SPOT 2
1 20436U 90005A 96225.22607683 -.00000044 00000-0 00000+0 0 1043
```

```
2 20436 98.6957 297.9294 0001440 100.3716 259.7622 14.20044168339794
UO-14
1 20437U 90005B 96222.78970956 -.00000010 00000-0 13053-4 0 2027
2 20437 98.5429 304.7992 0011916 45.5983 314.6173 14.29927801341715
UO-15
1 20438U 90005C 96226.24987513 -.00000021 00000-0 88329-5 0 9983
2 20438 98.5339 306.0304 0010796 43.5719 316.6319 14.29235002342077
PACSAT
1 20439U 90005D 96226.24402847 .00000000 00000-0 16869-4 0 16
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Glonass 68
1 23396U 94076A 96225.07421847 .00000010 00000-0 10000-4 0 2995
2 23396 65.1135 82.3801 0029046 189.0692 170.9682 2.13102556 13433
Glonass 69
1 23397U 94076B 96225.25034868 .00000011 00000-0 00000+0 0 2860
2 23397 65.0991 82.3847 0011875 326.0620 33.9532 2.13102112 13438
Glonass 70
1 23398U 94076C 96226.07260514 .00000015 00000-0 00000+0 0 3125
2 23398 65.0860 82.3319 0002337 292.6010 67.4984 2.13102177 13469
LUCH (Altair-2)
1 23426U 94082A 96224.75560334 -.00000284 00000-0 00000+0 0 3635
2 23426 1.3428 267.4813 0002129 241.8703 177.9442 1.00261638 6060
RS-15
1 23439U 94085A 96225.68525264 -.00000039 00000-0 10000-3 0 1538
2 23439 64.8181 291.7170 0159344 189.1536 170.6479 11.27528561 67158
NOAA 14
1 23455U 94089A 96225.84750294 .00000015 00000-0 32908-4 0 7060
2 23455 98.9491 171.1629 0010607 80.1445 280.0926 14.11602985 83447
Glonass 71
1 23511U 95009A 96223.68493652 -.00000076 00000-0 00000+0 0 2154
2 23511 64.6483 322.2736 0007248 216.6563 143.3236 2.13103511 11135
Glonass 72
1 23512U 95009B 96225.68131714 -.00000061 00000-0 00000+0 0 2328
2 23512 64.6373 322.2072 0005261 312.7626 47.2308 2.13101661 11178
Glonass 73
1 23513U 95009C 96223.15771360 -.00000080 00000-0 10000-4 0 2435
2 23513 64.6445 322.3097 0014100 200.6700 159.3017 2.13102634 11125
GMS 5
1 23522U 95011B 96225.39719108 -.00000296 00000-0 10000-3 0 1424
2 23522 0.3919 1.9129 0001024 142.2971 100.2021 1.00274028 5019
DMSP B5D2-8
1 23533U 95015A 96225.67023046 .00000036 00000-0 43022-4 0 6270
2 23533 98.8427 227.4106 0005966 258.4642 101.5857 14.12748969 71607
OSC 1
1 23545U 95017A 96223.97636161 .00000082 00000-0 40474-4 0 1559
2 23545 69.9735 43.0443 0011681 113.0215 247.2148 14.45380264 71573
OSC 2
1 23546U 95017B 96222.90297456 .00000047 00000-0 30503-4 0 1814
2 23546 69.9836 45.6468 0010931 105.0466 255.1881 14.45351434 71420
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Microlab 1
1 23547U 95017C 96225.97067686 .00000143 00000-0 57376-4 0 1279
2 23547 69.9783 38.2948 0011143 103.7567 256.4804 14.45566409 71874
OFEQ 3
1 23549U 95018A 96225.93183686 .00003993 00000-0 83812-4 0 2953
2 23549 143.3616 214.2511 0222880 256.9286 100.6482 15.16445555 74985
GFZ-1
1 23558U 86017JE 96224.35575834 .00001725 00000-0 24945-4 0 1487
2 23558 51.6459 194.9988 0006752 74.2180 285.9559 15.62480544598638
ERS-2
1 23560U 95021A 96224.81946945 -.00000019 00000-0 90000-5 0 2631
2 23560 98.5464 298.0803 0000939 79.2965 280.8324 14.32251632 68531
Spektr
1 23579U 95024A 96225.81912098 .00002357 00000-0 32843-4 0 4152
2 23579 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315 70286
GOES 9
1 23581U 95025A 96225.24626458 .00000070 00000-0 10000-3 0 2265
2 23581 0.2976 267.9873 0000541 313.4706 53.1951 1.00271747 4480
Helios 1A
1 23605U 95033A 96226.22049797 .00055948 00000-0 10636-1 0 2824
2 23605 98.1229 161.1138 0001848 69.9152 290.2234 14.63839974 58901
UPM SAT 1
1 23606U 95033B 96226.26031058 .00000135 00000-0 32543-4 0 2024
2 23606 98.1037 162.3943 0009469 14.0662 346.0804 14.67271043 59084
CERISE
1 23607U 95033C 96224.35910536 .00000051 00000-0 17695-4 0 1094
2 23607 98.1058 160.3631 0007522 17.7848 342.3607 14.66955027 58825
TDRS 6
1 23613U 95035B 96225.45376193 .00000082 00000-0 00000+0 0 2003
2 23613 0.7963 82.7876 0001694 118.7112 111.7745 1.00273243 3945
Glonass 74
1 23620U 95037A 96222.47231994 .00000056 00000-0 00000+0 0 1708
2 23620 64.8246 202.1957 0018207 173.2796 186.7434 2.13102727 8145
Glonass 75
1 23621U 95037B 96222.18043425 .00000059 00000-0 00000+0 0 1733
2 23621 64.8333 202.2019 0018327 184.5075 175.4728 2.13101976 8136
Glonass 76
1 23622U 95037C 96223.64639226 .00000044 00000-0 00000+0 0 1741
2 23622 64.8253 202.1531 0036886 168.2141 191.8679 2.13102493 8164
Prognoz-M2
1 23632U 95039A 96225.90175950 .00000343 00000-0 00000+0 0 723
2 23632 68.9880 250.6380 8143465 322.6560 359.5280 0.26325600 1003
SICH-1
1 23657U 95046A 96226.17401068 .00000193 00000-0 26234-4 0 1007
2 23657 82.5341 148.1123 0026039 223.3677 136.5485 14.73487471 51226
RADARSAT
1 23710U 95059A 96224.89629870 -.00000018 00000-0 10000-4 0 1709
2 23710 98.5799 230.7929 0001289 87.3278 272.8052 14.29988462 40204
Glonass 77
1 23734U 95068A 96225.64120210 .00000030 00000-0 00000+0 0 1520
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2 23734 64.8306 202.0033 0019232 318.3323 41.5069 2.13101848 5174
Glonass 78
1 23735U 95068B 96225.37870591 .00000031 00000-0 00000+0 0 1481
2 23735 64.8242 201.9959 0008298 223.6260 136.3005 2.13125301 5169
Glonass 79
1 23736U 95068C 96225.87567494 .00000029 00000-0 00000+0 0 1232
2 23736 64.8183 201.9946 0007705 210.9223 149.0091 2.13102224 5176
XTE
1 23757U 95074A 96222.88182132 .00000536 00000-0 15854-4 0 771
2 23757 22.9820 46.2344 0013264 344.1262 15.8809 14.97675627 33528
1996010D
1 23797U 96010D 96226.26218344 .20728079 13383-4 13694-2 0 2590
2 23797 47.8619 219.3475 3557031 57.8205 331.9390 8.61032363 4663
Soyuz TM-23
1 23798U 96011A 96225.81912098 .00002357 00000-0 32843-4 0 1519
2 23798 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315 27045
Polar
1 23802U 96013A 96223.92652980 .00000051 00000-0 00000+0 0 386
2 23802 86.1742 25.4816 6558955 283.8107 15.5339 1.36677204 2300
1996010E
1 23824U 96010E 96224.08513024 .00002836 00000-0 60307-2 0 900
2 23824 47.6449 237.8217 7278004 40.7150 355.4606 2.21806373 3835
GPS BIIA-25
1 23833U 96019A 96224.24116706 -.00000103 00000-0 00000+0 0 630
2 23833 54.6801 345.8114 0038023 153.2060 206.9762 2.00564264 2782
Priroda
1 23848U 96023A 96225.81912098 .00002357 00000-0 32843-4 0 1046
2 23848 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315 17376
MSX
1 23851U 96024A 96226.15987636 -.00000047 00000-0 00000+0 0 712
2 23851 99.3824 206.6199 0005181 344.8512 15.2471 13.97639785 15454
Progress M-31
1 23860U 96028A 96211.93253172 .00008205 00000-0 99499-4 0 838
2 23860 51.6501 268.7968 0010934 359.4219 0.7497 15.61563553 13376
MSTI 3
1 23868U 96031A 96225.93281158 -.00000114 00000-0 -57847-6 0 465
2 23868 97.1207 55.3882 0011998 335.0969 24.9710 15.46200759 13588
TOMS-EP
1 23940U 96037A 96223.56681067 .00001300 00000-0 61450-4 0 304
2 23940 97.4348 128.3612 0013110 146.2063 214.0011 15.21115812 5894
GPS BIIA-26
1 23953U 96041A 96222.66233582 -.00000056 00000-0 00000+0 0 215
2 23953 55.0407 106.1535 0017501 332.6139 27.3461 2.00573226 546
1996041B
1 23954U 96041B 96226.23539092 .00000457 00000-0 23027-4 0 121
2 23954 35.2518 263.9726 0074574 40.1047 320.5144 15.17543407 4287
1996041C
1 23955U 96041C 96225.94933627 .00032388 96633-6 87761-3 0 418
2 23955 35.0408 81.0171 6036622 221.3751 72.2941 4.06693111 1131
UHF F7
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1 23967U 96042A 96225.31973109 .00000016 00000-0 00000+0 0 262
2 23967 5.0609 320.8668 0204475 161.5504 142.0410 1.00290640 190
1996042B
1 23968U 96042B 96225.43960435 .00002278 00000-0 10278-2 0 133
2 23968 26.8861 297.5642 6684823 189.5591 144.9100 3.04020995 563
Progress M-32
1 24071U 96043A 96225.81912098 .00002357 00000-0 32843-4 0 192
2 24071 51.6472 198.8035 0010772 51.2564 308.8050 15.61691315 1895
1996043B
1 24072U 96043B 96216.39484756 .26807532 12838-4 14270-3 0 163
2 24072 51.6265 245.3338 0003417 296.2379 63.8165 16.54813509 420
ITALSAT F2
1 24208U 96044A 96224.97367262 -.00000137 00000-0 00000+0 0 97
2 24208 2.1636 119.2905 4605207 177.6740 41.8948 1.77221259 54
TELECOM 2D
1 24209U 96044B 96225.25582144 -.00000347 00000-0 10000-4 0 97
2 24209 5.6103 117.1324 7277261 180.5192 179.6194 2.27622253 76
1996044C
1 24210U 96044C 96223.93772132 -.00000394 00000-0 10000-4 0 47
2 24210 5.4294 117.8507 7294336 179.2896 182.7981 2.28186586 35
1996044D
1 24211U 96044D 96225.68990860 .00038750 00000-0 57894-2 0 71
2 24211 5.4621 116.8747 7295017 180.9735 175.6570 2.27850371 82
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1555. Sat Rigs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-13 00:00:00 UTC
From: Craig Nicholson <craign@newnorth.net>
Message-ID: <321078F7.27C1@newnorth.net>
Source record: 21678

Is there a satellite capable radio out there that tracks doppler and
compensates for it automatically?
--
Craig Nicholson
KW9R

1556. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-14 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <4urkne$56m@news.onramp.net>
Source record: 21679

>Forgot to mention: I tried 5 and 10KHZ offsets for Doppler with no luck..

When you were receiving at 10Kkhz offset did you xmit at 10Knz
the other direction from the center freq.

Also I have read you need 50 watts with a 7 element ant.

I have 50 Watts with a 3 element and can't seem to make it.

73

1557. SET TIME IN HOMEPLANET:HELP PLEASE

Newsgroup: rec.radio.amateur.space
Date: 1996-08-14 00:00:00 UTC
From: Mike <Mike@miti.demon.co.uk>
Message-ID: <w3SgxDAUDXEyEwFX@miti.demon.co.uk>
Source record: 21680

Hi,
I am using Homeplanet with Windows 95. I have not been able to
find a way of setting the time to UTC. I have used the command in
Autoexec as suggested in the help file but it still reverts to Pacific
Standard Time.

Any help would be appreciated

****
***
mike@miti.demon.co.uk
OR
mike_fallon@mon.bbc.co.uk

Buckinghamshire, UK.

1558. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-14 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4ush5i$3afh@ns4-1.CC.Lehigh.EDU>
Source record: 21681

>Also I have read you need 50 watts with a 7 element ant.
>
>I have 50 Watts with a 3 element and can't seem to make it.

i have 50w and an 11ele beam :)
the PROBLEM is...i dont know the freq. for the repeater!

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1559. Wanna to win A CD player ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: kelvin@k.com.hk
Message-ID: <4uucj6$mi6@news.asiaonline.net>
Source record: 21682

Wanna to win A CD player ?
If you are interesting in a Philippines Radio Show, try :
http://www.corjam.com/

1560. Oscar 27

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: jrayol@internext.COM.BR
Message-ID: <01BB8A82.45F227E0@Jrayol.internext.com.br>
Source record: 21683

Hello Friends.

Today I work for the first time Oscar 27 (14 aug = 15:01~15:08 utc). I have
a good return of my own signal on 70 cm band. But, there were a lot of spanish
speaking stations around the same frequency interfering.
My coordinates is:
FI96XU - UTC -4
Manaus, Am Brasil

73's de PP8KWA
Jefferson R. Frederico.

1561. are there lists e-mail about SETI ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: mduran@canaldinamic.es
Message-ID: <4uv6b6$28q@helios.canaldinamic.es>
Source record: 21684

Thank you for you read this message
I am interested in lists e-mail about SETI can you help me?
Yours Sincerely

1562. READ THIS NOW!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: pmcdaddy@usit.net
Message-ID: <4v18i9$l35@news.usit.net>
Source record: 21685

Turn a measly $5 into $50,000!

Taking 5 minutes to read this text may be one of the best decisions you

ever made.

I could make $50 000 within 4 weeks for an investment of only $5. I

thought it was a huge joke! I spoke to my friends about it

and they thought likewise. But after three days of desperate struggle

I decided I had nothing to lose.

My family and I sent $1 by snail mail to each of 5 names and addresses

specified in the article. We then

placed our own name and address in the article and posted it in 200

other newsgroups.

Two weeks later, I started receiving money in the mail! I could not

believe it! Hundreds of dollars turned into thousands, and in the 4

weeks,

I received a total of $53,654. It came from all over the world.

If you follow the 3 steps below, there is no reason whatsoever why the

same shouldn't happen to you. This is a perfectly legitimate investment

opportunity. You invest $5 and you receive a return on your investment.

So does the next investor. NOT ILLEGAL, NOT A CHAIN LETTER - PERFECTLY

LEGITIMATE!

OBVIOUSLY, IF YOU ARE NOT INTERESTED, THEN DON'T PARTICIPATE. BUT

PLEASE

PRINT THIS ARTICLE AND GIVE IT TO SOMEONE WHO MAY WISH TO TAKE

ADVANTAGE.

The procedure is very simple.

STEP 1. Write your name and address on 5 separate pieces of paper with

the words "PLEASE ADD ME TO YOUR MAILING LIST". Fold a $1 note or money

order or bank draft in each of the pieces of paper and mail them to the

following five addresses:

****

1. Qunwei Yu, 11405 Tiverton Court , St.Louis, MO 63146

2. Nat Heatwole, 7550 Damascus Rd., Gaithersburg, MD 20882

3. Jeff Katz, 7 Seir Hill Rd, #41, Norwalk, CT 06850

4. Eric Johnson 14817 Holden Circle, Horizon TX, 79927

5. Patrick McElroy 818 Hollow Creek Dr. Newbern, TN. 38059

****

STEP 2. Now remove the 1st name on the list, move the other 4 names up

(5 becomes 4, 4 becomes 3 etc) and put your name and address as number

5 on the list. You can do this by re-typing this article or simply

editing and re-posting it in this or another newsgroup.

STEP 3. Post your amended article to at least 200 new groups (there are

17 000 of them).

You are now in the Mail Order Investment Business and you will start

receiving $1 returns by mail within a week or two. The more newsgroups

you post to, the bigger your return will be. You may want to rent a

Post

Office Box to handle the volume of mail you are likely to receive.

If you wish to remain anonymous, you can use a pseudonym such as

"The Manager" or "The Investor", but make sure your address is correct!

NOW LET ME TELL YOU WHY THIS SYSTEM WORKS!

Of every 200 postings I made, I received an average of 5 replies, YES -

ONLY 5, each with a $1 bill enclosed. You make $5 for every 200

postings WITH YOUR NAME AT NUMBER 5.

Each person who sent you $1, now also makes let's say,only 200

additional postings WITH YOUR NAME AT NUMBER 4, i.e. 1000 postings.

On average therefore, 50 people will send you $1 with your name at

number 4. You make $50.

Your 50 new agents make 200 posting each WITH YOUR NAME AT NUMBER 3

or 10 000 postings - average return 500 at $1 each is $500. They

make 200 postings each WITH YOUR NAME AT NUMBER 2 = 100 000 postings

= 5 000 returns at $1 each = $5 000.

Finally, 5 000 people make 200 postings each WITH YOUR NAME AT NUMBER 1

and you get a return of $50 000 before you name drops off the list.

AND THAT'S IF EVERYONE DOWN THE LINE ONLY MAKES 200 POSTINGS! Total

income in one cycle = $55 500.

From time to time, when your name is no longer on the list, you take

the latest posting that is appearing in the newsgroups, SEND OUT

ANOTHER $5 TO THE NAMES THAT ARE ON THE LIST, PUT YOUR NAME IN

AT NUMBER 5 AND START POSTING AGAIN. Remember, 200 postings is only

a guideline. The more you post, the greater the return.

Let's review the reasons why you should do this: THE ONLY COST FACTORS

ARE 5 STAMPS, 5 ENVELOPES, AND 5 $1 BILLS. Anyone can afford five

dollars to put into such an effortless investment with SPECTACULAR

RETURNS.

Some people have said to me "What happens if the scheme is 'played

out' and no one sends me any money"? Big deal! So you lose $5 - but

what are the chances of that happening?

Do you realise how many Internet Users there are? Do you realise how

many times this scheme can be utilised over and over again - with COMPLETELY NEW people participating?

There are not HUNDREDS, NOT EVEN THOUSANDS, BUT HUNDREDS OF THOUSANDS OF NEW INTERNET USERS EVERY MONTH!

Remember, read the instructions carefully and play FAIRLY...that's the only way this will work. Get a printout so you can refer back to this article easily.

Try to keep a list of everyone that sends you money and always keep an eye on the newsgroup postings to make sure everyone is playing fairly. You know where your name should be.

1563. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: ydtlzmj@news.atglab.bls.combst.bls.com
Message-ID: <4v0ai5$gcu@atglab10.atglab.bls.com>
Source record: 21686

: : i have 50w and an 11ele beam :)
: : the PROBLEM is...i dont know the freq. for the repeater!
: :
: : David
:
: I don't have the power or the beam, but I do have the freqs:

Ok, lets try that again, but this time with the brain engaged:

Uplink: 435.750
Downlink: 437.950

Doppler +- 10 Khz

CTCSS: 141.3

73s, KF4BUX

1564. 2M lowcost aerial for receiving only

Newsgroup: rec.radio.amateur.space
Date: 1996-08-15 00:00:00 UTC
From: Darin Quick <quicky@vicnet.net.au>
Message-ID: <01bb8aa2$ed5c3a00$35490acb@quicky.vicnet.net.au>
Source record: 21687

I'm interested in the Telemerity from the Oscar series of satellites and was courious if there was any aerials that were cheep to make that didnt require constant moving to chase the satellite.

Darin

1565. Re: dont bother to READ THIS NOW!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: Eddie Speed <espeed@carmen.murdoch.edu.au>
Message-ID: <3215672C.5F0A@carmen.murdoch.edu.au>
Source record: 21688

Another get rich quick scheme.....Hah!!

1566. Re: are there lists e-mail about SETI ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.960816131817.28390G-100000@spork.callamer.com>
Source record: 21689

Try: http://wbs.net/sara.html

On Thu, 15 Aug 1996, Manuel Duran Vacas wrote:

> Thank you for you read this message
> I am interested in lists e-mail about SETI =BF can you help me?
> Yours Sincerely
>=20
>=20
>=20

1567. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: Mel Markowitz <melmark@ix.netcom.com>
Message-ID: <3214C9C8.5957@ix.netcom.com>
Source record: 21690

Has the repeater been turned off?

I have made several QSO's via the MIR repeater. It doesn't seem to be on anymore when I listen. Do they have a schedule of activity for the repeater?

I hear the beacon messages on 435.725 +/- doppler OK (announcing the new crew as of Monday) and I hear a Russian signing RR0DL CQ. Haven't been able to raise him or hear him come back to anyone else. Has anyone made a two way on the QSO channel?

Perhaps the repeater will come back after the crew exchange.

Mel, K2JWD

1568. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <4v1kh9$20m@news.onramp.net>
Source record: 21691

437.950 down
435.750 up

pl 141.3

Voice messages on 437.925

I use split mode with several memory settings to do doppler correction.

1569. ALBUQUERQUE, NM Hamfest - August 17 & 18

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: n5zgt@swcp.com
Message-ID: <4v31fl$oa1@sloth.swcp.com>
Source record: 21692
Cross-posted to: rec.radio.amateur.equipment,rec.radio.swap,rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.space

Well, it is that time again! It is Hamfest Season, and it is time
for the annual Duke City Hamfest! Here is all the information:

WHEN: Saturday, August 17th - Sunday, August 18th
TIMES: 8:00 AM-5:00 PM (Saturday), 8:00 AM-2:00 PM (Sunday)
WHERE: National Guard Armory, 601 Wyoming NE, Albuquerque, NM
(Near Wyoming & Copper, on east side of Wyoming)

* * FEATURES * *

* VE Testing (Saturday at 1:00 PM) * Outdoor Tailgate Swapfest
* Hourly Door Prizes * Grand Prize Drawings
* Search & Rescue Forum * Contests
* On-Site T-Hunt * ARRL Forum
* MARS Forum * AMSAT Forum
* RV Parking (Sorry, no hook-ups) * QRP Forum
* ATV Demonstration

* PACKET FORUM - Information, plus the start of NM's Packet Users
Group!!! Please sign up!

TALK-IN FREQUENCY: 147.15 (+ No PL) Repeater

* * PRIZES * *

Grand Prize: Yaesu FT-840 HF Transceiver
Second Prize: Alinco DR-150 2 meter mobile
Third Prize: Alinco 2 meter HT

* * PRICES * *

Tables without Power: $10.00 each
Tables WITH Power: $15.00 each
RV Parking: $10.00 per Night
Raffle Tickets: $2 each, 3 for $5

See everybody there!! Please E-Mail me if you need any information
before the Hamfest. Or call Judy, KC5HZE (Hamfest Corrdinator) at
(505) 891-9132 .

Best of 73,
Brian, N5ZGT

Boy Scouts of America Amateur Radio - N5ZGT
JASM -Troop 41 ARRL QRP: NorCal# 1700 QRP-L# 580

Albuquerque, N.M. Packet: N5ZGT @ KC5IZT.ALBQ.NM.USA.NA
O.A. Lodge 66 <-W-W-W-<< Internet: n5zgt@swcp.com

1570. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: clinton.peebles@saloon.bcbbs.net
Message-ID: <9608161406592624@saloon.bcbbs.net>
Source record: 21693

C>i have 50w and an 11ele beam :)
C>the PROBLEM is...i dont know the freq. for the repeater!

Uplink - 447.75 141.3 Sub tone
Down - 437.95
Beacon - 437.925

QSL Manager is DF0VR

 QMPro 1.53 I know a good tag line when I steal one

1571. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.960816163105.15734G-100000@spork.callamer.com>
Source record: 21694

Pleeze! don't call it a repeater!---Mir is a RELAY!

1572. Re: READ THIS NOW!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-08-16 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <3214BC93.5BB2@wco.com>
Source record: 21695

KEEP THIS CRAP OFF OUR NEWSGROUPS!!!!!!!

1573. JAS-II Launched and Heard in Iowa

Newsgroup: rec.radio.amateur.space
Date: 1996-08-17 00:00:00 UTC
From: "Ralph Wallio, W0RPK" <wallio@dsmnet.com>
Message-ID: <3216080F.12E0@dsmnet.com>
Source record: 21696

Info from numerous sources indicates a successful launch of JAS-II.
CW telemetry was heard this morning in Iowa on 435.795MHz (+/- doppler)
with a TCA (Time of Closest Approach) of 1610Z. Please post observation
data and elements when they are available. 73, Ralph

1574. ARLS011 JAS-2 In Orbit

Newsgroup: rec.radio.amateur.space
Date: 1996-08-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls011.1996@arrl.org>
Source record: 21697
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS011
ARLS011 JAS-2 In Orbit

ZCZC AS19
QST de W1AW
Space Bulletin 011 ARLS011
From ARRL Headquarters
Newington, CT August 17, 1996
To all radio amateurs

SB SPACE ARL ARLS011
ARLS011 JAS-2 In Orbit

JAS-2, the first Amateur Radio satellite launched in 1996, is in orbit. Early Saturday morning, August 17 (UTC), an H-2 rocket blasted off from Japan's Tanegashima Island space center carrying the JAS-2 Amateur Radio satellite. The satellite was successfully deployed in orbit 38 minutes later.

JAS-2 is similar to OSCAR 20, although it offers some interesting twists. As soon as testing is completed and the satellite is open for general use (approximately three days), hams will have access to an easy-to-use packet BBS. Unlike most digital satellites which function as file servers and require specialized ground station software, JAS-2 provides a BBS that operates much like a terrestrial system. The only software required is a terminal program to ''talk'' to your TNC. Connecting to the BBS is as simple as sending a connect request to 8J1JCS.

Hams who own PSK TNCs can connect to JAS-2 at 1200 baud. But unlike OSCAR 20, JAS-2 can handle 9600-baud FM FSK as well.

A digital voice-storage unit (called the ''Digitalker'') will be used to transmit announcements, bulletins on the condition of the satellite and so on. It's similar to the unit presently being heard from the Mir space station.

JAS-2 also features a linear transponder for SSB and CW communication. At this time there has been no word from the Japan Amateur Radio League concerning an operating schedule for the transponder vs the BBS. The satellite has also not yet received its OSCAR designation.

Congratulations to JARL and JAMSAT on the successful launch of JAS-2. And many thanks to Kazu Sakamoto, JJ1WTK, and Fujio Yamashita, JS1UKR, for keeping ARRL HQ informed throughout the

project.

JAS-2 Frequencies

Uplink (MHz) Downlink (MHz) Mode

145.85 435.910 1200-baud PSK
145.89
145.91

145.87 435.910 9600-baud FM FSK

--- 435.795 CW telemetry
(12 WPM)

--- 435.910 Digitalker

145.90--146.00 435.80--435.90 Analog linear transponder
(SSB
and CW)
NNNN
/EX

1575. ARLK058 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk058.1996@arrl.org>
Source record: 21698
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK058
ARLK058 Keplerian data

ZCZC SK58
QST de W1AW
Keplerian Bulletin 58 ARLK058
From ARRL Headquarters
Newington, CT August 17, 1996
To all radio amateurs

SB KEP ARL ARLK058
ARLK058 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96229.14663346 .00002373 00000-0 32999-4 0 06533
2 16609 51.6475 182.0269 0011220 64.3828 295.8326 15.61710203599270
AO-10
1 14129U 83058B 96226.26539988 -.00000182 00000-0 10000-3 0 4469
2 14129 26.0187 194.8640 6028317 39.9473 351.5269 2.05882799 71040
RS-10/11
1 18129U 87054A 96229.19960023 .00000037 00000-0 23938-4 0 2490
2 18129 82.9264 104.1915 0012255 355.6177 4.4868 13.72368266458409
UO-11
1 14781U 84021B 96228.98668186 .00000036 00000-0 13901-4 0 09149
2 14781 97.8038 217.0611 0010631 259.4583 100.5423 14.69471425666436
RS-12/13
1 21089U 91007A 96228.82374658 .00000071 00000-0 58506-4 0 09252
2 21089 82.9241 145.1234 0030866 65.6123 294.8247 13.74072641277225
AO-13
1 19216U 88051B 96228.19615732 .00017325 90928-6 17749-2 0 02560
2 19216 57.1593 98.1130 7439855 47.7970 354.9981 2.10811720031081
UO-14
1 20437U 90005B 96229.15729951 -.00000049 00000-0 -23180-5 0 02129
2 20437 98.5427 311.0462 0011772 29.0536 331.1302 14.29927731342628
RS-15
1 23439U 94085A 96229.14430637 -.00000039 00000-0 10000-3 0 01712
2 23439 64.8185 286.1235 0159356 188.5391 171.2809 11.27528445067545
```

```
AO-16
1 20439U 90005D 96229.18280538 -.00000001 00000-0 16399-4 0 00147
2 20439 98.5572 313.3986 0011835 30.1339 330.0524 14.29981561342648
DO-17
1 20440U 90005E 96229.05916848 -.00000051 00000-0 -27249-5 0 00036
2 20440 98.5604 313.9474 0012196 29.5244 330.6616 14.30123018342658
WO-18
1 20441U 90005F 96228.77043472 -.00000020 00000-0 89314-5 0 00169
2 20441 98.5598 313.5964 0012716 29.4014 330.7881 14.30092799342615
LO-19
1 20442U 90005G 96229.18146520 -.00000006 00000-0 14565-4 0 00185
2 20442 98.5606 314.5178 0013219 27.5751 332.6131 14.30202266342699
FO-20
1 20480U 90013C 96229.02817351 -.00000036 00000-0 -43935-5 0 09116
2 20480 99.0238 242.4996 0540733 348.9567 10.0010 12.83234340305568
AO-21
1 21087U 91006A 96229.13444933 .00000094 00000-0 82657-4 0 07413
2 21087 82.9396 277.3378 0037053 40.3205 320.0687 13.74570656278249
UO-22
1 21575U 91050B 96229.20920567 .00000019 00000-0 20524-4 0 7089
2 21575 98.3471 293.7979 0008544 84.2000 276.0159 14.37032578266683
KO-23
1 22077U 92052B 96229.04167556 -.00000037 00000-0 10000-3 0 5988
2 22077 66.0837 64.1425 0014542 282.7839 77.1555 12.86297311188509
KO-25
1 22828U 93061F 96229.16608400 .00000030 00000-0 29410-4 0 04846
2 22828 98.5756 303.8694 0011331 40.6657 319.5365 14.28148831118679
IO-26
1 22826U 93061D 96229.12907384 .00000000 00000-0 17693-4 0 05054
2 22826 98.5784 303.7683 0010164 55.6562 304.5590 14.27809987150551
AO-27
1 22825U 93061C 96229.13731990 -.00000103 00000-0 -24148-4 0 05006
2 22825 98.5763 303.5957 0009671 55.3197 304.8900 14.27700403150541
PO-28
1 22829U 93061G 96229.18351492 -.00000025 00000-0 72218-5 0 04890
2 22829 98.5744 303.9464 0010976 43.3917 316.8140 14.28129849150592

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
August 20, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1576. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-17 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32166DAC.554A@wco.com>
Source record: 21699

Bob Winingham wrote:
>
> 437.950 down
> 435.750 up
>
> pl 141.3
>
> Voice messages on 437.925
>
> I use split mode with several memory settings to do doppler correction.

One post said ctcss 141.3 and one post said pl 141.3 .which is it?
thanks 73 steve

1577. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-17 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <8117cc$52213.36e@GRAYLADY>
Source record: 21700

In article <3214C9C8.5957@ix.netcom.com>, melmark@ix.netcom.com says...
>
>Has the repeater been turned off?
>
>I have made several QSO's via the MIR repeater. It doesn't seem to be on
>anymore when I listen. Do they have a schedule of activity for the
>repeater?
>
>I hear the beacon messages on 435.725 +/- doppler OK (announcing the new
>crew as of Monday) and I hear a Russian signing RR0DL CQ. Haven't been
>able to raise him or hear him come back to anyone else. Has anyone made
>a two way on the QSO channel?
>
>Perhaps the repeater will come back after the crew exchange.
>
>Mel, K2JWD
>
The Space Station MIR is in qso mode on 437.925 with a recording message......

Rick N1HID

1578. ORBITAL ELEMENTS FOR JAS-2

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <4v8a6g$4gl@dfw-ixnews5.ix.netcom.com>
Source record: 21701

August 18, 1996, 23:49UTC

Hello and thanks for reading this message. Does anyone have an orbital element set for JAS-2? I've seen where several stateside hams have already heard its beacon. If anyone has the elements, I would appreciate it if they could either e-mail me (hamdan@ix.netcom.com), or post them to this newsgroup.

See you on the birds! 73's de Bernie, KF0QS

1579. MIR pass Aug 18 1650 CDT Dallas

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: mbv@flash.net
Message-ID: <4v84ik$t8@excelsior.flash.net>
Source record: 21702

Just finished turning off the FT470 after listening on the beacon and the repeater downlink frequencys. There wasn't a signal on either one. Does anyone know what kind of schedule to expect? Could there be some kind of power rationing involved? Operating a repeater shouldn't disturb the crew since the speaker could be turned off.
A few days ago, the repeater signal was very strong and I could hear a number of contacts being made. My 141.3 tone wasn't working at that time and so I couldn't make a contact with the talkie. Does anyone have the straight scoop on MIR SAFEX schedule and system requirements? The 40 el RHCP beam gets a good signal and should put up enough from 5W to work if there isn't a high noise level or tight squelch on the MIR receiver.

Ken K5MBV

1580. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: glittle@awod.com
Message-ID: <4v7p38$avl@battery.awod.com>
Source record: 21703

In article <32166DAC.554A@wco.com>, steve <kd6fyk@wco.com> says:
>
>Bob Winingham wrote:
>>
>> 437.950 down
>> 435.750 up
>>
>> pl 141.3
>>
>> Voice messages on 437.925
>>
>> I use split mode with several memory settings to do doppler correction.
>
>One post said ctcss 141.3 and one post said pl 141.3 .which is it?
>thanks 73 steve

Steve

PL means Private Line (a Motorola trademark)
CG means Channel Guard (a General Electric trademark)
QC means Quiet Channel (a RCA trademark)
Johnson, Aerotron, Kenwood, Icom, Regency, Tandy and anyone else that
makes two way radios may come up with another name for it.

They all mean CTCSS (Continious Tone Coded Squelch System).

Does this help or make things more unclear.

As you see many things mean the same thing.

73

Glenn Little
WB4UIV

1581. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: cgreenha@magnus.acs.ohio-state.edu
Message-ID: <cgreenha.444.32171D36@magnus.acs.ohio-state.edu>
Source record: 21704

In article <32166DAC.554A@wco.com> steve <kd6fyk@wco.com> writes:

>Bob Winingham wrote:
>>
>> 437.950 down
>> 435.750 up
>>
>> pl 141.3
>>
>> Voice messages on 437.925
>>
>> I use split mode with several memory settings to do doppler correction.

>One post said ctcss 141.3 and one post said pl 141.3 .which is it?
>thanks 73 steve

"CTCSS" and "PL" (private line) are both the same. "Private Line" was a name that GE (I think) gave to its commercial radios when they first put CTCSS in them, and the term spilled over into the ham community.

Take care.

Christopher K. Greenhalgh, N8WCT
Computer/Electronic Tech. II at The Ohio State University
E-Mail: ckg+@osu.edu (cgreenha@magnus.acs.ohio-state.edu)
AX.25 : n8wct@w8cqk.#cmh.oh.usa.noam

1582. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Aug18.144259.15267@ke4zv.atl.ga.us>
Source record: 21705

In article <32166DAC.554A@wco.com> steve <kd6fyk@wco.com> writes:
>Bob Winingham wrote:
>> pl 141.3
>
>One post said ctcss 141.3 and one post said pl 141.3 .which is it?

Depends on whether you own stock in Motorola or not. PL is Motorola's
trademarked name for CTCSS.

Gary

--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1583. Re: MIR Repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-08-18 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Aug18.144504.15350@ke4zv.atl.ga.us>
Source record: 21706

In article <cgreenha.444.32171D36@magnus.acs.ohio-state.edu>
cgreenha@magnus.acs.ohio-state.edu (Christopher K. Greenhalgh) writes:
>
>"CTCSS" and "PL" (private line) are both the same. "Private Line" was a name
>that GE (I think) gave to its commercial radios when they first put CTCSS in
>them, and the term spilled over into the ham community.

PL is Motorola's trademark. GE calls it CG, Channel Guard. But they're
both CTCSS just the same.

Gary

--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1584. Re: ORBITAL ELEMENTS FOR JAS-2

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <3217F6C5.2028@isocor.com>
Source record: 21707

Bernard A. Poskus and Cheryl A. Blehm-Poskus wrote:
>
> August 18, 1996, 23:49UTC
>
> Hello and thanks for reading this message. Does anyone have an orbital
> element set for JAS-2? I've seen where several stateside hams have
> already heard its beacon. If anyone has the elements, I would appreciate
> it if they could either e-mail me (hamdan@ix.netcom.com), or post them to
> this newsgroup.
>
> See you on the birds! 73's de Bernie, KF0QS

The keps on www.amsat.org are:

JAS-2

1 99999U 99999C 96231.03798611 -.00000037 00000-0 -10627-4 0 9998

2 99999 98.3839 306.3820 0348080 248.3459 228.0273 13.52548600000128

73,

John, KD6OZH

1585. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199608190853.BAA06849@UCSD.EDU>
Source record: 21708

```
From smtp Sat Aug 17 07:42 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sat, 17 Aug 96 07:42 PDT
Received: by mail.ucsd.edu; id EAA03674
sendmail 8.6.12/UCSD-2.2-sun
Sat, 17 Aug 1996 04:30:35 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA03659
sendmail 8.6.12/UCSD-2.2-sun
Sat, 17 Aug 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 3700
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199608171130.EAA03659@mail.ucsd.edu>
Date: Sat, 17 Aug 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #250
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sat, 17 Aug 96 Volume 96 : Issue 250

Today's Topics:
2M lowcost aerial for receiving only
are there lists e-mail about SETI ?
dont bother to READ THIS NOW!!!
MIR Repeater (2 msgs)
READ THIS NOW!!!
Sat Rigs

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 15 Aug 1996 12:12:22 GMT
From: "Darin Quick" <quicky@vicnet.net.au>
```

Subject: 2M lowcost aerial for receiving only

I'm interested in the Telemerity from the Oscar series of satellites and
was courious if there was any aerials that were cheep to make that didnt
require constant moving to chase the satellite.

Darin

Date: Fri, 16 Aug 1996 13:19:18 -0700
From: Clifford Buttschardt <cbuttsch@slonet.org>
Subject: are there lists e-mail about SETI ?

Try: http://wbs.net/sara.html

On Thu, 15 Aug 1996, Manuel Duran Vacas wrote:

> Thank you for you read this message
> I am interested in lists e-mail about SETI =BF can you help me?
> Yours Sincerely
>=20
>=20
>=20

Date: Fri, 16 Aug 1996 23:31:08 -0700
From: Eddie Speed <espeed@carmen.murdoch.edu.au>
Subject: dont bother to READ THIS NOW!!!

Another get rich quick scheme.....Hah!!

Date: 14 Aug 1996 04:29:34 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: MIR Repeater

>Forgot to mention: I tried 5 and 10KHZ offsets for Doppler with no luck..

When you were receiving at 10Kkhz offset did you xmit at 10Knz
the other direction from the center freq.

Also I have read you need 50 watts with a 7 element ant.

I have 50 Watts with a 3 element and can't seem to make it.

73

Date: 14 Aug 1996 08:34:58 -0400
From: c002@Lehigh.EDU
Subject: MIR Repeater

>Also I have read you need 50 watts with a 7 element ant.
>
>I have 50 Watts with a 3 element and can't seem to make it.

i have 50w and an 11ele beam :)
the PROBLEM is...i dont know the freq. for the repeater!

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

----

Date: Fri, 16 Aug 1996 11:23:15 -0700
From: steve <kd6fyk@wco.com>
Subject: READ THIS NOW!!!

KEEP THIS CRAP OFF OUR NEWSGROUPS!!!!!!!

Date: Tue, 13 Aug 1996 07:45:43 -0500
From: Craig Nicholson <craign@newnorth.net>
Subject: Sat Rigs

Is there a satellite capable radio out there that tracks doppler and
compensates for it automatically?
--
Craig Nicholson
KW9R

End of Ham-Space Digest V96 #250
****

1586. More newbie help

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: cgreenha@magnus.acs.ohio-state.edu
Message-ID: <cgreenha.589.3218724B@magnus.acs.ohio-state.edu>
Source record: 21709

Hello all.

I would first like to thank all of you who responded to my intitial call for help...it was most appreciated!

However, it seems that all of the UHF freqs that were sent, were unable to transmit from my rig. I have since found out that "multi-mode" rigs are needed for much of the sat bands, so, let me ask my query again, being more specific...

Can I do any sat work with an FM only voice/packet VHF rig (Kenwood 241a), and a FM only voice/packet (9600) UHF rig (Kenwood 451a)? Both can operate simultaneously.

Any comments/recommendations about tracking software are welcomed also.

Thanks much, & take care.

Christopher K. Greenhalgh, N8WCT
Computer/Electronic Tech. II at The Ohio State University
E-Mail: ckg+@osu.edu (cgreenha@magnus.acs.ohio-state.edu)
AX.25 : n8wct@w8cqk.#cmh.oh.usa.noam

1587. JAS-2 INFO 01

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <8137cc$f21f.22c@GRAYLADY>
Source record: 21710

This message was from RGD02520@NIFTYSERVE.OR.JP to RUSS TILLMAN
and was forwarded to you by RUSS TILLMAN

From: JJ1ZUT, JAS-2 Control Station in Tokyo
Date: August 18, 1996, 1330UTC
Subject:JAS-2 Testing

Current PROVISIONAL Keplerian:

JAS-2
1 00000U 99999C 96231.03798611 -.00000037 00000-0 -10627-4 0
9997
2 00000 98.3839 306.3820 0348080 248.3459 228.0273
13.52548600000127

Now JJ1ZUT are conducting testing of sub-systems. Transponders
will be
turned on/off without notice.
JAS-2 is gradually getting to spin up but slowly.
73.

---
* OLXWin 1.00a * Internet: russ.tillman@drig.com

In article <4v8a6g$4gl@dfw-ixnews5.ix.netcom.com>,
hamdan@ix.netcom.com says...
>
>August 18, 1996, 23:49UTC
>
>
>Hello and thanks for reading this message. Does anyone have an
orbital
>element set for JAS-2? I've seen where several stateside hams
have
>already heard its beacon. If anyone has the elements, I would
appreciate
>it if they could either e-mail me (hamdan@ix.netcom.com), or
post them to
>this newsgroup.
>
>See you on the birds! 73's de Bernie, KF0QS
>
>

1588. Re: ORBITAL ELEMENTS FOR JAS-2

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: n1hid@usa1.com
Message-ID: <8137cc$f1e1e.3e7@GRAYLADY>
Source record: 21711

Forwarding message from Fujio Yamashita, JARL;

----- Begin Included Message -----
From:Fujio Yamashita, JARL
Date:August 18, 1996
Subject:JAS-2 Keps

Hello Tak,
JAS-2 seems normal at present. Initial operation is
progressing, to build
up whole system in every pass. Please wait for half a month
until JD
transponder will be ready.
Here I would like to send you PROVISIONAL Keps in two lines
obtained by
analysis with several observation results of Doppler shift of
beacon
frequency and preliminary orbit of rocket.
Using this, antenna and frequency tracking at our station went
good, so
we may open this as provisional Keps, for the time being.
These are:

JAS-2
1 09999U 99999C 96231.03798611 -.00000037 00000-0 -10627-4 0
9997
2 09999 98.3839 306.3820 0348080 248.3459 228.0273
13.52548600000127

Orbit number counts "1" for the first pass of ascending node.

This is for reference, soon we will be able to get NASA two
lines, when
we will open it as before.
I mailed the Keps to Russ Tillman KC5JVB and Paul Williamson
KB5MU.

Thank you for your cooperation.
Best regards and 73, Fujio Yamashita, JARL

----- End Included Message -----

In article <4v8a6g$4gl@dfw-ixnews5.ix.netcom.com>,
hamdan@ix.netcom.com says...
>
>August 18, 1996, 23:49UTC
>

>
>Hello and thanks for reading this message. Does anyone have an
orbital
>element set for JAS-2? I've seen where several stateside hams
have
>already heard its beacon. If anyone has the elements, I would
appreciate
>it if they could either e-mail me (hamdan@ix.netcom.com), or
post them to
>this newsgroup.
>
>See you on the birds! 73's de Bernie, KF0QS
>
>

1589. NORAD Two-Line Orbital Element Sets (TLE854)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4vatkn$quj@blackbird.afit.af.mil>
Source record: 21712

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #854 -
Alouette 1
1 00424U 62049A 96230.00515354 .00000042 00000-0 39013-4 0 2218
2 00424 80.4581 223.7300 0021681 238.6051 121.2967 13.67873845690654
ATS 1
1 02608U 66110A 96226.68293774 -.00000265 00000-0 10000-3 0 9775
2 02608 14.6127 352.2211 0008925 94.8639 265.2947 1.00314453 25449
ATS 3
1 03029U 67111A 96230.36160167 -.00000114 00000-0 10000-3 0 5290
2 03029 14.9157 359.1333 0008703 265.3919 86.3503 1.00273182105378
Starlette
1 07646U 75010A 96230.20981078 -.00000132 00000-0 10963-4 0 9913
2 07646 49.8286 267.9112 0205974 72.0514 290.2715 13.82190893 87405
LAGEOS
1 08820U 76039A 96228.57864950 .00000022 00000-0 00000+0 0 2170
2 08820 109.8509 46.3530 0043717 115.9958 244.5150 6.38664492217620
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96229.54611086 .00000059 00000-0 10000-3 0 7146
2 10061 12.4498 36.4062 0010959 129.0665 181.6914 1.00282343 15045
IUE
1 10637U 78012A 96223.13048291 -.00000312 00000-0 10000-3 0 2685
2 10637 35.8233 82.2496 1373056 58.3375 176.4818 1.00223949 20478
GPS BI-01
1 10684U 78020A 96229.37538950 -.00000039 00000-0 10000-3 0 4660
2 10684 65.0318 22.1294 0062490 160.2628 199.9868 1.98069599120605

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GPS BI-02
1 10893U 78047A 96227.33149686 .00000049 00000-0 10000-3 0 2634
2 10893 63.1358 259.1087 0232456 15.3278 345.4414 2.01627425133987
GOES 3
1 10953U 78062A 96230.39658667 -.00000132 00000-0 10000-3 0 6922
2 10953 11.4440 39.2991 0002193 82.7459 245.4095 1.00269374 19660
SeaSat 1
1 10967U 78064A 96228.90646690 -.00000067 00000-0 22281-4 0 5084
2 10967 107.9897 298.3183 0002190 260.3042 99.7853 14.38117270950031
GPS BI-03
1 11054U 78093A 96231.50455592 .00000054 00000-0 10000-3 0 4228
2 11054 62.8159 258.2928 0047359 181.3643 178.6976 1.93505300129860
Nimbus 7
1 11080U 78098A 96228.64431942 -.00000047 00000-0 -53373-5 0 6077
2 11080 98.9327 87.9732 0009241 163.2531 196.8922 13.83690224899396
GPS BI-04
1 11141U 78112A 96226.35876348 -.00000048 00000-0 10000-3 0 589
2 11141 65.0152 24.7331 0050441 29.0574 331.2342 1.92894497 18987
GPS BI-05
1 11690U 80011A 96229.67497819 -.00000035 00000-0 10000-3 0 518
2 11690 65.3392 23.5444 0144044 189.6093 170.1351 2.00573892135410
GPS BI-06
1 11783U 80032A 96229.31540529 .00000050 00000-0 10000-3 0 1597
2 11783 62.2776 251.6330 0232040 33.8637 327.3727 2.03448207120052
GOES 5
1 12472U 81049A 96224.62847346 .00000071 00000-0 10000-3 0 9443
2 12472 8.2770 49.5936 0007652 47.5192 312.6713 1.00238799 13653
Cosmos 1383
1 13301U 82066A 96230.68746185 -.00000005 00000-0 -23767-4 0 5199
2 13301 82.9320 88.7172 0028982 70.5182 289.9097 13.68075336705782
LandSat 4
1 13367U 82072A 96230.14224257 -.00000012 00000-0 71208-5 0 9858
2 13367 98.0663 279.1917 0006745 320.6908 39.3801 14.57181225749415
DMSP B5D2-1
1 13736U 82118A 96231.54284177 .00000040 00000-0 35357-4 0 665
2 13736 98.6244 58.9239 0007906 202.1760 157.9079 14.25797021709957
IRAS
1 13777U 83004A 96232.07151947 -.00000125 00000-0 -56100-4 0 4054
2 13777 98.9667 56.2358 0011897 282.5906 77.3943 13.99249960362162
Cosmos 1447
1 13916U 83021A 96232.19387697 .00000033 00000-0 19385-4 0 6135
2 13916 82.9458 144.4468 0038062 339.1629 20.7977 13.74342748672393
TDRS 1
1 13969U 83026B 96231.34638435 -.00000297 00000-0 10000-3 0 6196
2 13969 9.0631 43.1265 0002019 73.2146 286.3079 1.00261588 22005
GOES 6
1 14050U 83041A 96231.21631122 -.00000223 00000-0 10000-3 0 5342
2 14050 7.1195 52.9931 0004851 23.6015 244.5636 1.00234578106815
OSCAR 10
1 14129U 83058B 96232.09346529 .00000108 00000-0 10000-3 0 4472
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2 14129 26.0013 193.8906 6029969 41.5791 351.1096 2.05879842 71160
LandSat 5
1 14780U 84021A 96229.72013610 -.00000011 00000-0 78289-5 0 5272
2 14780 98.3247 287.5215 0003513 94.0738 266.0862 14.57056694662773
UoSat 2
1 14781U 84021B 96231.02946730 .00000076 00000-0 20674-4 0 9062
2 14781 97.8038 219.0136 0010701 253.9124 106.0904 14.69472138666738
GPS BI-09
1 15039U 84059A 96230.61468780 -.00000036 00000-0 10000-3 0 4319
2 15039 64.6648 18.9252 0083193 19.7656 340.5565 1.92302307 88617
Cosmos 1574
1 15055U 84062A 96231.23915701 .00000052 00000-0 38755-4 0 8139
2 15055 82.9545 200.1685 0027208 165.3738 194.8225 13.73638327609509
GPS BI-10
1 15271U 84097A 96230.07554104 .00000053 00000-0 10000-3 0 1848
2 15271 62.1682 252.3370 0108479 158.8852 201.6413 1.92618171 846
Cosmos 1602
1 15331U 84105A 96231.52414390 .00000093 00000-0 80077-5 0 4961
2 15331 82.5318 54.6291 0021328 98.8810 261.4815 14.84775228642220
ERBS
1 15354U 84108B 96230.18028068 -.00000231 00000-0 53741-6 0 2099
2 15354 56.9953 134.5317 0004341 53.0450 307.0991 14.94970102645966
NOAA 9
1 15427U 84123A 96232.05363178 .00000044 00000-0 47046-4 0 8107
2 15427 98.9455 297.0047 0015488 131.9569 228.2928 14.13798386602517
GPS BI-11
1 16129U 85093A 96231.60596348 -.00000025 00000-0 10000-3 0 7367
2 16129 65.3423 22.6800 0158107 84.1987 277.6079 1.89368943 23106
Mir
1 16609U 86017A 96232.02615961 .00002228 00000-0 31342-4 0 6275
2 16609 51.6506 167.5155 0011111 73.4512 286.7644 15.61723604599728
SPOT 1
1 16613U 86019A 96231.29487023 -.00000045 00000-0 00000+0 0 9761
2 16613 98.8271 299.2268 0002019 75.3328 284.8072 14.19982155229124
Cosmos 1766
1 16881U 86055A 96229.21112649 .00000135 00000-0 13365-4 0 4101
2 16881 82.5193 114.5006 0020058 133.9240 226.3636 14.83754670542743
EGP
1 16908U 86061A 96229.16688492 -.00000083 00000-0 10000-3 0 1085
2 16908 50.0098 172.6009 0011441 165.7809 194.3350 12.44415115123874
NOAA 10
1 16969U 86073A 96231.97290363 -.00000003 00000-0 16786-4 0 7427
2 16969 98.5244 227.2475 0012986 166.4415 193.7118 14.24998968515547
MOS-1
1 17527U 87018A 96231.74308745 -.00000043 00000-0 00000+0 0 4470
2 17527 98.9325 292.3334 0018896 154.2400 205.9751 14.00417060483742
GOES 7
1 17561U 87022A 96231.36134134 -.00000166 00000-0 10000-3 0 163
2 17561 3.1847 69.0527 0005977 328.9875 324.6118 1.00268608 17929
Kvant-1
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1 17845U 87030A 96230.87433812 .00001720 00000-0 25606-4 0 7192
2 17845 51.6483 173.3231 0011034 67.5948 292.5372 15.61714453533752
DMSP B5D2-3
1 18123U 87053A 96232.00757249 .00000006 00000-0 25224-4 0 5580
2 18123 98.7699 61.2720 0015268 74.6470 285.6388 14.15450065473389
RS-10/11
1 18129U 87054A 96232.11590505 .00000037 00000-0 23682-4 0 2519
2 18129 82.9260 102.0349 0012021 348.1030 11.9843 13.72368334458805
Meteor 2-16
1 18312U 87068A 96231.49046789 .00000004 00000-0 -98606-5 0 5021
2 18312 82.5555 302.6648 0013993 49.4617 310.7756 13.84082681454791
Meteor 2-17
1 18820U 88005A 96231.83133344 .00000034 00000-0 16625-4 0 194
2 18820 82.5403 357.2639 0017960 108.0112 252.3011 13.84760071432194
DMSP B5D2-4
1 18822U 88006A 96231.05334523 .00000014 00000-0 24438-4 0 3230
2 18822 98.3823 60.1624 0005675 174.9538 185.1698 14.23197863443378
Glonass 34
1 19163U 88043A 96231.93811441 .00000014 00000-0 10000-3 0 1020
2 19163 65.2883 83.7225 0009782 164.6454 195.4661 2.13102224 63577
Glonass 36
1 19165U 88043C 96231.99518866 .00000014 00000-0 10000-3 0 5094
2 19165 65.2553 83.6823 0003127 20.3332 339.7209 2.13102081 64197
METEOSAT 3
1 19215U 88051A 96230.42030314 -.00000123 00000-0 10000-3 0 2722
2 19215 3.3908 67.4667 0003056 97.2143 263.1470 0.96948246 17772
AO-13
1 19216U 88051B 96228.19615732 .00017325 90928-6 17749-2 0 2559
2 19216 57.1593 98.1130 7439855 47.7970 354.9981 2.10811720 31081
OKEAN 1
1 19274U 88056A 96230.47387103 .00000212 00000-0 23481-4 0 1116
2 19274 82.5127 214.2221 0018488 287.0170 72.9019 14.82507338438451
Meteor 3-2
1 19336U 88064A 96232.21971790 .00000051 00000-0 10000-3 0 5048
2 19336 82.5409 121.8332 0018058 74.3046 286.0065 13.16978519387777
Glonass 39
1 19503U 88085C 96231.55605933 -.00000034 00000-0 10000-3 0 3978
2 19503 65.5569 322.6116 0005945 159.4559 200.6244 2.13101758 61674
NOAA 11
1 19531U 88089A 96232.03767392 .00000004 00000-0 26985-4 0 6255
2 19531 99.1854 251.7868 0012918 64.7248 295.5264 14.13100451407325
TDRS 2
1 19548U 88091B 96225.68221773 -.00000203 00000-0 10000-3 0 2255
2 19548 2.6058 71.6384 0011191 123.5367 96.8723 1.00268522 16096
Glonass 40
1 19749U 89001A 96225.02387496 .00000010 00000-0 10000-3 0 6140
2 19749 65.2409 83.4782 0006112 251.9995 108.0225 2.13101594 59042
Glonass 41
1 19750U 89001B 96228.36371014 .00000018 00000-0 10000-3 0 5227
2 19750 65.2473 83.4336 0006250 240.3705 119.6595 2.13101806 59138
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GPS BII-01
1 19802U 89013A 96231.96267348 -.00000005 00000-0 00000+0 0 2726
2 19802 55.3637 108.1371 0029204 149.4179 210.7076 2.00550944 54971
Akebono
1 19822U 89016A 96231.68398752 .00006811 00000-0 34488-3 0 7652
2 19822 75.0668 87.6616 3742814 59.0530 332.5300 7.93006570171643
Meteor 2-18
1 19851U 89018A 96228.54432777 .00000048 00000-0 29597-4 0 4999
2 19851 82.5190 233.7437 0013942 162.8578 197.3056 13.84415263377045
MOP-1
1 19876U 89020B 96219.94163620 -.00000165 00000-0 10000-3 0 2077
2 19876 2.0898 71.2527 0018888 289.4719 70.3256 0.97110599 7110
TDRS 3
1 19883U 89021B 96228.37245949 -.00000276 00000-0 00000+0 0 2447
2 19883 0.0689 77.7445 0004834 103.1848 236.2779 1.00271371 27188
GPS BII-02
1 20061U 89044A 96224.32934328 -.00000016 00000-0 10000-3 0 2525
2 20061 54.1665 284.1294 0159635 220.7244 138.1500 2.00562228 52561
Nadezhda 1
1 20103U 89050A 96231.98928274 .00000050 00000-0 37320-4 0 8722
2 20103 82.9550 62.3623 0035974 238.7567 121.0062 13.73869141357308
GPS BII-03
1 20185U 89064A 96228.66907581 -.00000003 00000-0 10000-3 0 3051
2 20185 55.1456 108.7320 0018350 315.7721 44.2347 2.00542468 51223
GMS 4
1 20217U 89070A 96231.47037616 -.00000372 00000-0 10000-3 0 4386
2 20217 1.9159 74.8223 0001052 206.6526 335.1239 1.00265616 26045
INTERCOSMOS 24
1 20261U 89080A 96229.07925194 .00000031 00000-0 91727-5 0 5206
2 20261 82.5915 232.4631 1240277 265.4928 80.3817 12.47344355313375
GPS BII-04
1 20302U 89085A 96231.18213975 .00000049 00000-0 10000-3 0 2680
2 20302 53.2305 223.6361 0033271 187.9389 172.0098 2.00567241 50077
Meteor 3-3
1 20305U 89086A 96231.64058631 .00000044 00000-0 10000-3 0 6275
2 20305 82.5413 81.4089 0005802 141.4329 218.7148 13.04418750326346
COBE
1 20322U 89089A 96231.11678217 .00000087 00000-0 83813-4 0 2363
2 20322 98.9428 245.3232 0008258 221.5646 138.4895 14.03455790345616
Kvant-2
1 20335U 89093A 96230.87433812 .00001720 00000-0 25606-4 0 6662
2 20335 51.6483 173.3231 0011034 67.5948 292.5372 15.61714453382763
GPS BII-05
1 20361U 89097A 96229.70078784 -.00000031 00000-0 10000-3 0 1063
2 20361 56.0513 50.8707 0089035 133.6894 227.0926 2.00565606 39527
COSMOS 2054 (Altair-1)
1 20391U 89101A 96230.59072252 -.00000143 00000-0 00000+0 0 4023
2 20391 3.9703 62.9563 0004835 88.3969 11.0181 1.00267767 24614
SPOT 2
1 20436U 90005A 96231.56747986 -.00000044 00000-0 00000+0 0 1060
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2 20436 98.6952 304.1602 0001407 95.1358 264.9980 14.20044539340697
UO-14
1 20437U 90005B 96231.25650393 -.00000014 00000-0 11352-4 0 2045
2 20437 98.5426 313.1056 0011884 23.2602 336.9117 14.29928151342920
UO-15
1 20438U 90005C 96230.73035048 -.00000032 00000-0 45190-5 0 9991
2 20438 98.5338 310.4176 0010827 30.8171 329.3644 14.29235016342716
PACSAT
1 20439U 90005D 96230.79213536 -.00000004 00000-0 15246-4 0 20
2 20439 98.5571 314.9801 0011795 25.8269 334.3500 14.29981616342875
DO-17
1 20440U 90005E 96228.77931272 -.00000041 00000-0 79011-6 0 24
2 20440 98.5603 313.6721 0012217 30.1838 330.0046 14.30123114342614
WO-18
1 20441U 90005F 96231.21922365 -.00000018 00000-0 99104-5 0 74
2 20441 98.5595 316.0035 0012663 21.8338 338.3374 14.30092965342969
LO-19
1 20442U 90005G 96230.23086623 -.00000020 00000-0 89911-5 0 27
2 20442 98.5608 315.5505 0013168 24.5157 335.6647 14.30202157342847
GPS BII-06
1 20452U 90008A 96229.09664124 .00000006 00000-0 10000-3 0 2050
2 20452 54.0421 164.3136 0060059 89.1372 271.5403 2.00573601 48014
MOS-1B
1 20478U 90013A 96232.22250954 .00000088 00000-0 10000-3 0 9669
2 20478 99.1215 300.9278 0006540 66.7809 293.4027 13.93965670253332
DEBUT
1 20479U 90013B 96228.59710578 -.00000052 00000-0 -41954-4 0 14
2 20479 99.0239 242.3656 0540549 349.3873 9.6180 12.83342715305523
FO-20
1 20480U 90013C 96230.89927490 -.00000066 00000-0 -71697-4 0 8992
2 20480 99.0239 244.0145 0540704 344.7146 13.8191 12.83233904305801
MOS-1B R/B
1 20491U 90013D 96231.18400129 -.00000379 00000-0 -65352-3 0 2689
2 20491 99.0774 311.3136 0470365 149.2486 213.7106 13.02991470309931
LACE
1 20496U 90015A 96229.51956509 .00000349 00000-0 18052-4 0 6773
2 20496 43.1015 218.9312 0009632 80.5827 279.6117 15.35791109363100
Nadezhda 2
1 20508U 90017A 96231.99240018 .00000057 00000-0 44929-4 0 8731
2 20508 82.9537 196.8428 0043745 189.4367 170.5970 13.73510981324512
OKEAN 2
1 20510U 90018A 96229.33777351 .00000097 00000-0 99727-5 0 5193
2 20510 82.5254 169.9280 0020028 116.8496 243.4767 14.78618916348568
GPS BII-07
1 20533U 90025A 96231.49686769 -.00000006 00000-0 00000+0 0 2499
2 20533 54.5119 284.5931 0051148 75.6022 285.0563 2.00570750 46839
PegSat
1 20546U 90028A 96228.79881034 .00004775 00000-0 86287-4 0 9564
2 20546 94.1108 26.2928 0059971 132.6405 227.9926 15.47793201354225
HST
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1 20580U 90037B 96230.49886927 .00000279 00000-0 12409-4 0 8343
2 20580 28.4674 184.4359 0006429 95.0691 265.0624 14.91082994147748
MACSAT 2
1 20608U 90043B 96231.92200364 .00000047 00000-0 52421-5 0 2048
2 20608 89.9293 172.8531 0104015 195.6579 164.1403 14.64934928335479
Glonass 44
1 20619U 90045A 96229.14551095 -.00000038 00000-0 10000-3 0 3185
2 20619 65.1722 321.9092 0025616 204.5183 155.4091 2.13102728 48588
Glonass 45
1 20620U 90045B 96227.38720620 -.00000047 00000-0 10000-3 0 3037
2 20620 65.1585 321.9532 0008678 63.5616 296.5886 2.13102725 48585
Glonass 46
1 20621U 90045C 96231.20889052 -.00000034 00000-0 10000-3 0 9109
2 20621 65.1711 321.8863 0009178 196.5697 163.4670 2.13102289 48662
Kristall
1 20635U 90048A 96230.87433812 .00001720 00000-0 25606-4 0 4586
2 20635 51.6483 173.3231 0011034 67.5948 292.5372 15.61714453353595
ROSAT
1 20638U 90049A 96230.89859808 -.00000232 00000-0 36521-5 0 5857
2 20638 52.9901 21.1482 0010179 317.6874 42.3327 15.07438758341624
Meteor 2-19
1 20670U 90057A 96230.49434611 .00000001 00000-0 -12189-4 0 536
2 20670 82.5441 299.1754 0017160 81.3310 278.9798 13.84127584310220
CRRES
1 20712U 90065A 96231.45821837 .00000461 00000-0 33788-3 0 3112
2 20712 17.5680 225.5565 7199276 64.6734 351.2270 2.35751389 44586
GPS BII-08
1 20724U 90068A 96230.32311705 -.00000003 00000-0 00000+0 0 950
2 20724 54.9882 106.2033 0129173 181.0559 179.0008 2.00564787 42673
Feng Yun1-2
1 20788U 90081A 96231.21180098 .00000053 00000-0 63012-4 0 9964
2 20788 98.8076 234.5456 0016522 326.4482 33.5640 14.01403810304784
Meteor 2-20
1 20826U 90086A 96231.10270039 .00000034 00000-0 17527-4 0 112
2 20826 82.5223 235.0533 0013733 353.2158 6.8813 13.83634976297405
GPS BII-09
1 20830U 90088A 96230.37807070 -.00000031 00000-0 00000+0 0 681
2 20830 55.9678 48.7950 0067895 96.1187 264.6968 2.00566162 43315
GPS BIIA-10
1 20959U 90103A 96231.77354766 -.00000004 00000-0 10000-3 0 477
2 20959 55.1696 108.2082 0110834 235.1196 123.9126 2.00561339 41934
DMSP B5D2-5
1 20978U 90105A 96231.95444725 .00000044 00000-0 31301-4 0 7305
2 20978 98.5943 302.5598 0079288 345.9499 13.9483 14.32670163298702
Glonass 47
1 21006U 90110A 96228.88608612 .00000017 00000-0 10000-3 0 8740
2 21006 65.2124 82.6822 0057294 190.2481 169.7263 2.13102738 44280
Glonass 48
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2 21007 65.2338 82.7831 0034257 175.8428 184.2806 2.13101284 44261
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2 21008 65.2116 82.6385 0009346 273.6731 86.3177 2.13098612 44302
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2 21089 82.9250 143.3447 0031128 60.1879 300.2362 13.74072433277556
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2 21140 0.6671 76.8091 0003285 72.9773 45.6936 1.00266097 22204
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2 21152 82.9235 99.2583 0041631 166.0744 194.1570 13.73536194272371
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2 21216 64.8971 321.4159 0007747 190.0361 170.0027 2.13103436 41802
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1 21217U 91025B 96231.32242967 -.00000034 00000-0 10000-3 0 9314
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1 21218U 91025C 96228.61697596 -.00000040 00000-0 10000-3 0 4058
2 21218 64.8664 321.4092 0007953 337.9570 22.0674 2.13102620 41822
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2 21854 65.1639 82.2920 0016699 21.4833 338.6761 2.13104731 35405
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Glonass 58
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KO-25
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Glonass 64
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STRV-1B
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Nadezhda 4
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Glonass 65
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Glonass 77
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Glonass 78
1 23735U 95068B 96229.13235327 .00000044 00000-0 00000+0 0 1496
2 23735 64.8222 201.8752 0008334 223.7936 136.1187 2.13125445 5246
Glonass 79
1 23736U 95068C 96230.56827404 .00000058 00000-0 00000+0 0 1258
2 23736 64.8127 201.8428 0008191 209.4585 150.4777 2.13102223 5279
XTE
1 23757U 95074A 96231.54274729 .00000479 00000-0 11121-4 0 799
2 23757 22.9880 347.2768 0013685 87.0060 273.1988 14.97678268 34829
1996010D
1 23797U 96010D 96232.22315582 .45253200 25908-4 13457-2 0 2998
2 23797 47.8078 204.9444 1876314 71.5100 308.0094 12.19802249 5271
Soyuz TM-23
1 23798U 96011A 96230.87433812 .00001720 00000-0 25606-4 0 1548
2 23798 51.6483 173.3231 0011034 67.5948 292.5372 15.61714453 27833
Polar
1 23802U 96013A 96230.51131613 .00000100 00000-0 00000+0 0 424
2 23802 86.2203 25.4269 6532875 283.9356 15.6589 1.36677987 2390
1996010E
1 23824U 96010E 96229.49446140 .00003044 00000-0 58935-2 0 922
2 23824 47.6921 236.4345 7280938 42.2377 355.1515 2.21838439 3951
GPS BIIA-25
1 23833U 96019A 96231.22130887 -.00000067 00000-0 00000+0 0 664
2 23833 54.6935 345.5310 0041325 148.2048 212.0692 2.00564638 2925
Priroda
1 23848U 96023A 96230.87433812 .00001720 00000-0 25606-4 0 1075
2 23848 51.6483 173.3231 0011034 67.5948 292.5372 15.61714453 18165
MSX
1 23851U 96024A 96231.88694875 -.00000047 00000-0 00000+0 0 741
2 23851 99.3811 212.4670 0005904 337.4401 22.6489 13.97631925 16255
MSTI 3
1 23868U 96031A 96230.07470641 .00000296 00000-0 77543-5 0 477
2 23868 97.1210 59.4565 0011385 319.1409 40.8985 15.46203899 14228
TOMS-EP
1 23940U 96037A 96231.92123885 .00001164 00000-0 55304-4 0 323
2 23940 97.4332 136.6118 0013700 117.0229 243.2414 15.21135919 7168
GPS BIIA-26
1 23953U 96041A 96230.14075248 -.00000002 00000-0 00000+0 0 255
2 23953 55.0337 105.8413 0025984 9.8165 350.0814 2.00573135 698
UHF F7
1 23967U 96042A 96230.75843510 .00000046 00000-0 00000+0 0 328
2 23967 5.0567 320.8588 0204292 161.6255 305.6509 1.00292720 259
1996042B
1 23968U 96042B 96230.68784052 .00002853 00000-0 11843-2 0 155
2 23968 26.8795 294.8442 6683643 194.0988 129.2787 3.04053718 721
Progress M-32
1 24071U 96043A 96232.02629540 .00000332 00000-0 10000-4 0 271
2 24071 51.6508 167.5220 0012634 65.7136 294.5555 15.61415156 2864
1996043B
```

```
1 24072U 96043B 96216.39484756 .26807532 12838-4 14270-3 0 163
2 24072 51.6265 245.3338 0003417 296.2379 63.8165 16.54813509 420
ITALSAT F2
1 24208U 96044A 96229.84906834 -.00000218 00000-0 00000+0 0 159
2 24208 0.1678 256.0521 0105549 47.1501 28.5181 1.01846012 90
TELECOM 2D
1 24209U 96044B 96225.25625000 -.00000300 00000-0 10000-4 0 107
2 24209 5.4380 117.2355 7294598 180.4085 183.3119 2.27969238 74
1996044C
1 24210U 96044C 96223.93772132 -.00000394 00000-0 10000-4 0 47
2 24210 5.4294 117.8507 7294336 179.2896 182.7981 2.28186586 35
1996044D
1 24211U 96044D 96230.05671995 .00033176 00000-0 48444-2 0 127
2 24211 5.4753 115.0287 7292831 184.6165 159.9967 2.28155870 186
1996045A
1 24273U 96045A 96232.07211475 .00004710 00000-0 21622-1 0 99
2 24273 62.8653 248.0822 7468563 280.1920 10.5792 1.95639968 85
1996045B
1 24274U 96045B 96231.07641075 .00279394 78181-5 38351-3 0 93
2 24274 62.8034 236.9004 0167732 131.2656 230.3283 15.84320817 503
1996045C
1 24275U 96045C 96231.20114732 .00788250 78436-5 53231-3 0 154
2 24275 62.8073 236.3868 0196321 124.1055 237.8890 15.86851817 528
1996045D
1 24276U 96045D 96228.49105257 -.00000565 00000-0 10000-3 0 10
2 24276 62.8022 248.6079 7463214 280.0909 10.6491 1.96747910 10
ADEOS
1 24277U 96046A 96232.23225257 -.00000020 00000-0 10000-4 0 97
2 24277 98.5903 308.2362 0014415 180.6476 179.5683 14.24509085 310
1996046B
1 24278U 96046B 96231.16103203 -.00000038 00000-0 00000+0 0 43
2 24278 98.5753 307.0633 0351098 250.7819 105.5029 13.52623554 156
1996046C
1 24279U 96046C 96230.49531217 -.00000038 00000-0 00000+0 0 38
2 24279 98.7614 306.3949 0300353 242.6661 106.2027 13.46330508 85
Soyuz TM-24
1 24280U 96047A 96232.22687698 .00156187 21979-4 22838-3 0 135
2 24280 51.6471 166.6176 0039038 114.4910 246.0170 16.03153291 278
1996047B
1 24281U 96047B 96232.20652658 .01756704 12084-4 42241-3 0 164
2 24281 51.6244 166.4500 0021026 94.3737 265.9736 16.27991978 273
Zhongxing 7
1 24282U 96048A 96231.77413116 .00031190 00000-0 81522-3 0 37
2 24282 27.2391 120.4067 5641380 178.3842 184.8126 4.68230962 26
1996048B
1 24283U 96048B 96231.98948143 .00005791 -23634-6 10000-3 0 52
2 24283 27.2640 120.1693 5662595 178.7699 183.7750 4.66218024 36
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1590. SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-19 00:00:00 UTC
From: jadams@idirect.com
Message-ID: <4varvc$d4_042@ns.idirect.com>
Source record: 21713
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

```
Electronics Resource Internet Addresses Needed
for Publisher.
==============================================
To all Electronics Companies, Service Person-
nel, Webmasters & Hobbyists,

I am preparing a book tentatively titled "Sam's
Internet Guide to the Electronics Industry", to
be published by Howard W. Sams & Co. and PROMPT
Publications. The book will contain site add-
resses for electronics resources. Companies,
organizations and individual web creators are
encouraged to fill out a simple FORM at the ad-
dress below.
-----------------------------------------------
http://web.idirect.com/~ifx/book/
-----------------------------------------------
In addition, any electronics related addresses
or resources you run into while surfing please
let me know by filling out said form.

If you lack FORMS capability send an email with
the info below. I am especially interested in
sites offering simple electronics repair data,
service specs and hobbyist help-pages. Other
resources are more than welcome. Top Urls will
be printed in this directory and updated in
future issues.
-------------------------------------------------
Name:
Company Name:
Nature of Business:
Address http:
Other Addresses:
FTP Site:
E-mail Contact:
E-mail Main (info):
Webmaster:
Listserv:
How often is your website updated:
What type of information can be found on your
website or special features:
```

Has the WWW helped your business:
Comments:

Send to John Adams -- jadams@idirect.com

If you know of any other Electronics related
links please let me know in an email or a blank
form.

Thank you in advance. John Adams -- Author

John J. Adams | "Forever Learning" |
Author | "Forever Questioning" |
Web Designer | "Forever Creating" |

------------jadams@idirect.com------------

INFINET-FX @ http://web.idirect.com/~ifx/

1591. Re: interferometers?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: kmec@aol.com
Message-ID: <4vbenp$jas@newsbf02.news.aol.com>
Source record: 21714

In answer to your question about interferometer systems made out of old sat equipment/dishes. Been done and works for radio astronomy. Excellent material on topic available from Jeff Lichtman, Radio Astronomy Supplies 190 Jade Cove Drive, Roswell, GA 30075, (404)-992-4959. Good books by W. Lonc and Bob Sickels.

I am a member of SARA (Society of Amateur Radio Astronomers). Jeff Lichtman helped found this group years ago. Many have done neat stuff. Why re-invent the wheel. Have fun.

73's

Jeff Kruth, WA3ZKR

1592. Mir image

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: a37s0112@orchid.au.ac.th
Message-ID: <4vb8to$fgg@news.bu.ac.th>
Source record: 21715

hi all my friends,
Any body know how can I get mir images from which web site?
I need image file of mir station for my article.Someone can
help me?
thank you
HS2JFW , Joe

1593. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199608200855.BAA18197@UCSD.EDU>
Source record: 21716

```
From smtp Sat Aug 17 07:42 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sat, 17 Aug 96 07:42 PDT
Received: by mail.ucsd.edu; id EAA03674
sendmail 8.6.12/UCSD-2.2-sun
Sat, 17 Aug 1996 04:30:35 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA03659
sendmail 8.6.12/UCSD-2.2-sun
Sat, 17 Aug 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 3700
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199608171130.EAA03659@mail.ucsd.edu>
Date: Sat, 17 Aug 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #250
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sat, 17 Aug 96 Volume 96 : Issue 250

Today's Topics:
2M lowcost aerial for receiving only
are there lists e-mail about SETI ?
dont bother to READ THIS NOW!!!
MIR Repeater (2 msgs)
READ THIS NOW!!!
Sat Rigs

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 15 Aug 1996 12:12:22 GMT
From: "Darin Quick" <quicky@vicnet.net.au>
```

Subject: 2M lowcost aerial for receiving only

I'm interested in the Telemerity from the Oscar series of satellites and
was courious if there was any aerials that were cheep to make that didnt
require constant moving to chase the satellite.

Darin

Date: Fri, 16 Aug 1996 13:19:18 -0700
From: Clifford Buttschardt <cbuttsch@slonet.org>
Subject: are there lists e-mail about SETI ?

Try: http://wbs.net/sara.html

On Thu, 15 Aug 1996, Manuel Duran Vacas wrote:

> Thank you for you read this message
> I am interested in lists e-mail about SETI =BF can you help me?
> Yours Sincerely
>=20
>=20
>=20

Date: Fri, 16 Aug 1996 23:31:08 -0700
From: Eddie Speed <espeed@carmen.murdoch.edu.au>
Subject: dont bother to READ THIS NOW!!!

Another get rich quick scheme.....Hah!!

Date: 14 Aug 1996 04:29:34 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: MIR Repeater

>Forgot to mention: I tried 5 and 10KHZ offsets for Doppler with no luck..

When you were receiving at 10Kkhz offset did you xmit at 10Knz
the other direction from the center freq.

Also I have read you need 50 watts with a 7 element ant.

I have 50 Watts with a 3 element and can't seem to make it.

73

Date: 14 Aug 1996 08:34:58 -0400
From: c002@Lehigh.EDU
Subject: MIR Repeater

>Also I have read you need 50 watts with a 7 element ant.
>
>I have 50 Watts with a 3 element and can't seem to make it.

i have 50w and an 11ele beam :)
the PROBLEM is...i dont know the freq. for the repeater!

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

----

Date: Fri, 16 Aug 1996 11:23:15 -0700
From: steve <kd6fyk@wco.com>
Subject: READ THIS NOW!!!

KEEP THIS CRAP OFF OUR NEWSGROUPS!!!!!!!

Date: Tue, 13 Aug 1996 07:45:43 -0500
From: Craig Nicholson <craign@newnorth.net>
Subject: Sat Rigs

Is there a satellite capable radio out there that tracks doppler and
compensates for it automatically?
--
Craig Nicholson
KW9R

End of Ham-Space Digest V96 #250
****

1594. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199608200856.BAA18223@UCSD.EDU>
Source record: 21717

```
From smtp Sun Aug 18 07:54 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sun, 18 Aug 96 07:54 PDT
Received: by mail.ucsd.edu; id EAA27002
sendmail 8.6.12/UCSD-2.2-sun
Sun, 18 Aug 1996 04:30:35 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26985
sendmail 8.6.12/UCSD-2.2-sun
Sun, 18 Aug 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 9675
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199608181130.EAA26985@mail.ucsd.edu>
Date: Sun, 18 Aug 96 04:30:31 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #251
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sun, 18 Aug 96 Volume 96 : Issue 251

Today's Topics:
ARLK058 Keplerian data
ARLS011 JAS-2 In Orbit
JAS-II Launched and Heard in Iowa
MIR Repeater (4 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 17 Aug 1996 15:55:59 -0400
From: w1aw@arrl.org
Subject: ARLK058 Keplerian data
```

SB KEP @ ARL $ARLK058
ARLK058 Keplerian data

ZCZC SK58
QST de W1AW
Keplerian Bulletin 58 ARLK058

Date: 17 Aug 1996 15:46:03 -0400
From: w1aw@arrl.org
Subject: ARLS011 JAS-2 In Orbit

SB SPACE @ ARL $ARLS011
ARLS011 JAS-2 In Orbit

ZCZC AS19
QST de W1AW
Space Bulletin 011 ARLS011

Date: Sat, 17 Aug 1996 10:57:35 -0700
From: "Ralph Wallio, W0RPK" <wallio@dsmnet.com>
Subject: JAS-II Launched and Heard in Iowa

Info from numerous sources indicates a successful launch of JAS-II.
CW telemetry was heard this morning in Iowa on 435.795MHz (+/- doppler)
with a TCA (Time of Closest Approach) of 1610Z. Please post observation
data and elements when they are available. 73, Ralph

Date: 16 Aug 1996 11:03:05 GMT
From: Bob Winingham <kc5ejk@onramp.net>
Subject: MIR Repeater

437.950 down
435.750 up

pl 141.3

Voice messages on 437.925

I use split mode with several memory settings to do doppler correction.

Date: 15 Aug 1996 23:06:45 GMT
From: ydtlzmj@news.atglab.bls.combst.bls.com (Victor Gregg)
Subject: MIR Repeater

: : i have 50w and an 11ele beam :)
: : the PROBLEM is...i dont know the freq. for the repeater!
: :
: : David
:

: I don't have the power or the beam, but I do have the freqs:

Ok, lets try that again, but this time with the brain engaged:

Uplink: 435.750
Downlink: 437.950

Doppler +- 10 Khz

CTCSS: 141.3

73s, KF4BUX

Date: Sat, 17 Aug 1996 10:34:19 GMT
From: n1hid@usa1.com (n1hid@usa1.com)
Subject: MIR Repeater

In article <3214C9C8.5957@ix.netcom.com>, melmark@ix.netcom.com
says...
>
>Has the repeater been turned off?
>
>I have made several QSO's via the MIR repeater. It doesn't seem
to be on
>anymore when I listen. Do they have a schedule of activity for
the
>repeater?
>
>I hear the beacon messages on 435.725 +/- doppler OK
(announcing the new
>crew as of Monday) and I hear a Russian signing RR0DL CQ.
Haven't been
>able to raise him or hear him come back to anyone else. Has
anyone made
>a two way on the QSO channel?
>
>Perhaps the repeater will come back after the crew exchange.
>
>Mel, K2JWD
>
The Space Station MIR is in qso mode on 437.925 with a recording
message......

Rick N1HID

Date: Sat, 17 Aug 1996 18:11:08 -0700
From: steve <kd6fyk@wco.com>
Subject: MIR Repeater

Bob Winingham wrote:
>
> 437.950 down
> 435.750 up
>
> pl 141.3
>
> Voice messages on 437.925
>
> I use split mode with several memory settings to do doppler correction.

One post said ctcss 141.3 and one post said pl 141.3 .which is it?
thanks 73 steve

Date: (null)
From: (null)

SB KEP ARL ARLK058
ARLK058 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96229.14663346 .00002373 00000-0 32999-4 0 06533
2 16609 51.6475 182.0269 0011220 64.3828 295.8326 15.61710203599270
AO-10
1 14129U 83058B 96226.26539988 -.00000182 00000-0 10000-3 0 4469
2 14129 26.0187 194.8640 6028317 39.9473 351.5269 2.05882799 71040
RS-10/11
1 18129U 87054A 96229.19960023 .00000037 00000-0 23938-4 0 2490
2 18129 82.9264 104.1915 0012255 355.6177 4.4868 13.72368266458409
UO-11
1 14781U 84021B 96228.98668186 .00000036 00000-0 13901-4 0 09149
2 14781 97.8038 217.0611 0010631 259.4583 100.5423 14.69471425666436
RS-12/13
1 21089U 91007A 96228.82374658 .00000071 00000-0 58506-4 0 09252
2 21089 82.9241 145.1234 0030866 65.6123 294.8247 13.74072641277225
AO-13
1 19216U 88051B 96228.19615732 .00017325 90928-6 17749-2 0 02560
2 19216 57.1593 98.1130 7439855 47.7970 354.9981 2.10811720031081
UO-14
1 20437U 90005B 96229.15729951 -.00000049 00000-0 -23180-5 0 02129
2 20437 98.5427 311.0462 0011772 29.0536 331.1302 14.29927731342628
RS-15
1 23439U 94085A 96229.14430637 -.00000039 00000-0 10000-3 0 01712

```
2 23439 64.8185 286.1235 0159356 188.5391 171.2809 11.27528445067545
AO-16
1 20439U 90005D 96229.18280538 -.00000001 00000-0 16399-4 0 00147
2 20439 98.5572 313.3986 0011835 30.1339 330.0524 14.29981561342648
DO-17
1 20440U 90005E 96229.05916848 -.00000051 00000-0 -27249-5 0 00036
2 20440 98.5604 313.9474 0012196 29.5244 330.6616 14.30123018342658
WO-18
1 20441U 90005F 96228.77043472 -.00000020 00000-0 89314-5 0 00169
2 20441 98.5598 313.5964 0012716 29.4014 330.7881 14.30092799342615
LO-19
1 20442U 90005G 96229.18146520 -.00000006 00000-0 14565-4 0 00185
2 20442 98.5606 314.5178 0013219 27.5751 332.6131 14.30202266342699
FO-20
1 20480U 90013C 96229.02817351 -.00000036 00000-0 -43935-5 0 09116
2 20480 99.0238 242.4996 0540733 348.9567 10.0010 12.83234340305568
AO-21
1 21087U 91006A 96229.13444933 .00000094 00000-0 82657-4 0 07413
2 21087 82.9396 277.3378 0037053 40.3205 320.0687 13.74570656278249
UO-22
1 21575U 91050B 96229.20920567 .00000019 00000-0 20524-4 0 7089
2 21575 98.3471 293.7979 0008544 84.2000 276.0159 14.37032578266683
KO-23
1 22077U 92052B 96229.04167556 -.00000037 00000-0 10000-3 0 5988
2 22077 66.0837 64.1425 0014542 282.7839 77.1555 12.86297311188509
KO-25
1 22828U 93061F 96229.16608400 .00000030 00000-0 29410-4 0 04846
2 22828 98.5756 303.8694 0011331 40.6657 319.5365 14.28148831118679
IO-26
1 22826U 93061D 96229.12907384 .00000000 00000-0 17693-4 0 05054
2 22826 98.5784 303.7683 0010164 55.6562 304.5590 14.27809987150551
AO-27
1 22825U 93061C 96229.13731990 -.00000103 00000-0 -24148-4 0 05006
2 22825 98.5763 303.5957 0009671 55.3197 304.8900 14.27700403150541
PO-28
1 22829U 93061G 96229.18351492 -.00000025 00000-0 72218-5 0 04890
2 22829 98.5744 303.9464 0010976 43.3917 316.8140 14.28129849150592

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
August 20, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)

SB SPACE ARL ARLS011
ARLS011 JAS-2 In Orbit
```

JAS-2, the first Amateur Radio satellite launched in 1996, is in orbit. Early Saturday morning, August 17 (UTC), an H-2 rocket blasted off from Japan's Tanegashima Island space center carrying the JAS-2 Amateur Radio satellite. The satellite was successfully deployed in orbit 38 minutes later.

JAS-2 is similar to OSCAR 20, although it offers some interesting twists. As soon as testing is completed and the satellite is open for general use (approximately three days), hams will have access to an easy-to-use packet BBS. Unlike most digital satellites which function as file servers and require specialized ground station software, JAS-2 provides a BBS that operates much like a terrestrial system. The only software required is a terminal program to ''talk'' to your TNC. Connecting to the BBS is as simple as sending a connect request to 8J1JCS.

Hams who own PSK TNCs can connect to JAS-2 at 1200 baud. But unlike OSCAR 20, JAS-2 can handle 9600-baud FM FSK as well.

A digital voice-storage unit (called the ''Digitalker'') will be used to transmit announcements, bulletins on the condition of the satellite and so on. It's similar to the unit presently being heard from the Mir space station.

JAS-2 also features a linear transponder for SSB and CW communication. At this time there has been no word from the Japan Amateur Radio League concerning an operating schedule for the transponder vs the BBS. The satellite has also not yet received its OSCAR designation.

Congratulations to JARL and JAMSAT on the successful launch of JAS-2. And many thanks to Kazu Sakamoto, JJ1WTK, and Fujio Yamashita, JS1UKR, for keeping ARRL HQ informed throughout the project.

JAS-2 Frequencies

Uplink (MHz) Downlink (MHz) Mode

145.85 435.910 1200-baud PSK
145.89
145.91

145.87 435.910 9600-baud FM FSK

--- 435.795 CW telemetry
(12 WPM)

--- 435.910 Digitalker

145.90--146.00 435.80--435.90 Analog linear transponder
(SSB
and CW)
NNNN
/EX

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End of Ham-Space Digest V96 #251
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1595. Navstar GPS Constellation Status (96-08-19)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: "Richard B. Langley" <lang@unb.ca>
Message-ID: <4vc9gf$at4@sol.sun.csd.unb.ca>
Source record: 21718
Cross-posted to: sci.geo.satellite-nav,sci.electronics,sci.engr.surveying,comp.infosystems.gis,rec.aviation.misc,rec.boats.electronics,rec.radio.amateur.space

```
Navstar GPS Constellation Status
(96-08-19)

Blk NORAD Orbit Launch
II PRN Internat. Catalog Plane Date
Seq SVN Code ID Number Pos'n (UT) Clock Available/Decommissioned
-------------------------------------------------------------------------------
Block I
01 04 1978-020A 10684 78-02-22 78-03-29 85-07-17
02 07 1978-047A 10893 78-05-13 78-07-14 81-07-16
03 06 1978-093A 11054 78-10-06 78-11-13 92-05-18
04 08 1978-112A 11141 78-12-10 79-01-08 89-10-14
05 05 1980-011A 11690 80-02-09 80-02-27 83-11-28
06 09 1980-032A 11783 80-04-26 80-05-16 91-03-06
07 81-12-18 Launch failure
08 11 1983-072A 14189 83-07-14 83-08-10 93-05-04
09 13 1984-059A 15039 84-06-13 84-07-19 94-06-20
10 12 1984-097A 15271 84-09-08 84-10-03 95-11-18
11 03 1985-093A 16129 85-10-09 85-10-30 94-04-13

Block II
II-1 14 14 1989-013A 19802 E-1 89-02-14 Cs 89-04-15 05:02 UT
II-2 13 02 1989-044A 20061 B-3 89-06-10 Cs 89-08-10 20:46 UT
II-3 16 16 1989-064A 20185 E-5 89-08-18 Cs 89-10-14 20:21 UT
II-4 19 19 1989-085A 20302 A-4 89-10-21 Rb 89-11-23 03:13 UT
II-5 17 17 1989-097A 20361 D-3 89-12-11 Cs 90-01-06 03:30 UT
II-6 18 18 1990-008A 20452 F-3 90-01-24 Cs 90-02-14 22:26 UT
II-7 20 20 1990-025A 20533 90-03-26 90-04-18 96-05-10
II-8 21 21 1990-068A 20724 E-2 90-08-02 Cs 90-08-22 15:00 UT
II-9 15 15 1990-088A 20830 D-2 90-10-01 Cs 90-10-15 00:39 UT

Block IIA
II-10 23 23 1990-103A 20959 E-4 90-11-26 Cs 90-12-10 23:45 UT
II-11 24 24 1991-047A 21552 D-1 91-07-04 Rb 91-08-30 04:44 UT
II-12 25 25 1992-009A 21890 A-2 92-02-23 Cs 92-03-24 11:00 UT
II-13 28 28 1992-019A 21930 C-5 92-04-10 Cs 92-04-25 20:32 UT
II-14 26 26 1992-039A 22014 F-2 92-07-07 Cs 92-07-23 19:43 UT
II-15 27 27 1992-058A 22108 A-3 92-09-09 Cs 92-09-30 20:08 UT
II-16 32 01 1992-079A 22231 F-1 92-11-22 Rb 92-12-11 14:49 UT
II-17 29 29 1992-089A 22275 F-4 92-12-18 Cs 93-01-05 16:39 UT
II-18 22 22 1993-007A 22446 B-1 93-02-03 Cs 93-04-04 05:20 UT
II-19 31 31 1993-017A 22581 C-3 93-03-30 Rb 93-04-13 20:53 UT
II-20 37 07 1993-032A 22657 C-4 93-05-13 Cs 93-06-12 16:15 UT
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II-21 39 09 1993-042A 22700 A-1 93-06-26 Cs 93-07-20 12:54 UT
II-22 35 05 1993-054A 22779 B-4 93-08-30 Cs 93-09-28 19:29 UT
II-23 34 04 1993-068A 22877 D-4 93-10-26 Cs 93-11-22 18:20 UT
II-24 36 06 1994-016A 23027 C-1 94-03-10 Cs 94-03-28 14:20 UT
II-25 33 03 1996-019A 23833 C-2 96-03-28 Cs 96-04-09 21:17 UT
II-26 40 10 1996-041A 23953 E-3 96-07-16 96-08-15 15:05 UT
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Notes
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1. NORAD Catalog Number is also known as U.S. Space Command (USSPACECOM) object number and NASA catalog number.
2. No orbital plane position = satellite no longer operational.
3. Clock: Rb = Rubidium; Cs = Cesium.
4. Selective Availability (S/A) had been enabled on Block II satellites during part of 1990; S/A off between about 10 August 1990 and 1 July 1991 due to Gulf crisis; standard level re-implemented on 15 November 1991; occasionally off for test and other purposes. Currently, PRN15 and PRN28 appear to have little or no S/A imposed.
5. Anti-spoofing (A-S) was activated on 94-01-31 at 00:00 UT on all Block II satellites (ref. NANU 050-94042); occasionally off for test and other purposes. A-S was turned off on all satellites at 20:00 UT on 95-04-19 and back on on 95-05-10; off again between 95-06-19 and 95-07-10; and between 95-10-10 and 95-10-31. A-S has been off on PRN28 since 95-02-21.
6. PRN number of SVN32 was changed from 32 to 01 on 93-01-28.
7. PRN05 and PRN06 are equipped with corner-cube reflectors for satellite laser ranging (SLR). SLR tracking of the satellites will permit onboard clock errors and satellite ephemeris errors in GPS tracking to be differentiated.
8. The decommissioning date for PRN06/SVN03 is the date of termination of operations of this satellite (ref. USNO) and is about 3 weeks later than other published dates for "deactivation".
9. PRN10 (SVN40) was launched on 96-07-16 at 00:50 UT. It achieved initial usable status on 96-08-15 at 15:05 UT (ref. NANUs 120-96204,133-96228).
10. PRN16 will be moved from the E-3 slot to the E-5 slot to make room for PRN10. An orbit maneouvre was carried out on 96-08-19 (ref. NANUs 120-96204, 137-96232).
11. PRN20 hs been unusable since 15:18 UT on 96-05-10 and will not return to service (ref. NANU 118-96204). Alamanc data was still being produced into GPS Week 867 although the satellite was marked unhealthy. Not previously reported in this table was a clock change from Rb to Cs on 96-01-13.
12. PRN28 is in the process of being moved from the C-2 slot to the C-5 slot, about 40 degrees away. This move, which was initiated on 96-03-06 by lowering the orbit of PRN28 by about 6 km, made way for PRN03. PRN03 is a backup for PRN28 which has some undisclosed equipment problem. PRN28 will remain on the air, with some subsystems shut down to conserve power (ref. NANUs 045-96066, NANU 068-96100, and GPS World Newsletter). The move should be completed on 96-08-23 (ref. NANU 127-96236).
13. Announced date of next scheduled launch: 96-09-12.
14. Compiled by Richard B. Langley, Dept. of Geodesy and Geomatics Engineering,

University of New Brunswick.

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Fredericton, N.B., Canada E3B 5A3 Telex: 014-46202
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1596. Cloning cellular

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: philbada@aol.com
Message-ID: <4vdul7$ke1@newsbf02.news.aol.com>
Source record: 21719

How in the heck did these criminals clone my cellular phone last week???
Any electronics whizzes out there want to enlighten me... I am guessing
some form of frequency counter???

Phil
N8QDK

1597. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: pip@shore.net
Message-ID: <4vcg3p$6a7@shore.shore.net>
Source record: 21720
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In article <4varvc$d4_042@ns.idirect.com>, jadams@idirect.com says...

>I am preparing a book tentatively titled "Sam's
>Internet Guide to the Electronics Industry",

Um, this is yesterday's solution. Back in the dark ages of the internet (18 months ago) I used to use a book called the internet yellow pages. With the advent of the search engine (Alta vista, Lycos, Deja News etc...) it is easier and quicker to do an online search.

Good luck, I think you will need it.

--
Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber

1598. ARLK059 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk059.1996@arrl.org>
Source record: 21721
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK059
ARLK059 Keplerian data

ZCZC SK59
QST de W1AW
Keplerian Bulletin 59 ARLK059
From ARRL Headquarters
Newington, CT August 20, 1996
To all radio amateurs

SB KEP ARL ARLK059
ARLK059 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96233.56187951 .00029736 00000-0 34090-3 0 6318
2 16609 51.6486 159.7781 0010943 80.8907 279.3320 15.61768593599966
AO-10
1 14129U 83058B 96233.06484831 .00000158 00000-0 10000-3 0 04485
2 14129 26.0004 193.7297 6030338 41.8453 351.0662 2.05879692071185
RS-10/11
1 18129U 87054A 96233.13661153 .00000044 00000-0 32254-4 0 2524
2 18129 82.9259 101.2803 0011906 345.5801 14.5013 13.72368434458941
UO-11
1 14781U 84021B 96233.00415971 .00000073 00000-0 20185-4 0 09165
2 14781 97.8040 220.9015 0010713 248.0358 111.9710 14.69472590667020
RS-12/13
1 21089U 91007A 96231.80925366 .00000036 00000-0 22075-4 0 09143
2 21089 82.9250 142.9129 0031133 58.5941 301.8252 13.74072422277637
AO-13
1 19216U 88051B 96228.19615732 .00017325 90928-6 17749-2 0 02560
2 19216 57.1593 98.1130 7439855 47.7970 354.9981 2.10811720031081
UO-14
1 20437U 90005B 96232.09618537 -.00000021 00000-0 84599-5 0 02088
2 20437 98.5426 313.9292 0011778 21.5453 338.6203 14.29928135343048
RS-15
1 23439U 94085A 96231.62772974 -.00000039 00000-0 10000-3 0 01643
2 23439 64.8177 282.1073 0159171 188.1101 171.7243 11.27528383067821
```

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AO-16
1 20439U 90005D 96231.77172761 -.00000008 00000-0 13741-4 0 00070
2 20439 98.5572 315.9437 0011807 23.2572 336.9143 14.29981601343017
DO-17
1 20440U 90005E 96233.25700259 -.00000005 00000-0 14830-4 0 39
2 20440 98.5570 318.0722 0012017 18.2377 341.9231 14.30123816343257
WO-18
1 20441U 90005F 96231.77894694 -.00000011 00000-0 12454-4 0 00107
2 20441 98.5595 316.5539 0012662 20.2987 339.8697 14.30093055343040
LO-19
1 20442U 90005G 96231.76998627 .00000021 00000-0 24865-4 0 00107
2 20442 98.5612 317.0657 0013162 20.0787 340.0910 14.30202688343068
FO-20
1 20480U 90013C 96232.06871135 -.00000025 00000-0 20835-4 0 09079
2 20480 99.0234 244.9603 0540684 342.0722 16.1943 12.83234314305955
AO-21
1 21087U 91006A 96232.11887227 .00000094 00000-0 82657-4 0 07412
2 21087 82.9395 275.1289 0037030 32.4516 327.8905 13.74570748278652
UO-22
1 21575U 91050B 96232.13358624 .00000017 00000-0 19830-4 0 07215
2 21575 98.3466 296.6327 0008590 75.5162 284.6981 14.37032956267105
KO-23
1 22077U 92052B 96233.55119319 -.00000037 00000-0 10000-3 0 5994
2 22077 66.0843 54.7008 0014564 281.3846 78.5535 12.86297592189083
KO-25
1 22828U 93061F 96232.10863001 -.00000033 00000-0 40058-5 0 04772
2 22828 98.5742 306.7555 0011247 33.6070 326.5824 14.28148536119096
IO-26
1 22826U 93061D 96232.07231540 .00000022 00000-0 26449-4 0 04968
2 22826 98.5782 306.6577 0010183 47.4758 312.7283 14.27810546150979
AO-27
1 22825U 93061C 96232.15086663 -.00000046 00000-0 -12346-5 0 04960
2 22825 98.5774 306.5526 0009602 46.8768 313.3165 14.27701424150970
PO-28
1 22829U 93061G 96231.70572829 -.00000011 00000-0 12960-4 0 05017
2 22829 98.5744 306.4227 0010968 36.5023 323.6896 14.28130156150957

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
August 24, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1599. updated TLE's for JAS-2

Newsgroup: rec.radio.amateur.space
Date: 1996-08-20 00:00:00 UTC
From: Charlie Panek <charlier@lsid.hp.com>
Message-ID: <321A42E2.2581@lsid.hp.com>
Source record: 21722

In looking at the latest TLEs from archive.afit.af.mil, it looks like
NORAD has some tles for JAS-2. ADEOS is listed as object 96046A, and
from browsing the JAS-2 web site, I know that JAS-2 was launched along with
ADEOS. There are also items 96046B and 96046C. 96046C seems to be nearby
ADEOS (spent booster?), but 96046B seems to have elements very near the
preliminary elements previously posted here for JAS-2.

In any event here they are:

1996045B
1 24274U 96045B 96231.07641075 .00279394 78181-5 38351-3 0 93
2 24274 62.8034 236.9004 0167732 131.2656 230.3283 15.84320817 503

BTW, I tried listening for it last night, based on those preliminary
elements, but only heard FO-20, which also happened to be above the
horizon at the same time. (FO-20 has 3 digit telemetry numbers, as
opposed to JAS-2, which has only 2 hex digits.) Of course my antenna
(a whip) is not the greatest, and it was only a 20degree elevation pass...

--
Charlie Panek KX7L Hewlett Packard Company
charlier@lsid.hp.com Lake Stevens Division
Everett, Washington

1600. Re: are there lists e-mail about SETI ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-21 00:00:00 UTC
From: "Tom Clark (W3IWI)" <clark@tomcat.gsfc.nasa.gov>
Message-ID: <321A88BA.1029@tomcat.gsfc.nasa.gov>
Source record: 21723

Manuel Duran Vacas wrote:
>
> Thank you for you read this message
> I am interested in lists e-mail about SETI ï¿½ can you help me?
> Yours Sincerely

A few web sites to visit:

http://www.nitehawk.com/rasmit/

http://www.seti-inst.edu/

http://seti1.setileague.org/

Regards, Tom Clark

1601. Re: 2M lowcost aerial for receiving only

Newsgroup: rec.radio.amateur.space
Date: 1996-08-21 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <321A9788.2FE8@isocor.com>
Source record: 21724

Darin Quick wrote:
>
> I'm interested in the Telemerity from the Oscar series of satellites and
> was courious if there was any aerials that were cheep to make that didnt
> require constant moving to chase the satellite.
>
> Darin

For LEO satellites with CW or PSK downlinks, like RS-10, RS-12, AO-16 or LO-19, you can use a simple groundplane antenna. See www.amsat.org for frequencies and other info.

73,

John, KD6OZH

1602. Balloon Flight!

Newsgroup: rec.radio.amateur.space
Date: 1996-08-21 00:00:00 UTC
From: mai@iquest.net
Message-ID: <4vfq61$34o_018@news.iquest.net>
Source record: 21725

IT'S ANOTHER WINDTRAX
AMATEUR RADIO BALLOON FLIGHT!

All are welcome to participate and join in the fun!
We expect this to be another successful ATV, Repeater,
and GPS/packet flight of approximately 2-3 hours duration,
and the pre-flight and post-flight nets will extend the fun.
Join us!

DATE: August 24, 1996
TIME: 1200-1300 UTC (0700-0800 Indiana time) Wx dependent
LAUNCH SITE: Purdue University Airport, Lafayette, IN.

Prelaunch Freq's: HF check-in @ 3.869-3.871MHz
2 meter locals 147.135/R (W9YB)
Nets will begin at 1130 UTC

Flight Package's:
Crossband repeater provided by W9DUU, Paul
2m rcvr to 6m & 70cm xmtrs, with voice ID
Using half-wave antennas and 100mW.

GPS/Packet system provided by WB9QPG, Dave
Garmin GPS rcvr, controlled by MIM packet & downlinked to 145.79MHz xmtr, lithum powered.
1/4 wave antenna, 100mW output.

ATV package by KT9V, Terry
Contains two B&W CCD camera's & a WB8ELK color
video graphics card. Downlinked on Wyman ATV xmtr via 1/4 wave antenna. Lithum powered, the
cameras are aimed horz. and vert, with controlled switching.

Flight Freq's:
Crossband Repeater Dwn 52.525 & 444.85MHz
(50mW & 100mW) Up 144.3MHz
GPS/Packet: Dwn 145.79MHz @ 1200 Baud,(VP) 100mW out
ATV: Dwn 439.25MHz (VP) 1.5 watts output

Balloon Type: Kaymont 1200 Gr.
Parachute: Custom made by KB9BSV, Barb, is 5' in diameter

We welcome your email notes regarding your reception!

1603. Beat the pile-ups>>Cyberscheds now Available @ sarrio.com

Newsgroup: rec.radio.amateur.space
Date: 1996-08-21 00:00:00 UTC
From: wb6siv@cyberg8t.com
Message-ID: <wb6siv-2108961514540001@host22.cyberg8t.com>
Source record: 21726

This is a new use of the WWW that can benefit ham radio operators throughout the world.

You can now schedule contacts with hams all over the world simply and easily by using the WWW and e-mail.I have set aside a section of my web site for hams to post their request for over-the-air schedules. Included in the posting is a place to list the posters specific ham radio contact needs (countries, zones,IOTA, grid squares, LEO's ect...). The postings will also include an e-mail link that will allow hams that read the posts, to easily request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted.

Visit http://www.sarrio.com and participate in your first cybersched.
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

1604. LOOKING FOR CW CONTACTS ON JAS-2

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <4vgn7s$4j3@sjx-ixn3.ix.netcom.com>
Source record: 21727

August 22, 1996, at 4:15 UTC

Hello and thanks for reading this. I have suceeded in getting a set of provisional elements for JAS-2 (see the latest issue of Spacenews). Last night, I copied the CW beacon at 435.795 MHZ. Tonight, on the local AMSAT net in Denver, I heard that the transponder was open. At 3:48 UTC, I tuned in and heard a couple of SSB stations. I listened for CW stations and heard none. I called CQ a number of times and heard absolutely nothing.

I'll be on tomorrow night at 4:38 UTC when JAS-2 makes another pass over my QTH (Denver, CO., grid: DM-79). If you are into satellite CW contacts, get on the air! I'd like to make my first JAS-2 QSO before the orbit number gets into three figures!

73's de Bernie, KF0QS

hamdan@ix.netcom.com

1605. Re: Cloning cellular

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: Eddie Speed <espeed@carmen.murdoch.edu.au>
Message-ID: <321C185F.1864@carmen.murdoch.edu.au>
Source record: 21728

Your AMPS phone will send the ESN and Mobile Ph no on
the reverse Forward control channel (FCC)of the local cell
site(around 825MHz), the signal can be recieved and decoded if the
monitoring radio is in range.

Most people are changing over to GSM digital phones over here
this fixes the hacker problem.

Eddie vk6ked

1606. fones

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: clarence@baynet.co.uk
Message-ID: <4vh6tm$7br@vulcan.baynet.co.uk>
Source record: 21729

taking offers on the following
today i have
200 bt amber
340 motorola tac/flips/no-flip
250 p100
250 nec p3
150 panasonic f1
1000 alcatel hb100/200 hands free kits new+boxed
1000 bt amber hands free kits new+boxed
500 nec p100 hands free kits new+boxed
old bt ivory,s/ batteries/chargers
second hand bt pagers

note phones do not have batteries or chargers
--
matt

--
matt
email or tel 0973 664224
clarence@baynet.co.uk

1607. Re: Cloning cellular

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: glittle@awod.com
Message-ID: <4vghqd$36r@battery.awod.com>
Source record: 21730

In article <4vdul7$ke1@newsbf02.news.aol.com>, philbada@aol.com (PhilBada) says:
>
>How in the heck did these criminals clone my cellular phone last week???
>Any electronics whizzes out there want to enlighten me... I am guessing
>some form of frequency counter???
>
>Phil
>N8QDK

For about $1000.00 you can purchase an ESN reader that attaches to a scanner.
Stand on a street corner with one of these and record each ESN as
the vechile passes you.
For another $1000 to 2000.00 ypu can purchase programming software for
cellular phones.

You now have a valid ESN and a way to place it into another cellular
phone. Is this legal? No! But that does not stop a lot of people.

Pick up a copy of Nuts and Volts. You will be suprise as to what you can
purchase.

Not a good feeling to have a phone duplicated. The technology is ther
to build the phone and the same technology can duplicate it.

73
Glenn Little
WB4UIV

1608. 70cm pre_amp

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <4vi7gjINN2of@faatcrl.faa.gov>
Source record: 21731

Can anyone recommend a pre amplifier for 70cm ? I don't
want to spend more then 100 dollars. If it works, the cheaper
the better. Thanks in advance.

73 Jeff KB2WQM

1609. Alucina

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: romualdo@redestb.es
Message-ID: <4vin9s$406@artemis.ibernet.es>
Source record: 21732

ALUCINA

Traduccion libre ingles-espa&#65533;ol EA5XE

Escribe Sandy (WA6BXH / 7J1AEB).

Recientemente he recibido una carta de un viejo amigo, Joe Speroni (AH0A / 7J1AAA), que ha vivido y trabajado en Jap&#65533;n durante muchos a&#65533;os. Es tambi&#65533;n el autor del software de la Academia de Morse, famoso programa para ense&#65533;ar esta modalidad. Es una carta tan excitante que he pensado seria muy interesante conocerla para otros muchos, as&#65533; que os la mando integramente. Esta es la carta:

Estimada Sandy:

Hab&#65533;a prometido una serie de art&#65533;culos a la revista de la asociaci&#65533;n de radioaficionados japoneses, pero hay algo aqu&#65533; mas excitante que no puede esperar mas a ser contado. Me tomar&#65533; pues un descanso y hablar&#65533; de ello.

Todo comenz&#65533; con el trabajo que Ed Coan (AH6MI / 7J1AAE) hacia en su ordenador, calculando y dibujando una antena para los locales de la asociaci&#65533;n de radioaficionados de Tiara. Coan realizaba el proyecto seg&#65533;n las necesidades que los del radioclub le hab &#65533;an pedido, sabiendo que una buena estaci&#65533;n necesita una buena antena. La antena de Ed parec&#65533;a que iba a resultar muy grande y los resultados del ordenador as&#65533; lo confirmaron. Los contactos regulares entre Colorado y Maine no pueden ahora basarse en la pro pagaci&#65533;n, pues las manchas solares est&#65533;n bajo m&#65533;nimos.

Mi mini-antena no puede compararsele y me permit&#65533; una reflexi&#65533;n sobre lo que podemos hacer los que vivimos en peque&#65533;os apartamentos, donde el espacio es el principal problema. &#65533;Como poner el largo hilo de una antena en un balc&#65533;n? La soluci&#65533;n son las bobina s de carga y el problema, al mismo tiempo, que la resistencia a la radiaci&#65533;n del hilo se sustituye por una reactancia. Cuantas mas vueltas tienen las bobinas mas se disipa la potencia, en vez de radiarse. Si la antena no dispersase la potencia radiada.....

Hmmmmm ... dejame ver, P = E x E x R, Si R fuese 0, entonces .....

Por mi trabajo, tengo contacto con algunos grupos de investigaci&#65533;n de la Universidad de Tokio. Mejor todav&#65533;a, supe de un radioaficionado japon&#65533;s que se gradu&#65533; alli. De mi cabeza no se separaba el pensamiento de construir un super-conductor para usarlo en una antena. Esto

requiere temperaturas criogenicas, por ejemplo de 279 grados bajo cero.

Los universitarios se interesaron en el proyecto y nos pusimos a construir una direccional para 10 metros de muchos elementos y peque&#65533;as dimensiones. A base de bobinas de carga para cada elemento lograr&#65533;amos la resonancia y as&#65533; quer&#65533;amos construir una mini antena hecha de un superconductor. Baj&#65533; mi tranceiber TS-940 al laboratorio para las primeras pruebas, pero mostraron que resonaba en 31.260 Khz.

Parece que las ecuaciones para una inductancia normal, no trabajan lo mismo a bajas temperaturas, donde se n ecesita dar unas vueltas menos a las inductancias. Muchas medidas y ensayos mas tarde, ten&#65533;amos una antena resonante en diez metros. Tenia 320 elementos en menos de un cubo de 15 cms.

La primera prueba no fue demasiado bien. Conect&#65533; el TS-930 a la antena superconductora y lo sintonic&#65533; en 10 metros. A la temperatura ambiental no o&#65533;amos nada. Usando una bomba de calor, los t&#65533;cnicos del laboratorio comenzaron a bajar la temperatura hacia l a zona de la superconductividad. Yo estaba pensando en lo peque&#65533;o que era mi equipo y como encajaba todo en el equipo del laboratorio. Entonces, el TS-930, helado dej&#65533; de funcionar. El fr&#65533;o le afect&#65533;, ten&#65533;amos que inventar algo para conectar la antena al e quipo sin que pasara el fr&#65533;o. Quiz&#65533;s un acoplamiento inductivo o alg&#65533;n material cer&#65533;mico que dejase pasar la radiofrecuencia y no el calor. Probablemente Kiocera inventar&#65533;a algo para solucionar ese problema.

Llev&#65533; el TS-940 a reparar a una tienda para radioaficionados de

Akihabara. Suzuki-san, el empleado del servicio t&#65533;cnico de la tienda, pregunt&#65533; por el motivo exacto por el que se hab&#65533;a pelado la pintura alrededor del conector coaxial. &#65533;Un rayo quiz&#65533;s?. No, le respond&#65533;, solo la exposici&#65533;n a unas bajas temperaturas, le contest&#65533;, sin especificar cuanto de bajas eran estas. El proyecto tenia que quedar en secreto, adem&#65533;s Suzuki-san tiene fama de poderlo arreglar todo. De todas formas y mientras se arreglaba el TS-930, adquir&#65533; un TS-940.

Adem&#65533;s yo hab&#65533;a ya encargado tambi&#65533;n un FT-1000.

Una vez en el laboratorio y tras comprobar que la antena superconductora resonaba en la banda de 10 metros, conectamos el TS-940.

El material cer&#65533;mico (que un&#65533;a la antena con el equipo) funcionaron bien y empezamos el ciclo de enfriamiento. La banda parec&#65533;a muerta y lo mismo cuando llegamos a los 150 grados bajo cero. Nos cost&#65533; otros 10 minutos llegar a la zona de fr&#65533;o en que el mate rial de la antena comienza a ser superconductor. Entonces el TS-940 explot&#65533;.
Parece que nuestra antena tenia mas ganancia de la que el TS-940 pod&#65533;a soportar. Mas tarde y con 100 dB de atenuaci&#65533;n, las medidas demostraron que aun llegaban 5 voltios al conector de antena del

equipo.

Algo dif�cil de creer, pero entonces �que pasar�a de poderse construir antenas superconductoras a temperatura ambiente?.
El TS-940 volvi� a la tienda de Suzuki-sam, pero en cuanto este frunci� el entrecejo le dije "ahora si que le ha ca�do un rayo". No se preocupe, me contest�, Suzuki-sam puede arreglar cualquier cosa.
El FT-1000 lleg� justo a tiempo de poder continuar los experimentos.
Construimos un QSK (atenuador) para proteger el receptor y desde el mismo laboratorio decidimos probar a ver si pod�amos hacer un contacto en diez metros.

Chico, que sorpresa cuando lo pusimos en funcionamiento. Lo primero que o�mos fue a dos W2's haciendo un qso local (Nota de EA5XE.- W2 es Estados Unidos, y ellos estaban en el Jap�n), y est�bamos con el atenuador en 80 decibelios.

Nosotros pod�amos rotar la antena, as� que la mov� un grado y los W2 desaparecieron. �Que anchura de banda!. Los sintonizamos de nuevo y estaban a punto de despedirse as� que pensamos que tratar�amos de trabajarlos.

El equipo estaba ajustado sobre una carga artificial para sacar 50 watios. Cambiamos a la antena superconductora y N2BA hizo una llamada.
El ruido fue incre�ble. Un rayo ioniz� el aire desde la antena hasta la pared del laboratorio. Hab�a un agujero en la pared de 1 cent�metro de circunferencia. Cortamos la transmisi�n r�pidamente.
N2BA volvi� a escuchar unos minutos despu�s pero no escuch� nada. Por alguna raz�n la estaci�n que hablaba nunca volvi�, as� que decidimos no transmitir de nuevo hasta estar seguros de que est�bamos haciendo.
Aproximadamente podemos decir que la antena tiene 120 de ganancia, pero que con una desviaci�n de 0,75 grados, esta cae a 60 db.
Es decir, que con 50 watios a la salida del equipo, estos se transforman a la punta de la antena en 5,5 cuatrillones de watios: 5.500.000.000.000.000 watios.

En cuanto la Universidad se dio cuenta de lo que hab�amos construido, se llev� el proyecto entero lejos de nosotros y lo cedi� a las Fuerzas A�reas Japonesas.

Luego que digan que los radioaficionados se "ocupan vanamente" o "contribuyen con algo, pero no se sabe exactamente con que".
No tengo ni la mas ligera idea del material con el que estaba construida la antena ni podr�a explicar como construir otra. Pero me gustar�a poderla usar en el pr�ximo contest mundial.

�Piensa alguien si esto podr�a interesar por ejemplo a proyectos como el de la Guerra de las Galaxias?.

Unos meses mas tarde la Universidad se puso en contacto con nosotros y pregunt� como se comportaba la antena cuando la probamos.
Parece ser que una utilidad secundaria de nuestra antena seria la de

esterilizar las masas, pero la confirmaci�n de esto tendr� que esperar a las pruebas m�dicas. Si una antena aunque solamente fuese remotamente parecida a la nuestra, saliese al mercado, seria una maravilla.

Cuando escribo esto, Suzuki-san me ha dicho que no puede arreglarlo todo a pesar de su fama, y que puede ser que Yaesu anuncie nuevos modelos pronto.
Mejores 73 de Joe Speroni, - Ingeniero Jefe. Tiara, 1 de Abril de 1.994

Esta historia ha sido publicada en la revista Tokio Internacional Radioaficionados en Abril de 1.992. Se concede permiso de reimpresi�n del material cedido por TIARA NOTICIAS y el autor es Joe Speroni, AH0A / 7J1AAA.

73 de Sandy WA6BXH / 7J1ABV

73 de Romualdo, EA5XE

1610. Sobre Alucina

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: romualdo@redestb.es
Message-ID: <4vipu8$5na@artemis.ibernet.es>
Source record: 21733

romualdo@redestb.es (Romualdo) wrote:

> ALUCINA
>
> Traduccion libre ingles-espa&#65533;ol EA5XE

Sorry, I have sended this article in spanish. It was really for other foro, also of ham-radio in spanish. 73 Romualdo, EA5XE

Disculpad el que haya mandado este art&#65533;culo traducido al espa&#65533;ol, ha sido por un error al foro a que iba dirijido, tambien de radioaficionados. No obstante espero que si alguien lo lee se quede tan impresionado por su contenido como yo qued&#65533; la primera vez que lo le&#65533;.

Saludos, Romualdo, EA5XE

1611. lower loss at 150ft rg-11 or 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4vitko$1hfu@ns1-1.CC.Lehigh.EDU>
Source record: 21734

Yes, as the title said..."rg-11 or 9913"
i need to run 150ft of cable, but here is my question:
which has less loss for a 150ft run...
at 3.7-4.2 GHz with 9913
or .95 - 1.45GHz with rg-11 <or rg-6??>

thanks

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1612. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: Ken Bessler <kg0wx@feist.com>
Message-ID: <321D2E19.196D@feist.com>
Source record: 21735
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

vaj mu'tlheghvam wIngachpu', qaɪ'a

Qapla'!!!

1613. Re: Mir image

Newsgroup: rec.radio.amateur.space
Date: 1996-08-22 00:00:00 UTC
From: w.bell@psyc.canterbury.ac.nz
Message-ID: <4vio1v$86g@cantuc.canterbury.ac.nz>
Source record: 21736

In article <4vb8to$fgg@news.bu.ac.th>,
a37s0112@orchid.au.ac.th says...
>
>hi all my friends,
> Any body know how can I get mir images
from which web site?
>I need image file of mir station for my
article.Someone can
>help me?
> thank you
> HS2JFW ,
Joe
>
Hello Joe,
I have seen a very clear colour image of MIR
station on front cover of QST. ARRL at New
Conneticut, USA may assist you. Another
source is your Thailand Amateur radio
Headquaters. Sawadeeka, 73 From ZL3AO
Christchurch, New Zealand.

1614. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-23 00:00:00 UTC
From: future@blarg.net
Message-ID: <321d178c.1107574@news.blarg.net>
Source record: 21737
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

On Wed, 21 Aug 1996 04:46:16 GMT, jafo@cheetah.net (Gregg) wrote:

>>Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber
>
>Url! Jung xvaq bs n penpx vf gung? :-D

Urururur.. V gubhtug EBG13 jnf bhg bs qngr.. guvf vf gur svefg gvzr
V'ir frra vg hfrq va dhvgr n juvyr ;)

--
Check out my home page at http://www.blarg.net/~future/index.html
I'm a volunteer at the Win95 Help Site. Drop by if you need help with Win95.
http://www.isisnet.com/terrymo/index.html

1615. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-23 00:00:00 UTC
From: Phil Wakely <pwakely@scigen.co.uk>
Message-ID: <4vk6r5$h44@Thomas.generics.co.uk>
Source record: 21738
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

future@blarg.net (Tim Gerchmez) wrote:
>On Wed, 21 Aug 1996 04:46:16 GMT, jafo@cheetah.net (Gregg) wrote:
>
>
>>>Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber
>>
>>Url! Jung xvaq bs n penpx vf gung? :-D
>
>Urururur.. V gubhtug EBG13 jnf bhg bs qngr.. guvf vf gur svefg gvzr
>V'ir frra vg hfrq va dhvgr n juvyr ;)
>

Jung vf/jnf EBG13 ??

1616. Western Connecticut Hamfest 15-Sep Newtown CT

Newsgroup: rec.radio.amateur.space
Date: 1996-08-24 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <321F04CA.43B1@ix.netcom.com>
Source record: 21739
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

1617. Beat the pile-ups>>Cyberscheds now Available @ sarrio.com

Newsgroup: rec.radio.amateur.space
Date: 1996-08-24 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.181.39@anjo.com>
Source record: 21740

RE: Beat the pile-ups>>Cyberscheds now Available @ sarrio.com
BY: Raymond Sarrio to ALL on Wed Aug 21 1996 15:14:54

```
> This is a new use of the WWW that can benefit ham radio operators
> throughout the world.
>
> You can now schedule contacts with hams all over the world simply and
> easily by using the WWW and e-mail.I have set aside a section of my web
> site for hams to post their request for over-the-air schedules. Included
> in the posting is a place to list the posters specific ham radio contact
> needs (countries, zones,IOTA, grid squares, LEO's ect...). The postings
> will also include an e-mail link that will allow hams that read the posts,
> to easily request an over-the-air schedule.
>
> How Can Cyberscheds work for me?
```

It can't. Pre-arranged contacts are not good towards any sort of award or certificate, so this particular piece of cyber-technology won't be much use to anyone. Of course, you could use it anyway, and just cheat...

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

1618. Re: lower loss at 150ft rg-11 or 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-24 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <321F5BA0.448F@isocor.com>
Source record: 21741

c002@Lehigh.EDU wrote:
>
> Yes, as the title said..."rg-11 or 9913"
> i need to run 150ft of cable, but here is my question:
> which has less loss for a 150ft run...
> at 3.7-4.2 GHz with 9913
> or .95 - 1.45GHz with rg-11 <or rg-6??>
>
> thanks
>
> DAvid
> |---|
> | David Roseman | c002@lehigh.edu |
> | | The Flying HAm - BBS |
> | Utopia Telecommunications | Technomage - BBS |
> | 610.838.2989 | N3SQE/1 - HAm |
> | (Parttime system) | |
> |-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|

Both will have lower loss at 0.95-1.45 GHz. You need to use a coaxial cable with the correct characteristic impedance. R-11 and RG-6 are 75 ohn cables and 9913 is a 50 ohm cable. The impedance should match your equipment. Times LMR-400 is an even better cable than Belden 9913 and is about the same price. The 9913 uses air dielectric. The center conductor can corrode quite easily and can be displaced when the cable is bent. Either increases attenuation. LMR-400 uses a very low loss foam dielectric than protects the center conductor. It is also much lighter as it uses copper plated aluminum.

73,
John, KD6OZH

1619. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: future@blarg.net
Message-ID: <321fa55b.3452629@news.blarg.net>
Source record: 21742
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

On 23 Aug 1996 12:05:57 GMT, Phil Wakely <pwakely@scigen.co.uk> wrote:

>future@blarg.net (Tim Gerchmez) wrote:
>>On Wed, 21 Aug 1996 04:46:16 GMT, jafo@cheetah.net (Gregg) wrote:
>>
>>
>>>>>>Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber
>>>>
>>>>Url! Jung xvaq bs n penpx vf gung? :-D
>>
>>Urururur.. V gubhtug EBG13 jnf bhg bs qngr.. guvf vf gur svefg gvzr
>>V'ir frra vg hfrq va dhvgr n juvyr ;)
>>
>
>Jung vf/jnf EBG13 ??
>

Tvira gung lbh rapbqrq gur nobir, lbh onfvpnyyl nyernql xabj jung vg
vf. Vg'f n fvzcyr Hfrarg rapbqvat zrgubq (sbetbg jurer vg bevtvangrq,
fbzrbar ryfr pbhyq cebonoyl gryy lbh). V unqa'g rire frra vg hfrq
orsber hagvy guvf guernq fgnegrq. Zl arjfernqre (Ntrag .99S) vapyhqrf
n EBG13 rapbqre/qrpbqre, fb V'z abg qbvat guvf ol unaq ;)

--
Check out my home page at http://www.blarg.net/~future/index.html
I'm a volunteer at the Win95 Help Site. Drop by if you need help with Win95.
http://www.isisnet.com/terrymo/index.html

1620. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: wnewkirk@iu.net
Message-ID: <4vof62$o5b@cc.iu.net>
Source record: 21743
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In <4vcg3p$6a7@shore.shore.net>, pip@shore.net (GeorgeS) writes:
>advent of the search engine (Alta vista, Lycos, Deja News etc...) it is easier
>and quicker to do an online search.

yeah, when they work they're grand. but there seems to be little if any rechecking to see if a url on file at a search location is really there - so you might get 1 of a million possible listings with about 999,000 of them unusuable at all.

of course, there's one location where you have to download files (getting a catalog), expand, run an installation program on the data, then you find you have a bunch of directories and a ton of HTML files to pull up in the browser to view 'em...(now, THAT'S comedy). <sigh>

Bill Newkirk WB9IVR The Space Coast Amateur Technical Group
Melbourne, FL duty now for the future of amateur radio
Lombardi's 1st Law of Business:
Companies succeed in spite of their best effort. If they succeed at all.

1621. wx satellites frqs?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: n3tuk@idsonline.com
Message-ID: <4volfs$mcm@news2.cais.com>
Source record: 21744

Hi Folks

Can someone tell me some wx satellites freqs so i can monitor their
trasmissions..

luis
Luis A Velis
Hamradio operator
n3tuk@idsonline.com

1622. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: marty@trucom.com
Message-ID: <4vomi5$858@thepit.trucom.com>
Source record: 21745
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

jadams@idirect.com (J Adams) wrote:

>Electronics Resource Internet Addresses Needed
> for Publisher.
>==
>To all Electronics Companies, Service Person-
>nel, Webmasters & Hobbyists,

>I am preparing a book tentatively titled "Sam's
>Internet Guide to the Electronics Industry", to
>be published by Howard W. Sams & Co. and PROMPT
>Publications. The book will contain site add-
>resses for electronics resources. Companies,
>organizations and individual web creators are
>encouraged to fill out a simple FORM at the ad-
>dress below.
>--
> http://web.idirect.com/~ifx/book/
>--
>In addition, any electronics related addresses
>or resources you run into while surfing please
>let me know by filling out said form.

>If you lack FORMS capability send an email with
>the info below. I am especially interested in
>sites offering simple electronics repair data,
>service specs and hobbyist help-pages. Other
>resources are more than welcome. Top Urls will
>be printed in this directory and updated in
>future issues.
>--
>Name:
>Company Name:
>Nature of Business:
>Address http:
>Other Addresses:
>FTP Site:
>E-mail Contact:
>E-mail Main (info):
>Webmaster:
>Listserv:
>How often is your website updated:

>What type of information can be found on your
> website or special features:
>Has the WWW helped your business:
>Comments:
>---
>Send to John Adams -- jadams@idirect.com

>If you know of any other Electronics related
>links please let me know in an email or a blank
>form.

>Thank you in advance. John Adams -- Author

>John J. Adams | "Forever Learning" |
>Author | "Forever Questioning" |
>Web Designer | "Forever Creating" |

>------------jadams@idirect.com------------

>INFINET-FX @ http://web.idirect.com/~ifx/

I assume that this book will be provided free to all who submit or are
just trying to get us all to:

1) Do all your work
2) Still pay for the book

Just curious... I gave up doing research for others without pay when I
got my degree.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

1623. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: kharker@cs.utexas.edu
Message-ID: <kharker-2508961147130001@slip-9-2.ots.utexas.edu>
Source record: 21746
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In article <321fa55b.3452629@news.blarg.net>, future@blarg.net (Tim Gerchmez) wrote:

> On 23 Aug 1996 12:05:57 GMT, Phil Wakely <pwakely@scigen.co.uk> wrote:
>
> >future@blarg.net (Tim Gerchmez) wrote:
> >>On Wed, 21 Aug 1996 04:46:16 GMT, jafo@cheetah.net (Gregg) wrote:
> >>
> >>
> >>>>Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber
> >>>
> >>>Url! Jung xvaq bs n penpx vf gung? :-D
> >>
> >>Urururur.. V gubhtug EBG13 jnf bhg bs qngr.. guvf vf gur svefg gvzr
> >>V'ir frra vg hfrq va dhvgr n juvyr ;)
> >>
> >
> >Jung vf/jnf EBG13 ??
> >
>
> Tvira gung lbh rapbqrq gur nobir, lbh onfvpnyyl nyernql xabj jung vg
> vf. Vg'f n fvzcyr Hfrarg rapbqvat zrgubq (sbetbg jurer vg bevtvangrq,
> fbzrbar ryfr pbhyq cebonoyl gryy lbh). V unqa'g rire frra vg hfrq
> orsber hagvy guvf guernq fgnegrq. Zl arjfernqre (Ntrag .99S) vapyhqrf
> n EBG13 rapbqre/qrpbqre, fb V'z abg qbvat guvf ol unaq ;)

Gur svefg checbfr V rire fnj EBG-13 hfrq sbe (onpx va 1991 be gurernobhgf) jnf gb uvqr rvgure gur chapuyvar bs be na ragver wbxr gung jnf cbgragvnyyl bssrafvir be bs n evfdhr angher, cercraqrq jvgu n pyrnegrkg qvfpynvzre, fb nf gb nyybj gur vaqvivqhny ernqre gur bcgvba bs jurgure be abg gb ivrj gur zngrevny. V'z fher gurer ner bgure tbbq ernfbaf sbe vg nf jryy.

Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f orra nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) - lbh whfg fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq nf arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz, gubhtu.

--

Kenneth E. Harker kharker@cs.utexas.edu
University of Texas at Austin Amateur Call: N1PVB
Department of the Computer Sciences "Long Live Peent!"

Taylor Hall TAY 2.124 Maintainer of the Linux Laptop Home Page
Austin, TX 78712-1188 USA http://www.cs.utexas.edu/users/kharker/

1624. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: pip@shore.net
Message-ID: <4vqfae$2ar@shore.shore.net>
Source record: 21747
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In article <kharker-2508961147130001@slip-9-2.ots.utexas.edu>,
kharker@cs.utexas.edu says...

>Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f orra
>nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) - lbh whfg
>fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq nf
>arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz,
>gubhtu.
>

My guess is ROT13 is short for ROTATE 13. If you imagine the alphabet on a
wheel, you would cipher the text by rotating the wheel 13 spaces

1625. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: jeffa@ix.netcom.com
Message-ID: <4vqiur$clr@dfw-ixnews9.ix.netcom.com>
Source record: 21748
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In <4vqfae$2ar@shore.shore.net> pip@shore.net (GeorgeS) writes:
>
>In article <kharker-2508961147130001@slip-9-2.ots.utexas.edu>,
>kharker@cs.utexas.edu says...
>
>>Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f
orra nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) -
lbh whfg fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq
nf arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz,
>>gubhtu.
>>
>
>My guess is ROT13 is short for ROTATE 13. If you imagine the alphabet
on a wheel, you would cipher the text by rotating the wheel 13 spaces
>

By goom, you're right! I did it the hard way - I noticed Ken Harker had capitalized a V in the middle of one of his sentences. I assumed this was "I" (what other single letter do we capitalize?) and translated (rotated) the alphabet accordingly. Everything fell out nicely from there.

After deciphering "If you can read this, you really ought to get out more," I decided the effort greatly outweighed the rewards!

- Jeff (wrss)

1626. Looking for C64 Sat prg

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: "J.A.B." <jamesb@clark.net>
Message-ID: <Pine.GSO.3.95.960825184632.28178D-100000@explorer2>
Source record: 21749

Hi,
I am looking for a NICE program that track satellites.
I have the C-64 and there was once a program I believed called
VR85 for the C-64 and they use to be oin those HAMSOFT
5.25" disk at HamFests.

Anyone by any chance have a copy of such program?

Thanks in advance

73

Alex

1627. Ham Radio Satellite Equipment For Sale/Trade

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: kj4fz@twave.net
Message-ID: <8197cc$131c35.2af@NEWS>
Source record: 21750

I have the following Ham Radio Satellite equipment for sale or trade.
I am looking for a Kenwood TS830 HF rig or an AEA Pk 232 all mode
controller. All equipment was purchased new and is in excellent
working condition.

Yaesu G-5400 Az/El Rotator
Ten Tec Mode B Satellite Station
Mirage 100W 430-450 Amplifier

Any interest, reply or send email to kj4fz@twave.net

1628. Sat Tracker Idea

Newsgroup: rec.radio.amateur.space
Date: 1996-08-25 00:00:00 UTC
From: derryb@mail.misslink.net
Message-ID: <4vql97$5is@matilda.misslink.net>
Source record: 21751

Hi I have this idea about a client/server system where by there would be a sat tracker client and a server element database. The client would access the element database through the internet using TCP/IP. So that the client element database would always be up-to-date. All of the tracking calculations would be up to the client. The server would only handle DB requests.

My 2 cents worth,
Benjamin K. Derry

1629. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: jshaffer@mail.csrlink.net
Message-ID: <19960826.79FE6D0.EC9@localhost.UUCP>
Source record: 21752
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In article <kharker-2508961147130001@slip-9-2.ots.utexas.edu> kharker@cs.utexas.edu (Kenneth E. Harker) writes:
> Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f orra
> nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) - lbh whfg
> fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq nf
> arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz,
> gubhtu.

"rot" means "rotate".

--
* From the disk of: | jshaffer@mail.csrlink.net | "there's a hell of
Jim Shaffer, Jr. | IRC: JustnCase // | a good universe
37 Brook Street | "Real AM radios // | next door; let's go"
Montgomery, PA 17752 | go up to 30000." \\// | (e.e. cummings)

1630. Space Center/International Space Hall of Fame

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: alamo@wazoo.com
Message-ID: <4vr9ba$jbd@hume.nmia.com>
Source record: 21753

August 22, 1996 Media contact:
FOR IMMEDIATE RELEASE Jack Moore
1-800-545-4021 (505) 437-2840

SPACE CENTER LAUNCHES INTO CYBERSPACE

ALAMOGORDO, N.M. - The Space Center in Alamogordo, a division of the New Mexico Office of Cultural Affairs, now has an extensive presence in cyberspace. There are now two World Wide Web sites from which to access information about the International Space Hall of Fame, the Clyde W. Tombaugh Omnimax Theater and Planetarium, the John P. Stapp Air and Space Park, and the many other elements that make up New Mexico's internationally-recognized space museum.

One web site was the result of a lot of hard work by members of the Alamogordo Consortium, who designed the pages, and Wazoo Computers. Wazoo Computers of Alamogordo is providing the free home for the web pages.

The pages offer text and photographs that tell the story of the history of space research in New Mexico, what's showing at the Tombaugh Theater, hours of operation, admission prices and special events. The site can be found on the InterNet at the following web address: http://www.wazoo.com/~alamo/space/index.html. Sign the guest book while you're there.

The second site came as the result of cooperation between the Space Center and New Mexico State University-Alamogordo. The web pages were designed by Space Center Program Manager Bob Wood, who also is a computer science and electronics instructor at NMSU-A. It was the first time Wood had ever attempted such a project. He worked into the wee small hours of many mornings crafting the web pages and then loading them into NMSU-A's server.

The NMSU-A site also details much of the history of space in New Mexico (the Land of Enchantment is the birthplace of America's space program) as well as information about International Space Hall of Fame inductees, the Governor's Space Center Commission, and links to other space-related World Wide Web sites. The NMSU-A site can be accessed at: http://abcc.nmsu.edu/~bwood/.

If you have access to the WWW, you'll want to visit both sites. They're quite informative.

-30-

-- End --

1631. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: greggIns@ix.netcom.com
Message-ID: <322127f2.2696521@dfw-ixnews10.ix.netcom.com>
Source record: 21754
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

On 25 Aug 1996 22:09:31 GMT, Jeff Anderson posted:

<snipped; see thread>

>By goom, you're right! I did it the hard way - I noticed Ken Harker
>had capitalized a V in the middle of one of his sentences. I assumed
>this was "I" (what other single letter do we capitalize?) and
>translated (rotated) the alphabet accordingly. Everything fell out
>nicely from there.
>
>After deciphering "If you can read this, you really ought to get out
>more," I decided the effort greatly outweighed the rewards!

Jeff, you're using the built-in newsreader in the Netcruiser software.
It's crap. Try using Free Agent -- and, if you like it, you can buy
Agent -- and you can do ROT13 with a couple of mouse clicks. Much
more importantly, you can also do most of your Usenet news stuff
offline.

>- Jeff (wrss)

Shouldn't that be... Wrss ?

--
... Gregg

1632. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: jwchrist@cp.duluth.mn.us
Message-ID: <4vr89v$m3o@poplar.computerpro.com>
Source record: 21755
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

In article <4vqiur$clr@dfw-ixnews9.ix.netcom.com>, jeffa@ix.netcom.co says...
>
>In <4vqfae$2ar@shore.shore.net> pip@shore.net (GeorgeS) writes:
>>
>>In article <kharker-2508961147130001@slip-9-2.ots.utexas.edu>,
>>kharker@cs.utexas.edu says...
>>
>>>Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f
>orra nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) -
>lbh whfg fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq
>nf arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz,
>>>gubhtu.
>>>
>>
>>My guess is ROT13 is short for ROTATE 13. If you imagine the alphabet
>on a wheel, you would cipher the text by rotating the wheel 13 spaces
>>
>
>By goom, you're right! I did it the hard way - I noticed Ken Harker
>had capitalized a V in the middle of one of his sentences. I assumed
>this was "I" (what other single letter do we capitalize?) and
>translated (rotated) the alphabet accordingly. Everything fell out
>nicely from there.
>
>After deciphering "If you can read this, you really ought to get out
>more," I decided the effort greatly outweighed the rewards!
>
>- Jeff (wrss)

Gurer vf nabgure ernyyl rnfl jnl gb qrpvcure guvf. Vs lbh ner hfvat Jvaivz nf n arjf ernqre, nyy lbh unir gb qb vf uvg PGEY. E naq vg punatrf gur grkg evtug orsber lbhe irel ryes.

Jim
>

1633. INFO FOR IC820H

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: Walter Girardi <narda@sunrise.it>
Message-ID: <3221438B.7D65@sunrise.it>
Source record: 21756

Hello,
I have the IC 820 and i would like to work pacsat with it.
I know that there is a mod. to make in the sub band for recivin the
signal.
Can anubody help me?
Thanks for Kindly
73
Walter
- narda@sunrise.it -

1634. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: slwork@netcom.com
Message-ID: <slworkDwqtB7.H9A@netcom.com>
Source record: 21757
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

GeorgeS (pip@shore.net) wrote:

: My guess is ROT13 is short for ROTATE 13. If you imagine the alphabet on a
: wheel, you would cipher the text by rotating the wheel 13 spaces

The reason for rot13 is not to encrypt a file to keep unwanted recipients
from seeing it. It's just a way someone can post something which can't
be read accidentally. Like posting a joke which someone might find
offensive to a humor group. If someone is just rifling thru the jokes
they won't be offended unless they deliberately decode the rot13.
Another use might be for a post which "spoils" or gives away the plot of
a book or movie.

1635. (no subject)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: cin02cic@lepus.celepar.BR
Message-ID: <3221C506.5EB4@lepus.celepar.br>
Source record: 21758

```
add ham-space
```

1636. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: gregglns@ix.netcom.com
Message-ID: <3221a646.2641092@dfw-ixnews10.ix.netcom.com>
Source record: 21759
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

On 26 Aug 1996 04:13:51 GMT, Jim Christensen posted:

>Gurer vf nabgure ernyyl rnfl jnl gb qrpvcure guvf. Vs lbh ner hfvat Jvaivz nf n
>arjf ernqre, nyy lbh unir gb qb vf uvg PGEY. E naq vg punatrf gur grkg evtug
>orsber lbhe irel ryes.

Same with Agent. Highlight the ROT text, do control-R, naq gurer lbh
tb.

--
... Gregg

1637. Re: lower loss at 150ft rg-11 or 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: ccart@erols.com
Message-ID: <4vskog$f0d@news7.erols.com>
Source record: 21760

c002@Lehigh.EDU wrote:
: Yes, as the title said..."rg-11 or 9913"
: i need to run 150ft of cable, but here is my question:
: which has less loss for a 150ft run...
: at 3.7-4.2 GHz with 9913
: or .95 - 1.45GHz with rg-11 <or rg-6??>

Well, aside from the impedance/freq differences, the chart on the wall says:
(length adjusted)

4.0 GHz w/9913 ~16db loss
1.2 GHz w/RG11 ~12db loss

db/100' loss:
1GHz 3GHz 5GHz
RG6A 9.8 23.0 32.0
RG11 7.8 16.5 26.5
9913 4.5 N/A 13.0

LDF5-50 1.4 2.5 3.5 (preamp is cheaper :)

Sounds like you need a downconverter and pre-amp before you stuff it through
150' of coax. And don't forget to add connector loss in there too.

-- Christopher Cartwright, Tech. Engineer | ...our chief weapons are fear,
-- Voice 301.295.0809 N3XRV | fear and surprise, and nice
-- Mail dsc3cjc@imc220.med.navy.mil | red uniforms, oh damn!!
-- ccart@erols.com | -- Monty Python

1638. Visual MIR siteing

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: bjp@cle.ab.com
Message-ID: <4vsjn5$87p@news1.cle.ab.com>
Source record: 21761

I have question regarding MIR. I live in Cleveland and the last couple of nights I was able to see MIR go by. About a minute later behind MIR was another object on the same path. I checked my tracking program and nothing was apparent to me to be another satellite. Could anyone tell me what it could be?

73,

Brian

1639. Re: lower loss at 150ft rg-11 or 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <4vsnbq$23v7@ns2-1.CC.Lehigh.EDU>
Source record: 21762

>> Yes, as the title said..."rg-11 or 9913"
>> i need to run 150ft of cable, but here is my question:
>> which has less loss for a 150ft run...
>> at 3.7-4.2 GHz with 9913
>> or .95 - 1.45GHz with rg-11 <or rg-6??>

the question is... i have a choise to run 150 of a coax cable
i know that rg-6/11 are 75's and 9913 is 50
but WHICH has a lower loss at the freq. provided?
3-4ghz on 9913 or .9-1.5ghz on rg-6 or rg-11

this is for a sat.TV down converter. the feed connects directly to the down converter with an 50ohm N, and from the downconv. to the TV it is an F but depending on which cable has the lowest loss will deside on if the downconv. is staying on the feed, or attached directly to the TV

>Both will have lower loss at 0.95-1.45 GHz. You need to use a coaxial
>cable with the correct characteristic impedance. R-11 and RG-6 are 75
>ohn cables and 9913 is a 50 ohm cable. The impedance should match your

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1640. I WOULD LIKE TO BE A MANAGER

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: naglieri@facil.umass.edu
Message-ID: <32223BAD.416C@facil.umass.edu>
Source record: 21763

Hello,

My name is Tony Naglieri my call is N1NYD qth Ware, Ma. home telephone is 413-967-7426. I would like to help out some ham by beening a manager.

Thank You

Tony

1641. NORAD Two-Line Orbital Element Sets (TLE859)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <4vtb52$rh9@blackbird.afit.af.mil>
Source record: 21764

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #859 -
Alouette 1
1 00424U 62049A 96238.56305780 .00000028 00000-0 22244-4 0 2231
2 00424 80.4560 215.2826 0021449 215.7072 144.2639 13.67873983691825
ATS 1
1 02608U 66110A 96237.64817237 -.00000257 00000-0 10000-3 0 9781
2 02608 14.6102 352.1044 0008861 95.3625 264.7889 1.00311244 25551
ATS 3
1 03029U 67111A 96238.26637545 -.00000124 00000-0 10000-3 0 5343
2 03029 14.9160 359.0506 0008751 263.4098 61.9489 1.00273451105453
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1 07646U 75010A 96239.17514373 -.00000152 00000-0 -53506-5 0 9934
2 07646 49.8284 232.5319 0206166 101.7120 260.6980 13.82191170 88648
LAGEOS
1 08820U 76039A 96237.19118152 .00000039 00000-0 00000+0 0 2194
2 08820 109.8499 49.3039 0043835 113.1975 247.3304 6.38664070218170
ETS-2
1 09852U 77014A 96192.28972393 -.00000090 00000-0 10000-3 0 729
2 09852 13.2741 32.6575 0004146 118.9539 241.0227 1.00020582 17872
GOES 2
1 10061U 77048A 96238.45971181 .00000051 00000-0 10000-3 0 7200
2 10061 12.4620 36.2921 0010239 126.1884 162.7489 1.00285587 15136
IUE
1 10637U 78012A 96237.54001102 -.00000261 00000-0 10000-3 0 2712
2 10637 35.8944 82.0417 1374324 58.7670 335.2396 1.00219743 20629
GPS BI-01
1 10684U 78020A 96234.42414885 -.00000014 00000-0 10000-3 0 4676
2 10684 65.0356 21.9814 0062123 160.1693 200.0844 1.98069613120702

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GPS BI-02
1 10893U 78047A 96230.30726442 .00000047 00000-0 10000-3 0 2645
2 10893 63.1346 259.0280 0229957 15.1348 345.6620 2.01627399134045
GOES 3
1 10953U 78062A 96237.34182759 -.00000141 00000-0 10000-3 0 6962
2 10953 11.4532 39.2212 0002124 81.8004 233.4848 1.00269113 19730
SeaSat 1
1 10967U 78064A 96237.25353935 -.00000081 00000-0 17651-4 0 5103
2 10967 107.9891 315.5863 0002485 256.5600 103.5265 14.38118025951239
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1 11054U 78093A 96231.50455592 .00000054 00000-0 10000-3 0 4228
2 11054 62.8159 258.2928 0047359 181.3643 178.6976 1.93505300129860
Nimbus 7
1 11080U 78098A 96237.17686079 -.00000038 00000-0 35022-5 0 6090
2 11080 98.9349 96.0820 0009291 140.3139 219.8697 13.83690219900576
GPS BI-04
1 11141U 78112A 96238.28240518 -.00000027 00000-0 10000-3 0 619
2 11141 65.0211 24.3952 0050250 29.7783 330.5012 1.92894686 19218
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2 11783 62.2949 251.3409 0232267 32.2129 329.4371 2.03452510120238
GOES 5
1 12472U 81049A 96235.60159215 .00000080 00000-0 10000-3 0 9455
2 12472 8.2963 49.4931 0007906 46.9051 313.2953 1.00242963 13763
Cosmos 1383
1 13301U 82066A 96236.53835534 .00000054 00000-0 45689-4 0 5230
2 13301 82.9314 84.4253 0029034 55.4177 304.9712 13.68076549706581
LandSat 4
1 13367U 82072A 96239.20620227 -.00000023 00000-0 46482-5 0 9882
2 13367 98.0662 287.9726 0006195 290.0777 69.9743 14.57181890750731
DMSP B5D2-1
1 13736U 82118A 96235.89376136 .00000025 00000-0 28780-4 0 670
2 13736 98.6246 63.2049 0008097 188.4862 171.6185 14.25797453710578
IRAS
1 13777U 83004A 96239.07910788 .00000051 00000-0 65018-4 0 4129
2 13777 98.9660 63.0923 0011666 261.9758 98.0083 13.99251527363145
Cosmos 1447
1 13916U 83021A 96236.19802918 .00000064 00000-0 51704-4 0 6143
2 13916 82.9458 141.4863 0037730 327.9380 31.9481 13.74343181672946
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2 13969 9.0722 43.0381 0001863 97.2676 262.5593 1.00259875 22052
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2 14050 7.1195 52.9931 0004851 23.6015 244.5636 1.00234578106815
OSCAR 10
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2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051 71300
LandSat 5
1 14780U 84021A 96239.19688185 .00005616 00000-0 12569-2 0 5304
2 14780 98.3237 296.9957 0003806 77.3382 282.8241 14.57068185664152
UoSat 2
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2 14781 97.8044 223.7013 0010706 237.4822 122.5352 14.69473310667451
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1 15039U 84059A 96234.77482561 -.00000020 00000-0 10000-3 0 4327
2 15039 64.6630 18.8096 0083344 19.8748 340.4520 1.92302342 88691
Cosmos 1574
1 15055U 84062A 96235.31823099 .00000018 00000-0 31606-5 0 8142
2 15055 82.9550 197.1603 0027495 153.9495 206.3052 13.73638081610068
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Cosmos 1602
1 15331U 84105A 96235.83722608 .00000120 00000-0 11197-4 0 4971
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2 15354 56.9961 98.9918 0005655 58.9627 301.1962 14.94972004647298
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2 15427 98.9446 303.7271 0015760 113.8655 246.4168 14.13799907603462
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2 16609 51.6488 132.5770 0011020 97.1343 12.9199 15.61784692600806
SPOT 1
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2 16613 98.8263 305.4810 0001940 66.2917 293.8464 14.19982518230011
Cosmos 1766
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NOAA 10
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MOS-1
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Kvant-1
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1 18123U 87053A 96238.51090857 -.00000009 00000-0 17700-4 0 5671
2 18123 98.7702 67.6686 0015290 57.3840 302.8810 14.15450454474306
RS-10/11
1 18129U 87054A 96236.70908326 .00000029 00000-0 15400-4 0 2556
2 18129 82.9259 98.6400 0011582 335.8608 24.1966 13.72368586459437
Meteor 2-16
1 18312U 87068A 96235.68332436 .00000046 00000-0 27912-4 0 5030
2 18312 82.5561 299.3401 0013862 38.2070 322.0070 13.84083236455378
Meteor 2-17
1 18820U 88005A 96238.40657731 .00000025 00000-0 88994-5 0 251
2 18820 82.5409 352.0338 0018197 90.8933 269.4312 13.84759978433100
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2 18822 98.3823 67.7951 0006151 150.6065 209.5461 14.23198227444511
Glonass 34
1 19163U 88043A 96235.69224895 .00000076 00000-0 10000-3 0 1048
2 19163 65.2676 83.6082 0003989 152.6394 207.4182 2.13103523 63654
Glonass 36
1 19165U 88043C 96237.62632846 .00000039 00000-0 10000-3 0 5115
2 19165 65.2618 83.4914 0002213 9.1109 350.9691 2.13102132 64311
METEOSAT 3
1 19215U 88051A 96234.54599934 -.00000064 00000-0 10000-3 0 2732
2 19215 3.3990 67.4436 0003056 97.3181 263.0020 0.96947158 17816
AO-13
1 19216U 88051B 96238.62104917 .00018570 25337-5 15077-2 0 2585
2 19216 57.1545 95.9509 7440029 48.7083 355.0112 2.11258218 31305
OKEAN 1
1 19274U 88056A 96238.97822428 .00000244 00000-0 27430-4 0 1138
2 19274 82.5125 206.2590 0017909 255.5308 104.3916 14.82510038439716
Meteor 3-2
1 19336U 88064A 96236.77800001 .00000051 00000-0 10000-3 0 5050
2 19336 82.5412 118.6080 0018222 65.5118 294.7902 13.16978824388372
Glonass 39
1 19503U 88085C 96237.18720446 -.00000041 00000-0 10000-3 0 3989
2 19503 65.5548 322.4214 0005945 159.4540 200.6207 2.13101759 61791
NOAA 11
1 19531U 88089A 96238.76418450 -.00000035 00000-0 61163-5 0 6320
2 19531 99.1858 258.6875 0012893 47.7331 312.4934 14.13100718408273
TDRS 2
1 19548U 88091B 96235.83914265 -.00000199 00000-0 10000-3 0 2274
2 19548 2.6204 71.5439 0005539 123.1606 163.7588 1.00266729 16191
Glonass 40
1 19749U 89001A 96233.00132129 .00000015 00000-0 10000-3 0 6154
2 19749 65.2435 83.2067 0006020 250.8656 109.1490 2.13101564 59217
Glonass 41
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2 19750 65.2501 83.2118 0006255 240.3467 119.6694 2.13101805 59270
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2 19802 55.3640 107.8996 0029061 150.3151 209.9426 2.00550985 55094
Akebono
1 19822U 89016A 96238.87252884 .00006973 00000-0 34787-3 0 7689
2 19822 75.0655 83.4747 3743167 53.6122 335.5064 7.93086433172217
Meteor 2-18
1 19851U 89018A 96237.50623653 .00000014 00000-0 -10004-5 0 5012
2 19851 82.5185 226.5962 0014904 138.1724 222.0578 13.84415244378281
MOP-1
1 19876U 89020B 96232.29949956 -.00000146 00000-0 10000-3 0 2084
2 19876 2.1164 71.2092 0018173 289.3949 70.7586 0.97110860 7239
TDRS 3
1 19883U 89021B 96239.16632523 -.00000289 00000-0 00000+0 0 2493
2 19883 0.0345 125.3117 0004834 79.8871 148.3155 1.00267251 27293
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2 20061 54.1565 283.5510 0161384 220.6399 138.2203 2.00562419 52842
Nadezhda 1
1 20103U 89050A 96238.76231927 .00000065 00000-0 53328-4 0 8796
2 20103 82.9558 57.3639 0036230 218.9898 140.8645 13.73869438358238
GPS BII-03
1 20185U 89064A 96233.15671718 -.00000008 00000-0 10000-3 0 3078
2 20185 55.1522 108.5379 0030006 346.3709 13.9731 2.00683833 51319
GMS 4
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2 20217 1.9321 74.7185 0001213 201.1372 258.2343 1.00261792 26121
INTERCOSMOS 24
1 20261U 89080A 96237.10049272 .00000032 00000-0 87076-5 0 5228
2 20261 82.5916 227.3376 1240338 247.2208 99.3348 12.47344942314374
GPS BII-04
1 20302U 89085A 96237.16490679 .00000059 00000-0 10000-3 0 2717
2 20302 53.2292 223.3865 0035084 187.4509 172.5069 2.00567245 50191
Meteor 3-3
1 20305U 89086A 96238.08360570 .00000044 00000-0 10000-3 0 6290
2 20305 82.5450 76.9544 0006875 128.0059 232.1683 13.04418302327184
COBE
1 20322U 89089A 96234.11103886 .00000287 00000-0 21102-3 0 2376
2 20322 98.9425 248.2668 0008339 213.5040 146.5600 14.03459185346030
Kvant-2
1 20335U 89093A 96237.78507444 .00005941 00000-0 73173-4 0 6720
2 20335 51.6483 138.4861 0011104 92.4151 267.8223 15.61778465600626
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COSMOS 2054 (Altair-1)
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2 20391 3.9846 62.9849 0004362 83.2626 195.8253 1.00269055 24677
SPOT 2
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2 20437 98.5424 317.0873 0011551 12.3006 347.8442 14.29928624343508
UO-15
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2 20438 98.5342 318.7813 0010727 6.2966 353.8347 14.29235607343931
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2 20439 98.5563 323.2997 0011509 1.5449 358.5764 14.29982516344084
DO-17
1 20440U 90005E 96237.73469262 -.00000026 00000-0 66418-5 0 46
2 20440 98.5563 322.4735 0012082 4.9578 355.1723 14.30123894343898
WO-18
1 20441U 90005F 96235.27721686 -.00000018 00000-0 97449-5 0 88
2 20441 98.5588 319.9917 0012371 11.5471 348.5991 14.30093189343544
LO-19
1 20442U 90005G 96238.76598840 .00000030 00000-0 28292-4 0 48
2 20442 98.5605 323.9462 0012834 0.4702 359.6490 14.30203355344066
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2 20452 54.0476 164.0680 0060611 89.2212 271.4776 2.00574264 48134
MOS-1B
1 20478U 90013A 96238.25176298 .00000088 00000-0 10000-3 0 9688
2 20478 99.1209 306.8807 0006749 52.8212 307.3564 13.93965903254176
DEBUT
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2 20479 99.0235 249.6249 0540601 329.0581 27.9665 12.83343206306671
FO-20
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2 20480 99.0238 247.3602 0540711 335.3540 22.2542 12.83233938306336
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1 20491U 90013D 96235.25376283 -.00000515 00000-0 -91024-3 0 2692
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1 20496U 90015A 96237.25884943 .00000655 00000-0 26603-4 0 6798
2 20496 43.1010 174.7378 0009055 138.0667 222.0884 15.35807967364290
Nadezhda 2
1 20508U 90017A 96238.84006412 .00000057 00000-0 44793-4 0 8807
2 20508 82.9548 191.7941 0044425 169.9831 190.2221 13.73511249325453
OKEAN 2
1 20510U 90018A 96238.20284090 .00000077 00000-0 73300-5 0 5212
2 20510 82.5254 161.6924 0020561 89.7444 270.6125 14.78620496349876
GPS BII-07
1 20533U 90025A 96231.49686769 -.00000006 00000-0 00000+0 0 2499
2 20533 54.5119 284.5931 0051148 75.6022 285.0563 2.00570750 46839
PegSat
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HST
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Glonass 44
1 20619U 90045A 96237.59219171 -.00000040 00000-0 10000-3 0 3205
2 20619 65.1690 321.6197 0025593 204.5878 155.3424 2.13102737 48769
Glonass 45
1 20620U 90045B 96238.18017404 -.00000039 00000-0 10000-3 0 3048
2 20620 65.1524 321.5843 0008518 63.4387 296.7013 2.13102724 48815
Glonass 46
1 20621U 90045C 96239.18629697 -.00000037 00000-0 10000-3 0 9148
2 20621 65.1691 321.6154 0009529 195.2647 164.7616 2.13102325 48835
Kristall
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ROSAT
1 20638U 90049A 96235.80484985 -.00000193 00000-0 61922-5 0 5863
2 20638 52.9909 359.0527 0010241 334.5751 25.4732 15.07440434342365
Meteor 2-19
1 20670U 90057A 96239.24123282 .00000011 00000-0 -31399-5 0 601
2 20670 82.5454 292.2296 0017406 59.3505 300.9367 13.84127935311435
CRRES
1 20712U 90065A 96239.09187563 .00000569 00000-0 50714-3 0 3196
2 20712 17.5621 222.4813 7192512 70.9758 350.0520 2.35760347 44764
GPS BII-08
1 20724U 90068A 96237.80172546 -.00000001 00000-0 00000+0 0 978
2 20724 54.9945 105.9027 0126896 186.0290 174.1440 2.00563622 42828
Feng Yun1-2
1 20788U 90081A 96239.20819224 -.00000029 00000-0 88136-5 0 28
2 20788 98.8118 242.2726 0016049 305.7915 54.1692 14.01403569305904
Meteor 2-20
1 20826U 90086A 96235.36922655 -.00000027 00000-0 -37953-4 0 122
2 20826 82.5239 231.6579 0013400 341.4869 18.5803 13.83634382297997
GPS BII-09
1 20830U 90088A 96237.85669907 -.00000010 00000-0 00000+0 0 739
2 20830 55.9906 48.5007 0068839 95.4309 265.3946 2.00566300 43461
GPS BIIA-10
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2 20959 55.1693 108.0456 0110921 235.1676 123.8607 2.00560731 42012
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1 20978U 90105A 96238.79867616 .00000077 00000-0 43361-4 0 7385
2 20978 98.5936 309.3442 0078850 325.7495 33.8617 14.32672072299682
Glonass 47
1 21006U 90110A 96237.80202346 .00000040 00000-0 10000-3 0 8764
2 21006 65.2178 82.3814 0056040 190.6386 169.3373 2.13102744 44479
Glonass 48
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2 21007 65.2230 82.5478 0032056 180.0465 179.9899 2.13102490 44411
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2 21008 65.2157 82.4053 0008780 272.5743 87.4099 2.13098840 44453
AO-21
1 21087U 91006A 96237.50538918 .00000094 00000-0 82657-4 0 7342
2 21087 82.9392 271.1418 0036791 17.8724 342.3716 13.74570905279399
RS-12/13
1 21089U 91007A 96239.23660760 .00000072 00000-0 60682-4 0 9137
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MOP-2
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Nadezhda 3
1 21152U 91019A 96238.80209835 .00000045 00000-0 31704-4 0 5684
2 21152 82.9217 94.2375 0041888 146.8031 213.5766 13.73536279273305
Glonass 50
1 21216U 91025A 96236.41272186 -.00000040 00000-0 10000-3 0 5283
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Glonass 51
1 21217U 91025B 96235.54574455 -.00000058 00000-0 10000-3 0 9330
2 21217 64.9274 321.2168 0013869 223.9002 136.0260 2.13101214 41924
Glonass 52
1 21218U 91025C 96236.59434442 -.00000040 00000-0 10000-3 0 4086
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2 21225 28.4599 78.9192 0002683 244.0637 115.9689 15.44219940180267
Meteor 3-4
1 21232U 91030A 96238.76341507 .00000050 00000-0 10000-3 0 9151
2 21232 82.5385 323.5989 0013920 352.5312 7.5598 13.16472146256695
NOAA 12
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OKEAN 3
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Nadezhda 4
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Progress M-32
1 24071U 96043A 96238.93831350 .00000334 00000-0 10000-4 0 330
2 24071 51.6498 132.6912 0012282 96.5032 263.7704 15.61480841 3946
1996043B
1 24072U 96043B 96216.39484756 .26807532 12838-4 14270-3 0 163
2 24072 51.6265 245.3338 0003417 296.2379 63.8165 16.54813509 420
ITALSAT F2
1 24208U 96044A 96229.84906834 -.00000218 00000-0 00000+0 0 159
2 24208 0.1678 256.0521 0105549 47.1501 28.5181 1.01846012 90
TELECOM 2D
```

```
1 24209U 96044B 96237.06993220 .00000008 00000-0 00000+0 0 121
2 24209 0.4231 273.2611 0002995 169.2527 277.5247 1.00347469 343
1996044C
1 24210U 96044C 96223.93772132 -.00000394 00000-0 10000-4 0 47
2 24210 5.4294 117.8507 7294336 179.2896 182.7981 2.28186586 35
1996044D
1 24211U 96044D 96235.72604973 .00029517 00000-0 48362-2 0 143
2 24211 5.5181 112.7161 7288810 189.2604 139.2582 2.28438161 303
1996045A
1 24273U 96045A 96238.58219716 .00014342 00000-0 82230-1 0 226
2 24273 62.8438 247.0847 7423235 280.2428 10.8506 2.00639571 211
1996045B
1 24274U 96045B 96239.20743457 .00360134 78959-5 43472-3 0 224
2 24274 62.8042 205.5834 0152545 132.6399 228.7768 15.88943759 1791
1996045C
1 24275U 96045C 96238.42094197 .01222513 80594-5 58985-3 0 185
2 24275 62.8076 208.3069 0150398 125.2385 236.2951 15.99948746 1675
1996045D
1 24276U 96045D 96235.09869164 .00001337 00000-0 10000-3 0 37
2 24276 62.8049 247.5823 7459654 280.1323 9.5815 1.96694918 148
ADEOS
1 24277U 96046A 96238.90557367 -.00052892 00000-0 -23094-1 0 221
2 24277 98.6200 314.7740 0014690 160.4262 199.7483 14.24175418 1263
JAS 2
1 24278U 96046B 96236.85678606 -.00000038 00000-0 00000+0 0 71
2 24278 98.5750 312.0051 0350856 236.1056 120.6257 13.52624959 921
1996046C
1 24279U 96046C 96238.74613071 -.00000037 00000-0 00000+0 0 87
2 24279 98.7542 313.6207 0300101 221.8963 135.8742 13.46328060 1193
Soyuz TM-24
1 24280U 96047A 96237.78507444 .00005941 00000-0 73173-4 0 173
2 24280 51.6483 138.4861 0011104 92.4151 267.8223 15.61778465600629
1996047B
1 24281U 96047B 96234.52902945 .24767605 12666-4 25953-3 0 320
2 24281 51.6202 153.3934 0002903 126.7041 233.9304 16.50538701 659
Zhongxing 7
1 24282U 96048A 96238.80146168 .00017333 00000-0 44799-3 0 126
2 24282 27.2671 113.7989 5640422 189.3180 152.6252 4.68455037 359
1996048B
1 24283U 96048B 96238.83440606 .00024421 00000-0 80666-3 0 134
2 24283 27.2590 113.8073 5647658 189.3504 152.6723 4.66369737 355
FAST
1 24285U 96049A 96237.14938213 .00000593 00000-0 55914-4 0 50
2 24285 82.9996 177.0456 2207792 156.9633 214.8164 10.81682092 304
1996049B
1 24286U 96049B 96239.18591042 .00003849 00000-0 36359-3 0 128
2 24286 82.9894 176.1040 2214065 153.4480 219.9334 10.81395909 510
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1642. problems with satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: p000655b@pbfreenet.seflin.lib.fl.us
Message-ID: <4vuqhq$q7a@nntp.seflin.lib.fl.us>
Source record: 21620

I have a problem with, AO-10 AMD AO-13, They are very week.
Does anyone have this same problem?
THANKS Richard Bascom.

--

Richard Bascom
p000655b@pbfreenet.seflin.lib.fl.us

1643. Re: wx satellites frqs?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <4vunri$70@service3.uky.edu>
Source record: 21621

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

1644. Re: 'modes.dat' for 'SatTrack'

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Manfred Bester <manfred>
Message-ID: <4vvdvl$huj@agate.berkeley.edu>
Source record: 21622

> Can someone suggest where/how i can get a current version of 'modes.dat'
> (which contains frequencies and modes of operation), including, for
> example, JAS-2? It seems like a real waste to get the whole SatTrack
> package just to get that one file. Or, did i miss something and there's
> some easy way of getting that?
>
> -- KD6PAG

It seems the best solution would be to place up-to-date resource files
on the SatTrack web page. We'll make a 'User Resources' entry and provide
some updated resource files there. Just give us a day...

The new SatTrack web page can be found at:

http://www.bester.com/sattrack.html

This page contains the latest patches for version 3.1 and a description
of our new product SatTrack V4.0.

-Manfred Bester

==
Manfred Bester http://www.bester.com
Bester Tracking Systems mbester@bester.com
P.O. Box 9948 (510) 849-9922
Berkeley, CA 94709
==

1645. Re: I WOULD LIKE TO BE A MANAGER

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: jaminge@pb2esac.esac.pacbell.com
Message-ID: <4vvmep$avv@gw.PacBell.COM>
Source record: 21623

In article <32223BAD.416C@facil.umass.edu>, <naglieri@facil.umass.edu> wrote:
>Hello,
>
>My name is Tony Naglieri my call is N1NYD qth Ware, Ma. home telephone is
>413-967-7426. I would like to help out some ham by beening a manager.
>
Yeah, Tony, I've had days like that. I always figured I
ought to wait til I got a manager who was a little shrimp
of a guy before I decided to "been" one of them.

Heck, just file a grievance. It'll drive him nuts!

-John
AC6VV

1646. mir no rx

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <4vvgljINN1t3@faatcrl.faa.gov>
Source record: 21624

I was building a Lindenblad antenna system for sat work
(lhcp and rhcp), and was using the recorded message on 437.925
to check my progress. This signal seems to be off the air. Has
anyone had any luck in the last two days with Mir? The freqs
I'm using are 437.950 and 437.925 the 950 is the repeater
output, but I have heard nothing on that either. Is there any
70cm sat freqs that are more reliable I have FM and paket.
Thanks in advance for any info.

73 Jeff KB2WQM

1647. Re: lower loss at 150ft rg-11 or 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <50023c$1l0f@ns5-1.CC.Lehigh.EDU>
Source record: 21625

```
>: Yes, as the title said..."rg-11 or 9913"
>: i need to run 150ft of cable, but here is my question:
>: which has less loss for a 150ft run...
>: at 3.7-4.2 GHz with 9913
>: or .95 - 1.45GHz with rg-11 <or rg-6??>
>
>Well, aside from the impedance/freq differences, the chart on the wall says:
>(length adjusted)
>
>4.0 GHz w/9913 ~16db loss
>1.2 GHz w/RG11 ~12db loss

THANK YOU!!!!!!!! finally someone has answered my question!!

was it that hard to understand ppl?!
gezz

DAvid
thanks again
|-------------------------------------------------------------------------|
| David Roseman | c002@lehigh.edu |
| | The Flying HAm - BBS |
| Utopia Telecommunications | Technomage - BBS |
| 610.838.2989 | N3SQE/1 - HAm |
| (Parttime system) | |
|-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|
```

1648. Re: Visual MIR siteing

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: rusaerog@mcs.net
Message-ID: <rusaerog-260896201531@rusaerog.pr.mcs.net>
Source record: 21765

In article <4vsjn5$87p@news1.cle.ab.com>, bjp@cle.ab.com (Brian J.
Pennebaker) wrote:
> I have question regarding MIR. I live in Cleveland and the last
> couple of nights I was able to see MIR go by. About a minute later
> behind MIR was another object on the same path. I checked my tracking
> program and nothing was apparent to me to be another satellite. Could
> anyone tell me what it could be?

Its the Progress M-32 that was docked a couple weeks ago. It was removed to
make way for the Soyuz with the Mir-22 crew. The Progress is parked and
will be
redocked after the Mir-21 crew leaves.

---------------------------------+-------------------------
Dennis Newkirk | http://www.mcs.net/~rusaerog/
Editor - Russian Aerospace Guide | email: rusaerog@mcs.net
---------------------------------+-------------------------

1649. 'modes.dat' for 'SatTrack'

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Tovar <tvr@alive.com>
Message-ID: <322252A2.167E@alive.com>
Source record: 21766

Can someone suggest where/how i can get a current version of 'modes.dat' (which contains frequencies and modes of operation), including, for example, JAS-2? It seems like a real waste to get the whole SatTrack package just to get that one file. Or, did i miss something and there's some easy way of getting that?

-- KD6PAG

1650. Re: Sat Tracker Idea

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Marinus Willemstijn <willemma@telkom19.telkom.co.za>
Message-ID: <3222A1FC.46@telkom19.telkom.co.za>
Source record: 21767

Benjamin K. Derry wrote:
>
> Hi I have this idea about a client/server system where by there would
> be a sat tracker client and a server element database. The client
> would access the element database through the internet using TCP/IP.
> So that the client element database would always be up-to-date. All of
> the tracking calculations would be up to the client. The server would
> only handle DB requests.
>
> My 2 cents worth,
> Benjamin K. Derry

I think that is a great idea!

Marinus ZS6MAW

1651. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: billn@PEAK.ORG
Message-ID: <4vtu78$8r@bashir.peak.org>
Source record: 21768
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

Gregg (gregglns@ix.netcom.com) wrote:
: >
: >After deciphering "If you can read this, you really ought to get out
: >more," I decided the effort greatly outweighed the rewards!

: Jeff, you're using the built-in newsreader in the Netcruiser software.
: It's crap. Try using Free Agent -- and, if you like it, you can buy
: Agent -- and you can do ROT13 with a couple of mouse clicks. Much
: more importantly, you can also do most of your Usenet news stuff
: offline.

Or, if you use 'tin' as the newsreader, you can do so by simply pressing
a lower case d key while in read mode.

Bill

1652. Portable VHF mark ALINCO model DJ180E

Newsgroup: rec.radio.amateur.space
Date: 1996-08-27 00:00:00 UTC
From: Paolo Tealdi <s76511@athena.polito.it>
Message-ID: <3222B28E.41C67EA6@athena.polito.it>
Source record: 21769
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.amateur.scanner,rec.radio.amateur.shortwave,rec.radio.amateur.swap

A friend of mine is a radio amateur and he has got this transceiver
radio:
RTX mark ALINCO
ELECTRONICS INC. JAPAN
Portable VHF
model DJ180E

He has got two questions about this radio:
1) How can he modify his radio to extend the band from 144/146 MHz to
130/170 MHz?
2) Can he receive the "manual for use" of this radio? (A photocopy of
the manual is acceptable too!)

For details, please conctact me through my personal e-mail address.
Thank you very much!

Paolo Tealdi - Italy
E-mail: s76511@athena.polito.it
WWW: http://www.polito.it/~s76511/index.html

1653. Re: Ham-Space Digest V96 #261

Newsgroup: rec.radio.amateur.space
Date: 1996-08-28 00:00:00 UTC
From: sfylaqc@scfn.THpl.lib.fl.US
Message-ID: <Pine.SUN.3.93.960827212542.23530J-100000@scfn>
Source record: 21626

unsubscribe

1654. Re: Visual MIR siteing

Newsgroup: rec.radio.amateur.space
Date: 1996-08-28 00:00:00 UTC
From: Brian Gibbs <Brian@brimar.demon.co.uk>
Message-ID: <841263945snz@brimar.demon.co.uk>
Source record: 21627

In article <rusaerog-260896201531@rusaerog.pr.mcs.net>
rusaerog@mcs.net "Dennis Newkirk" writes:

> In article <4vsjn5$87p@news1.cle.ab.com>, bjp@cle.ab.com (Brian J.
> Pennebaker) wrote:
> > I have question regarding MIR. I live in Cleveland and the last
> > couple of nights I was able to see MIR go by. About a minute later
> > behind MIR was another object on the same path. I checked my tracking
> > program and nothing was apparent to me to be another satellite. Could
> > anyone tell me what it could be?
>
> Its the Progress M-32 that was docked a couple weeks ago. It was removed to
> make way for the Soyuz with the Mir-22 crew. The Progress is parked and
> will be
> redocked after the Mir-21 crew leaves.
>
> ---------------------------------+-------------------------
> Dennis Newkirk | http://www.mcs.net/~rusaerog/
> Editor - Russian Aerospace Guide | email: rusaerog@mcs.net
> ---------------------------------+-------------------------
>

Thanks for the above Dennis, I saw it too. Not a bright as MIR
but on the same track sure enough. You have satisfied my curiosity!

Regards.....Brian
--

Brian Gibbs Email: brian@brimar.demon.co.uk
Neston, Wiltshire. UK Packet: g3mbn @ gb7sdn.#49.gbr.eu

1655. Re: SAMS Needs Your Electronics URLs

Newsgroup: rec.radio.amateur.space
Date: 1996-08-28 00:00:00 UTC
From: Ted Alexander <tealexan@ca.oracle.com>
Message-ID: <3224733E.76B8@ca.oracle.com>
Source record: 21628
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.cb,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.video.satellite.dbs,rec.video.satellite.europe,rec.video.satellite.misc,rec.video.satellite.tvro

Kenneth E. Harker wrote:
>
> In article <321fa55b.3452629@news.blarg.net>, future@blarg.net (Tim
> Gerchmez) wrote:
>
> > On 23 Aug 1996 12:05:57 GMT, Phil Wakely <pwakely@scigen.co.uk> wrote:
> > >
> > >future@blarg.net (Tim Gerchmez) wrote:
> > >>On Wed, 21 Aug 1996 04:46:16 GMT, jafo@cheetah.net (Gregg) wrote:
> > >>
> > >>
> > >>>>Vs lbh pna ernq guvf, lbh ernyyl bhtug gb trg bhg zber
> > >>>
> > >>>Url! Jung xvaq bs n penpx vf gung? :-D
> > >>
> > >>Urururur.. V gubhtug EBG13 jnf bhg bs qngr.. guvf vf gur svefg gvzr
> > >>V'ir frra vg hfrq va dhvgr n juvyr ;)
> > >>
> > >
> > >Jung vf/jnf EBG13 ??
> > >
> >
> > Tvira gung lbh rapbqrq gur nobir, lbh onfvpnyyl nyernql xabj jung vg
> > vf. Vg'f n fvzcyr Hfrarg rapbqvat zrgubq (sbetbg jurer vg bevtvangrq,
> > fbzrbar ryfr pbhyq cebonoyl gryy lbh). V unqa'g rire frra vg hfrq
> > orsber hagvy guvf guernq fgnegrq. Zl arjfernqre (Ntrag .99S) vapyhqrf
> > n EBG13 rapbqre/qrpbqre, fb V'z abg qbvat guvf ol unaq ;)
>
> Gur svefg checbfr V rire fnj EBG-13 hfrq sbe (onpx va 1991 be gurernobhgf)
> jnf gb uvqr rvgure gur chapuyvar bs be na ragver wbxr gung jnf cbgragvnyyl
> bssrafvir be bs n evfdhr angher, cercraqrq jvgu n pyrnegrkg qvfpynvzre, fb
> nf gb nyybj gur vaqvivqhny ernqre gur bcgvba bs jurgure be abg gb ivrj gur
> zngrevny. V'z fher gurer ner bgure tbbq ernfbaf sbe vg nf jryy.
>
> Nf gb jurer vg bevtvangrq, vg'f n irel fvzcyr Pnrfne pvcure gung'f orra
> nebhaq n ybat juvyr (fvapr ng yrnfg gur qnlf bs Whyvhf Pnrfne) - lbh whfg
> fuvsg rirel yrggre 13 fcnprf va gur nycunorg (jenccvat nebhaq nf
> arprffnel.) V'z abg pregnva jung "EBG" zrnaf be jurer vg pnzr sebz,
> gubhtu.
>
ROT-13 => ROTate 13

1656. "New" Amateur Satellite Project

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: lindley@syd.dit.csiro.au
Message-ID: <5031e6$hak_001@syd.dit.csiro.au>
Source record: 21629

The Australian Space Research Institute (a non-profit
space R&D group in Australia) is currently working on
a microsatellite project.

This project has been going for several years at a
pretty slow rate of progress, primarily due to lack
of funding opportunities here in Australia. Despite that,
some progress has been made in developing the overall
system design, with detailed studies completed, and some
fabrication completed on the spacecraft structure. Most
of this work has been done as university student projects.

Due to a significant change in the local situation, with
healthier possibilities for contributions and grants, we
are considering ramping up this development effort.

We have previously discussed the possibility of acquiring
the AMSAT-NA microsat plans, but could not obtain sufficient
funding to purchase them from AMSAT-NA (ie. $US15 000).

Does anyone know of any additional sources of this kind
of detailed technical information? We can continue to
do this alone, but it would be nice to have the opportunity
to discover pitfalls before we attempt to build something
(and especially before we attempt to launch it!).

Any help will be greatly appreciated.

regards, Craig Lindley

Craig A. Lindley
Research Leader, Knowledge-base Technology and
Artificial Intelligence

CSIRO Division of Information Technology
Locked Bag 17
North Ryde NSW 2113 Australia
Ph: +61-2-325-3150

1657. SPACE SHUTTLE FREQUENCIES FAQ->STS-79

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: sxi@indirect.com
Message-ID: <502n8h$a8m@globe.indirect.com>
Source record: 21630

STS-79 is launching soon! Check out the latest frequency listing and other related info regarding monitoring shuttle activities at the following URL

73's
<><><><><><><><><><><><><><><><><><><><><><><><><><><><><>
Roger Eastman sxi@indirect.com
http://www.indirect.com/www/sxi/rogers.htm
<><><><><><><><><><><><><><><><><><><><><><><><><><><><><>

1658. Re: Visual MIR siteing

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <503ko9$9h5@host-3.cyberhighway.net>
Source record: 21631

bjp@cle.ab.com (Brian J. Pennebaker) wrote:

> I have question regarding MIR. I live in Cleveland and the last
> couple of nights I was able to see MIR go by. About a minute later
> behind MIR was another object on the same path. I checked my tracking
> program and nothing was apparent to me to be another satellite. Could
> anyone tell me what it could be?
>
>73,
>
>Brian
>

Hi Brian,

Thats great that you were able to watch the MIR pass over, looks neet huh? A couple years ago while I was driving my semi in the mountains near Sisters Oregon, remembering that a visible pass of the space shuttle was that morning, I pulled the semi over to the side of the road, fired up the 2m and called for W5RRR, I was shocked to see AND hear the shuttle coming over the horizon, I had about a minute qso with the shuttle before they moved onto another station. They said that I was (to their knowledge) the only "semi mobile" to make a contact on that mission! It was truely kewl to see them go over my head while I was talking to a crew member at the same time. I'll cherrish that morning in my memory for a long time.

Anyway, to answer your question, SAC is currently tracking tens of thousands of space "things".. From the smallest of lost bolts, to highly top-secret sat's. It is very likely that you were observing one of these "unlisted" sat's.

Take care and 73's

John KB7VZL

1659. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: sfjcr@scfn.THpl.lib.fl.US
Message-ID: <Pine.SUN.3.93.960829125443.25633A-100000@scfn>
Source record: 21632

UNSUBSCRIBE

1660. Radio Astronomy

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: rs93463@midnet.com
Message-ID: <398000094.72528923@midnet.com>
Source record: 21633

Hi uk.radio.amateur!
Help required, does anybody have a current
contact address for "BARAS" British Amateur Radio Astonomy Society. And can
anybody help with info and advice on setting up a radio telescope to
monitor solar emisionns. Any info , help or advice will be much apreciated.
73 de Steve.
Stephen Reader RNARS 0951. RS93463

--- OffRoad 1.9e registered to Stephen Reader

1661. Re: Looking for C64 Sat prg

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: johnoxo@aol.com
Message-ID: <504rhq$bu2@newsbf02.news.aol.com>
Source record: 21634

Alex wrote that he was looking for a nice program
for the Commodore C-64 that tracked satellites, called
VR85.

The program is reviewed in 'The Beginners Column' of
Satellite Times May/June issue (Vol 2, No. 5).

It can be obtained by sending $20.00 (postage paid) to
RLD Research,
Box 888,
McCloud,
CA 96057.

You can add the elements (available from this newsgroup
or from http://www.grove.net/~tkelso) and it can handle
20 satellites. Its very slow, but works well, according to
the article.

Good luck.

John Donkersley
Johnoxo@AOL.COM

1662. MIR PRIRODA module status

Newsgroup: rec.radio.amateur.space
Date: 1996-08-29 00:00:00 UTC
From: Tovar <tvr@alive.com>
Message-ID: <3225FCC4.41C6@alive.com>
Source record: 21635

I asked on the local AMSAT net in the S.F. Bay Area and no one has heard MIR on the 70cm side in several weeks. Voice QSO have been heard on the 2 meter side, and we did hear packet on 145.55 two evenings ago, but neither person was setup to decode AX.25 at the time. So, while the two observers were probably about 50 Km apart, we don't know if the signals were terrestrial or from MIR, as propagation the Bay Area can be interesting at times...

If anyone knows the MIR status, I would appreciate a report, so i can know when to try again with antenna experimentation.

-- KD6PAG (networking old-timer, RF newbie)

1663. Radio Astronomy

Newsgroup: rec.radio.amateur.space
Date: 1996-08-30 00:00:00 UTC
From: rs93463@midnet.com
Message-ID: <398000094.77725659@midnet.com>
Source record: 21636

Hi uk.radio.amateur!
Help required, does anybody have a current
contact address for "BARAS" British Amateur Radio Astonomy Society. And can
anybody help with info and advice on setting up a radio telescope to
monitor solar emisionns. Any info , help or advice will be much apreciated.

73 de Steve.
Stephen Reader RNARS 0951. RS93463

--- OffRoad 1.9e registered to Stephen Reader

1664. Pacsat Software for Linux/X ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-30 00:00:00 UTC
From: Jeff Davis <n9avg@iquest.net>
Message-ID: <3226FC32.1896C9DE@iquest.net>
Source record: 21637

Hello all!

I have been using WiSP for the pacsats for quite sometime.

Now that I have given up windoze and become a Linuz zealot are there any
Linux/X-windows sat tracking/communication packages available?

Thanks,

--
Jeff Davis <n9avg@iquest.net>
PGP Key ID BC53CAF9
http://www.iquest.net/~n9avg

1665. Western Connecticut Hamfest 15-Sep Newtown CT

Newsgroup: rec.radio.amateur.space
Date: 1996-08-30 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <32279EDB.6CE5@ix.netcom.com>
Source record: 21638
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

1666. Mac Sat Software

Newsgroup: rec.radio.amateur.space
Date: 1996-08-31 00:00:00 UTC
From: john@wd1v.mv.com
Message-ID: <john-3108960644310001@wd1v.mv.com>
Source record: 21639

A trip to my home page reveals there are many good files and programs for amateur radio operators that want to use Mac computers.

<http://www.mv.com/ipusers/wd1v/>

* Ham Radio Test Simulators - where you can go from Novice to Extra Class practicing the actual tests right on your Mac! Check out the info on the new NO CODE license or scramble your neurons and learn Morse on the Mac too!

* Macnet Roster - a virtual "Whos Who" HyperCard stack with more than 700 entries giving the names, addresses, phone numbers, of radio operators all over the world that are using Macs. Check out their projects and their passions and put a design on your Mac Radio future when you see what neat things are being done!

* Mac Ham Radio Software Listing - as the name implies, its "The List" of the latest - much of it with FTP links so what you see is what you can get with just a click.

* Ham Radio.FAQ - compiled on a Mac with a lot of links to great Mac FTP sites for radio, electronic engineering, and similar data.

73,

John D. Seney |_|_|_|_| john@wd1v.mv.com
144 Pepperidge Dr |_| |_| page 5956779@skymail.com
Manchester, NH 03103-6150 |_|_ _|_| wd1v@wb1dsw.nh.usa.noam
voice mail 603.533.3472 | | | | | fax 603.627.1623

www.mv.com/ipusers/wd1v
Digital Scope.FAQ + Application Notes

1667. Re: Pacsat Software for Linux/X ?

Newsgroup: rec.radio.amateur.space
Date: 1996-08-31 00:00:00 UTC
From: mackall@clark.net
Message-ID: <mackall-3108961003160001@mackall.clark.net>
Source record: 21640

Yes. Look on the AMSAT web page, there is some very good software for Linux.

gil...

In article <3226FC32.1896C9DE@iquest.net>, Jeff Davis <n9avg@iquest.net> wrote:

> Hello all!
>
> I have been using WiSP for the pacsats for quite sometime.
>
> Now that I have given up windoze and become a Linuz zealot are there any
> Linux/X-windows sat tracking/communication packages available?
>
> Thanks,
>
> --
> Jeff Davis <n9avg@iquest.net>
> PGP Key ID BC53CAF9
> http://www.iquest.net/~n9avg

1668. Re: Visual MIR siteing

Newsgroup: rec.radio.amateur.space
Date: 1996-08-31 00:00:00 UTC
From: rosco@ior.com
Message-ID: <50af14$8ek@express.ior.com>
Source record: 21641

rb@cyberhighway.net (John Jordan) wrote:

>Anyway, to answer your question, SAC is currently tracking tens of
>thousands of space "things".. From the smallest of lost bolts, to
>highly top-secret sat's. It is very likely that you were observing
>one of these "unlisted" sat's.

Sorry, but should surly think that if it was something large enough
to see, and something that was that close to the MIR that it would be
listed. As was said before, it was M-32. A well "Listed" sat....

Rosco

1669. FS: KLM VHF Amp

Newsgroup: rec.radio.amateur.space
Date: 1996-08-31 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <3228EE26.4E20@amsat.org>
Source record: 21642

I have a KLM PA10-90BL VHF FM/SSB amp for sale. Includes documentation.

$125 shipping included.

Mark Fossum n0nsv@amsat.org

1670. Re: Pacsat Software for Linux/X ?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-01 00:00:00 UTC
From: tsellic@ibm.net
Message-ID: <50cbka$2qf2@news-s01.ny.us.ibm.net>
Source record: 21643

In <3226FC32.1896C9DE@iquest.net>, Jeff Davis <n9avg@iquest.net> writes:
>Hello all!
>
>I have been using WiSP for the pacsats for quite sometime.
>
>Now that I have given up windoze and become a Linuz zealot are there any
>Linux/X-windows sat tracking/communication packages available?
>
>Thanks,
>
>--
>Jeff Davis <n9avg@iquest.net>
>PGP Key ID BC53CAF9
>http://www.iquest.net/~n9avg

Check out SatTrack v3.1. It offers real-time tracking of
over 500 satellites, text and X graphics displays of single
or multiple satellites. It can also control antennas and
radios. Neat stuff, IMHO.

Terry WA9TTY

1671. Re: Pacsat Software for Linux/X ?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-01 00:00:00 UTC
From: tsellic@ibm.net
Message-ID: <50cc6h$45do@news-s01.ny.us.ibm.net>
Source record: 21644

In <50cbka$2qf2@news-s01.ny.us.ibm.net>, tsellic@ibm.net writes:
>Check out SatTrack v3.1. It offers real-time tracking of

Duh, forgot to tell you where to get it!
It's available from AMSAT http://128.54.16.15.
They also have other programs broken down into
groups based on operating systems, so they also have
other Linux software

Terry WA9TTY

1672. tsr-80 for packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-01 00:00:00 UTC
From: n3tuk@idsonline.com
Message-ID: <50d15v$4n1@news2.cais.com>
Source record: 21645
Cross-posted to: rec.radio.amateur.space,rec.ha.radio.packet

Hi
i just picked up at a flea market a used tsr-80 computer without manual
and i just wondering if I can use it for packet..?
Any info will be welcome!!

luis/n3tuk

1673. Re: MIR PRIRODA module status

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: Tovar <KD6PAG@alive.com>
Message-ID: <322A3A1D.41C6@alive.com>
Source record: 21646

> It is quite easy to determine if a signal is from Mir. Watch the
> frequency of the transmission. For a space signal you will observe
> a phenomenon called doppler shift: the signal will start out on a
> higher frequency than specified, and it will become lower and lower
> during the pass. On 2 metres the difference will be 3-4 KHz, so it
> should be easily observable. On 70 cm it is about 10 KHz, so it is
> enough to miss the signal when you are not prepared.

Agreed! Fading and timing are also relevant, and both observers
were not willing to say that it was definitely Mir, but might be.
It's not also that either observer couldn't determine where the
signal was coming from, but rather that, at least in my case, this
was a background task and at the time, this was considered less
important than the foreground task to determine the source of the
signals.

The point of the posting was to inquire about the 70 cm side, that
is, has anyone heard Mir on 70 cm in the past several weeks, or know
why not?
-- KD6PAG

1674. Re: tsr-80 for packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.960901214459.5492B-100000@spacelink>
Source record: 21647
Cross-posted to: rec.radio.amateur.space,rec.ha.radio.packet

On 1 Sep 1996, Luis Velis wrote:

> Hi
> i just picked up at a flea market a used tsr-80 computer without manual
> and i just wondering if I can use it for packet..?
> Any info will be welcome!!
>
> luis/n3tuk
>

Luis: I have no information about the computer adaptation, but I know
that many local hams are using it for packet. I will forward your
message to a fellow who might be able to help.
-Dick

>

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

1675. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609020912.CAA09691@UCSD.EDU>
Source record: 21648

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
```

>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

1676. immarsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: johliott@minyos.its.rmit.EDU.AU
Message-ID: <50ea1j$n7m@aggedor.rmit.EDU.AU>
Source record: 21649

Anybody out there scanning IMMarsat ?. Can you advise me of active freqs
or a web site where they may be some info ?.

--
+--------------------------------------+
| John Elliott AUSTRALIA |
| johliott@minyos.its.rmit.edu.au |
| Amateur VK3CVF |
+--------------------------------------+

1677. WTB: Low Output or Dead High Power Transmitting Tubes

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: jim.b@okisemi.com
Message-ID: <jim.b.33.00080B8A@okisemi.com>
Source record: 21650

I want to buy dead power transmitting tubes. Tubes must not be broken or physically damaged. I'm interested in tubes with power dissapations 250 watts to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

1678. Re: immarsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <322B18C8.6530@amsat.org>
Source record: 21651

John Elliot wrote:
>
> Anybody out there scanning IMMarsat ?. Can you advise me of active freqs
> or a web site where they may be some info ?.

I noticed a good article on Inmarsat in Groves' Satellite Times last
month.

Hope that helps a little.

Mark n0nsv@amsat.org

1679. Re: problems with satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <50ffoa$6h1@sjx-ixn2.ix.netcom.com>
Source record: 21652

In <4vuqhq$q7a@nntp.seflin.lib.fl.us>
p000655b@pbfreenet.seflin.lib.fl.us (Richard Bascom) writes:
>
>I have a problem with, AO-10 AMD AO-13, They are very week.
>Does anyone have this same problem?
> THANKS Richard Bascom.
>
>--
>
>Richard Bascom
>p000655b@pbfreenet.seflin.lib.fl.us
>

Hi Richard,

Both of the satellites you mention have some problems. AO-13 has been at a poor attitude of late for the northern hemisphere. This is being changed today. It should be stronger soon. Work this one while you can. It will be re entering the lower atmosphere in November/December and will be gone.

AO-10 has been "brain dead" for several years. Radiation above the Van Allen Belts has damaged the onboard computer to the point that the bird is no longer under control. The batteries have also gone away. It is possible to use AO-10 when it is in sunlight in fact sometimes it is very good.

You must remember that these satellites are not LEOs and so are truly weak signal stations. The advantage of them is the Doppler is much more stable so you don't have to talk and tune at the same time.

I hope this helps you understand why you receive weak signals from these birds. For more info point your web browser to amsat.org they have a bunch of stuff including timely stuff on the demise of AO-13.

73 Jerry

1680. Help: re pacsats

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: kenn2sqw@aol.com
Message-ID: <50fuua$9am@newsbf02.news.aol.com>
Source record: 21653

I've been involved with the analog sats for over a year now, and am thinking of trying the digital birds next. What suggestions do you have regarding a relatively inexpensive way to get on the pacsats? I'm using a Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

1681. Help: re pacsats

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: kenn2sqw@aol.com
Message-ID: <50fv4m$9fv@newsbf02.news.aol.com>
Source record: 21654

I've been involved with the analog sats for over a year now, and am thinking of trying the digital birds next. What suggestions do you have regarding a relatively inexpensive way to get on the pacsats? I'm using a Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

1682. Re: Radio Astronomy

Newsgroup: rec.radio.amateur.space
Date: 1996-09-02 00:00:00 UTC
From: marty@trucom.com
Message-ID: <50fojo$i9s@thepit.trucom.com>
Source record: 21655

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

1683. Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: h1riley@umassd.edu
Message-ID: <50gbe3$90f@gatekeeper.umassd.edu>
Source record: 21656
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH

Region: Central Indiana

Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
11:00-12:00 UTC

Location: Greentown, Indiana (8 miles east
of Kokomo)

Other states where
the signals will
reach easily: Ohio, Illinois, Michigan, Kentucky

Site Coordinates: approximate for initial antenna heading;
(not for navigating to launch site)
40' 29" North Lat.
85' 58" West Long.

ATV: 439.25 MHz AM NTSC from live camera

VHF/UHF Repeater: Input - 144.30 MHz FM
Dual Output - 444.85 MHz FM
- 52.525 MHz FM

Telemetry: 446.00 MHz FM AX.25 1200 baud packet
GPS/APRS position data

HF Net: 3.869 - 3.871 Mhz SSB

Local repeater
talk-in: probably 146.91 or 147.24

---
launch data courtesy of Malcolm Mallette, WA9BVS
malletem@trader.com

Please email me news of upcoming balloon launches and post-flight
reports for distribution on the Net.

Hank Riley, N1LTV
h1riley@umassd.edu

1684. Re: immarsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: rs@ife.ee.ethz.ch
Message-ID: <slrn52nono.g5t.rs@gillespie.ee.ethz.ch>
Source record: 21657

In article <50ea1j$n7m@aggedor.rmit.EDU.AU>, John Elliot wrote:
>Anybody out there scanning IMMarsat ?. Can you advise me of active freqs
>or a web site where they may be some info ?.

They are at http://www.inmarsat.org/inmarsat/

73,
Rolf

1685. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609030853.BAA04485@UCSD.EDU>
Source record: 21658

```
From smtp Sun Sep 1 07:44 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sun, 1 Sep 96 07:44 PDT
Received: by mail.ucsd.edu; id EAA25872
sendmail 8.6.12/UCSD-2.2-sun
Sun, 1 Sep 1996 04:30:50 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25853
sendmail 8.6.12/UCSD-2.2-sun
Sun, 1 Sep 1996 04:30:47 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 7645
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609011130.EAA25853@mail.ucsd.edu>
Date: Sun, 1 Sep 96 04:30:45 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #267
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sun, 1 Sep 96 Volume 96 : Issue 267

Today's Topics:
FS: KLM VHF Amp
http://www.geocities.com/SiliconValley/3112
Mac Sat Software
MIR PRIRODA module status
Pacsat Software for Linux/X ? (2 msgs)
Visual MIR siteing
Western Connecticut Hamfest 15-Sep Newtown CT

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: Sat, 31 Aug 1996 21:00:06 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: FS: KLM VHF Amp

I have a KLM PA10-90BL VHF FM/SSB amp for sale. Includes documentation.

$125 shipping included.

Mark Fossum n0nsv@amsat.org

Date: Sat, 31 Aug 1996 18:19:21 GMT
From: mod016k1@mo.nettuno.it (Roberto Ferrari)
Subject: http://www.geocities.com/SiliconValley/3112

Date: Sat, 31 Aug 1996 11:44:31 GMT
From: john@wd1v.mv.com (John D. Seney, WD1V, LeCroy T&M 800.553.2769)
Subject: Mac Sat Software

A trip to my home page reveals there are many good files and programs for
amateur radio operators that want to use Mac computers.

<http://www.mv.com/ipusers/wd1v/>

* Ham Radio Test Simulators - where you can go from Novice to Extra Class
practicing the actual tests right on your Mac! Check out the info on the
new NO CODE license or scramble your neurons and learn Morse on the Mac
too!

* Macnet Roster - a virtual "Whos Who" HyperCard stack with more than 700
entries giving the names, addresses, phone numbers, of radio operators
all over the world that are using Macs. Check out their projects and
their passions and put a design on your Mac Radio future when you see
what neat things are being done!

* Mac Ham Radio Software Listing - as the name implies, its "The List" of
the latest - much of it with FTP links so what you see is what you can
get with just a click.

* Ham Radio.FAQ - compiled on a Mac with a lot of links to great Mac FTP
sites for radio, electronic engineering, and similar data.

73,

John D. Seney |_|_|_|_| john@wd1v.mv.com
144 Pepperidge Dr |_| |_| page 5956779@skymail.com
Manchester, NH 03103-6150 |_|_ _|_| wd1v@wb1dsw.nh.usa.noam
voice mail 603.533.3472 | | | | fax 603.627.1623

www.mv.com/ipusers/wd1v
Digital Scope.FAQ + Application Notes

Date: Sat, 31 Aug 1996 11:07:05 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: MIR PRIRODA module status

In <3225FCC4.41C6@alive.com> Tovar <tvr@alive.com> writes:

>I asked on the local AMSAT net in the S.F. Bay Area and no one has
>heard MIR on the 70cm side in several weeks. Voice QSO have been
>heard on the 2 meter side, and we did hear packet on 145.55 two
>evenings ago, but neither person was setup to decode AX.25 at the
>time. So, while the two observers were probably about 50 Km apart,
>we don't know if the signals were terrestrial or from MIR, as
>propagation the Bay Area can be interesting at times...

It is quite easy to determine if a signal is from Mir. Watch the
frequency of the transmission. For a space signal you will observe
a phenomenon called doppler shift: the signal will start out on a
higher frequency than specified, and it will become lower and lower
during the pass. On 2 metres the difference will be 3-4 KHz, so it
should be easily observable. On 70 cm it is about 10 KHz, so it is
enough to miss the signal when you are not prepared.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: Sat, 31 Aug 1996 10:03:16 -0500
From: mackall@clark.net (mackall)
Subject: Pacsat Software for Linux/X ?

Yes. Look on the AMSAT web page, there is some very good software for Linux.

gil...

In article <3226FC32.1896C9DE@iquest.net>, Jeff Davis <n9avg@iquest.net> wrote:

> Hello all!
>
> I have been using WiSP for the pacsats for quite sometime.
>
> Now that I have given up windoze and become a Linuz zealot are there any
> Linux/X-windows sat tracking/communication packages available?
>
> Thanks,
>
> --
> Jeff Davis <n9avg@iquest.net>
> PGP Key ID BC53CAF9
> http://www.iquest.net/~n9avg

Date: Sat, 31 Aug 1996 20:29:10 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: Pacsat Software for Linux/X ?

In <3226FC32.1896C9DE@iquest.net> Jeff Davis <n9avg@iquest.net> writes:

>Hello all!

>I have been using WiSP for the pacsats for quite sometime.

>Now that I have given up windoze and become a Linuz zealot are there any
>Linux/X-windows sat tracking/communication packages available?

Tracking: SatTrack. http://www.primenet.com/~bester/sattrack.html

Communication: there is a program for X but I can't remember the location.
Look in the Hamradio HOWTO.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: Sat, 31 Aug 1996 22:40:35 GMT
From: rosco@ior.com (John KD7AAT)
Subject: Visual MIR siteing

rb@cyberhighway.net (John Jordan) wrote:

>Anyway, to answer your question, SAC is currently tracking tens of
>thousands of space "things".. From the smallest of lost bolts, to
>highly top-secret sat's. It is very likely that you were observing
>one of these "unlisted" sat's.

Sorry, but should surly think that if it was something large enough
to see, and something that was that close to the MIR that it would be
listed. As was said before, it was M-32. A well "Listed" sat....

Rosco

Date: Fri, 30 Aug 1996 23:09:31 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Western Connecticut Hamfest 15-Sep Newtown CT

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT

Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

End of Ham-Space Digest V96 #267
****

1686. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609030917.CAA06366@UCSD.EDU>
Source record: 21659

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
```

>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

1687. Kep Data AUG 30

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: karl_dundee@RedwoodFN.org
Message-ID: <215243822.60374026@RedwoodFN.org>
Source record: 21660

```
SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614
WO-18
```

```
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1688. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: darwin@indy.net
Message-ID: <50i90v$q65@news.indy.net>
Source record: 21661
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

1689. ARLK063 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk063.1996@arrl.org>
Source record: 21662
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063
From ARRL Headquarters
Newington, CT September 3, 1996
To all radio amateurs

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
```

```
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1690. NEW URL, please update !!

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: wa4pgm@luna.moonstar.com
Message-ID: <NEWTNews.841806938.7705.wa4pgm@wa4pgm.moonstar.com>
Source record: 21663
Cross-posted to: uk.radio.amateur,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.dx,rec.radio.amateur.antenna,rec.boats.paddle,aus.radio.amateur.misc

My URL has changed. please bookmark it and THANKS for the
GREAT response so far !!!

Amateur Radio -- Civil War -- Kayaking -- Nascar
Blue Ridge River Runners
Central Virginia Contest Club

http://luna.moonstar.com/~wa4pgm/
wa4pgm@luna.moonstar.com

Tks 73,
Kyle

1691. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Message-ID: <322CE91F.C26@expert.cc.purdue.edu>
Source record: 21664
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space

Darwin Teague wrote:

> Could you please tell me how to receive the video? Is it a TV-UHF frequency? I
> have an old Rabbit receiver, but don't know what frequency it's on....

You can receive ATV the following ways:

Using an ATV down converter (converts 439.25 to TV channel 3) and a
70cm Beam Antenna

Using an old TV or VCR with manual tuning hooked up to an outside
antenna.
You will have to tune the TV to UHF channel 14 and then try using
your
fine tuning control and tune DOWN. The ATV frequency is BELOW
UHF ch 14.

Using a newer TV or VCR that is cable-ready. Hook the TV or VCR up
to an
outside antenna and then set it for CABLE CHANNEL 60.

The first method is BY FAR the best. Down converters are around $80 and
you can
make your own beam (I did). Make sure your receiving antenna has the
same
polarity as the transmitter. Cross polorization loss on 70cm can be as
much
as 20db.

Mark
<KB9KHM>

1692. Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-03 00:00:00 UTC
From: "Hank.Riley%1": 2619/211.9;
Message-ID: <ffe_9609062047@woodybbs.com>
Source record: 21665

To: Hank Riley%1:2619/211.9%12:320/100.666
From: h1riley@umassd.edu (Hank Riley)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch
Organization: UMass Dartmouth, N. Dartmouth, MA.

CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH

Region: Central Indiana

Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
11:00-12:00 UTC

Location: Greentown, Indiana (8 miles east
of Kokomo)

Other states where
the signals will
reach easily: Ohio, Illinois, Michigan, Kentucky

Site Coordinates: approximate for initial antenna heading;
(not for navigating to launch site)
40' 29" North Lat.
85' 58" West Long.

ATV: 439.25 MHz AM NTSC from live camera

VHF/UHF Repeater: Input - 144.30 MHz FM
Dual Output - 444.85 MHz FM
- 52.525 MHz FM

Telemetry: 446.00 MHz FM AX.25 1200 baud packet
GPS/APRS position data

HF Net: 3.869 - 3.871 Mhz SSB

Local repeater
talk-in: probably 146.91 or 147.24

---
launch data courtesy of Malcolm Mallette, WA9BVS
malletem@trader.com

Please email me news of upcoming balloon launches and post-flight
reports for distribution on the Net.

Hank Riley, N1LTV
h1riley@umassd.edu

Origin: Usenet:UMass Dartmouth, N. Dartmouth, MA. (1:2619/211.9)

```
# Origin: Gateway ARNet <-> HamNet by HB9EBW (12:320/100.666)
--
|Fidonet: Hank Riley%1:2619/211.9 2:301/249.666
|Internet: Hank.Riley%1:2619/211.9
|
| Standard disclaimer: The views of this user are strictly his own.
```

1693. Radio Meteor Obs. Bull. August 1996: Perseids

Newsgroup: rec.radio.amateur.space
Date: 1996-09-04 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.80.322DF1B0@vvs.innet.be>
Source record: 21570

Radio Meteor Observation Bulletin No. 37 September 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P. Bus
Location: Groningen, Netherlands (6 degr 33' E, 53 degr 13' N)
Frequency: 72.11 MHz
Transmitter Location: Wroclaw, Poland, 130 kW, Distance 740 km
Antenna: Yagi, 3 elements, geographical azimuth 106 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 uV
Observing method: Listening

Mean dead time corrected Sporadic Radio Meteor activity between
1996 July 13 and 1996 August 5.
Between brackets the statistical error of one sigma.

Mean Sporadic activity, starting at UT:

10h 11 12 13 14

85(5) 96(9) 90(10) 93(6) 84(8)

18h 19 20 21 22 23 0 1 2-2.5

91(9) 102(8) 112(6) 130(13) 131(11) 166(19) 178(18) 180(12) 103(11)

Mean Sporadic activity of long duration reflections > 1 sec, starting at UT:

10h 11 12 13 14 | 18 19 20 21 22 23 0 1 2-2.5
---
2 2 2 2 3 | 4 4 2 6 5 4 7 6 6

Dead time corrected counts of reflections during one hour intervals.
Between brackets the number of long duration reflections > 1 sec,
starting at UT:

August 11 August 12
18h 19 20 21 22 23 0 1 2-2.5

115(19) 127(12) 169(20) 216(24) 188(16) 271(36) 281(52) 320(70) 116(25)

August 12
10h 11 12 13 14

106(18) 180(21) 138(26) 130(16) 114(10)

. very high activity between Aug 11 23h UT and Aug 12 2h UT.

E.P. Bus

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

August 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Aug	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	23	52	71	103	136	102	113	125	62	84	41
2- 3	33	47	64	89	103	100	115	115	85	91	51
3- 4	13	54	94	%	140	105	191	96	74	112	40
15-16	%	39	9	26	49	43	51	53	52	60	38
16-17	25	33	24	34	57	44	65	64	47	58	32
17-18	11	27	41	53	65	54	65	81	58	67	64
18-19											
19-20	11	36	49	177%	206%	49	92	65	58	64	30
20-21	20	20	28	29	38	26	28	32	32	40	-
21-22	22	15	32	30	45	58	64	72	62	59	72
22-23	14	29	28	37	42	52	67	72	52	55	30
23-24	8	21	24	45	64	72	33	56	55	36	23
24-25	14	8	17	49	36	34	56	44	39	38	33
25-26	7	22	37	24	46	34	39	34	30	25	22
26-27	4	9	12	21	22	40	32	54	46	49	37
27-28	Thunderstorms										

28-29 | Thunderstorms
29-30 | 9 6 6 9 11 12 20 14 29 27 20
30-31 | 18 5 10 26 31 28 30 39 45 34 24
31-01 | 4 5 13 14 20 24 31 22 31 23 21
------+---
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Aug | UT

Notes:

. local time = UT + 2 hours.
. % direct reception
. ? high count to be checked for potential sporadic E.

Maurice De Meyere

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector
Receiver: AR-8000 at 59.2505 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP38 program from AF9Y) on the PC where 640 channels of 2 Hz width
are recorded and stored continuously. The sensitivity of each 2 Hz wide
channel is about -171 dBm. Every meteor reflection (in SSB mode)
produces a distinct whistle, which is recorded easily by the real time
FFT program and saved in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width
is used for meteor identification, the other nearby "channels" are used
to monitor interference, which can be identified easily this way. If
any interference occurs, the whole 200 second recording of one
picture is not used for further processing.

The following figures show the total length of the meteor reflections
during one hour,expressed as percentage. The number here shows
10 times this value. (e.g. 100 means 10 percent).

| June 1996
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
---+---
2 | , , , , ,163,125, , , , , , , , ,
3 | 58, 80, 40,149, ,205,204,203, 85, 45,227,221, 59, 72,188,170,205
4 |115,132,148,161, ,237,208,180,207, 99,206,224, 67, 61,198,186,180
5 |137,161,226,192,134,253,265,244,175, 74,184,261, 75,179,147,259,188
6 |123,181,201,182,209,261,239,284,189,105,231,232, ,196,164,257,125
7 |114, ,188,172,228,286,301,231,314, 89,181,224, 80,176,185, ,247
8 |113, ,295,158,246,233,325,305,183,142,138,174,111,152, , ,
9 |108,132,275,196,212,242,316,258,272,163,171,147, 89,152,186, ,184
10 | 81,173,102,135,212,263,376,278,273,141,108, 79,102,159,173, ,184

```
11 | 86, , 97,155,101, ,457,268,195,165,101, , 82,170,157, ,108
12 |105, , 73,151, 57, ,468,359,257,213,148,134, 77,183,164, ,204
13 |145, ,281,241,250,277,514,399,223,231,252,268, ,183,232, ,289
14 |114,131,246,297,217,224,397,281,208,224,172,175, , ,225, ,
15 | 86, 98,234,221,178,193, ,186,167,204,145,172, ,141,156, 96,148
16 | 55,101, , , ,157, ,154,107, , 84,107, ,143,154, 50,167
17 | 51, ,156, , ,123,197,152, , 91, , , ,136,106, 54,125
18 | 50, ,107, , , 71,132,163, , 56,142, , , , , 35, 76
19 |
20 | , 65, , 75,140,106, 88,136,123, 60, 69, 24, 28, 83,204, 76,244
21 | 99, 60, 69, , 90,140,123, 85,116, 52, 76, 31, 29,109,103, 85, 15
22 | 92, 80, 93, , 64,108,158,133,105, 71, 76, 42, 27,135,169,125, 17
---+--------------------------------------------------------------------
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
| June 1996

(new) Location: near Villach, Austria (13 37' E, 46 45 ' N)
(new) Antenna: 3 el Yagi
Receiver: AR-8000 at 48.2492 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter (assumed): 250 kw TV video carrier near Madrid, Spain,
distance 1550 km, southwest direction.

| Aug 1996
UT | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
----+-----------------------------------------------------------------
0 | , 10, 16, 13, 9, 6, 8, 12, 15, , 53, 59, 52, 24, 32, 13, 6
1 | 4, 9, 18, 5, 9, 4, 3, , , 7, 25, 69, 65, 26, 35, 14, 15
2 | 13, 16, 12, 13, 20, 3, 16, 15, 36, 10, 43, 34, 65, 52, 24, 11, 4
3 | 16, 18, 31, 24, 14, 9, 13, 21, 11, 6, 36, 35, 59, 36, 29, 8, 9
4 | 24, 22, 31, 15, 18, 24, 13, 18, 22, 18, 40, 67, 63, 42, 38, 29, 10
5 | 17, 12, , 12, 13, 15, 22, 19, 20, 21, 28, 71, 37, 26, , 19, 11
6 | 14, 11, , 13, 43, 16, 20, 16, 10, 22, 34, 46, 39, 24, , 10, 3
7 |
8 | 31, , , , , 13, 15, 26, 11, 15, , 73, 41, 20, , 9, 13
9 | , , 4, 13, 23, 8, 32, , 10, 18, 40, 38, 18, 11, , 5, 4
10 | 42, 28, 8, 8, 2, 15, 20, 11, 7, , 29, 32, 32, 18, , 16,
11 | , 12, 7, 7, 8, 8, 10, 13, 8, , 23, 32, 57, 10, , 7, 10
12 | , 8, , 6, 9, 5, , 7, 5, , 7, , 23, 10, , 4, 4
13 | 5, 13, 3, , , 2, , 6, 11, , 13, 15, 7, 7, , 7,
14 | , , 2, 8, , , , 7, 29, , 27, 19, 2, 9, , 4,
15 | , , 3, 6, , , , , 10, , 10, 22, , 5, , 2,
16 | , , , , 6, , , , 5, , 3, 18, , , , ,
17 | , , 5, , , , , , , , 48, 20, , , , ,
18 | , , , , , , , , , , , , , , , 3,
19 | , , , , 13, , , , , 18, 7, 10, , , , ,
20 | 6, 12, , , , , 3, , , 25, 17, , 9, 4, , ,
21 | , 10, , 3, 4, 7, 5, , 6, 9, 10, 18, 15, 18, , ,
22 | 18, 8, , 5, 10, 7, 7, 21, 45, 8, 28, 24, 15, 12, 4, 5,
23 | 13, 6, 8, 24, , 22, 13, 30, 6, 18, , 30, 18, 18, , 10,
----+-----------------------------------------------------------------
```

| 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
| Aug 1996

Notes:
. blank value means either no data available, interference,
sporadic "E", power failure, shutdown during thunderstorms or
transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).

. maximum Perseid activity during the early hours (UT) of Aug 12.

. *** Radio Meteor Gallery is open ***
I'd like to invite you all to my new Radio Meteor Gallery,
with the best spectrograph pictures out of about one million
recorded meteor reflections during last year. URL is
<http://www.net4you.co.at/user/kuneth/gallery.html>

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW , sensitivity -154 dBm min
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Long duration echoes (t>2 sec):

| August 1996
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
---+---------+---------+---------+---------+---------+-------
21 | 17 37 27 72 53 37
22 | 17 20 22 55 34 29
23 | 5 11 14 31 34 21
00 | 10 15 5 24* 15 11
01 | 4 7 4 31* 19 11
02 | 2 5 0 16* 12 9
03 | 2 5 2 10 6 11
04 | 2 1 3 4 8 9
05 | 0 2 1 4 4 1
06 | 0 2 0 0 1 0
07 | 1 0 1 0 1 2
08 | 0 2 0 0 3 1
09 | 0 1 5 0 2 4
10 | 0 4 0 0 2 2

```
11 | 1 1 6 0 2 3
12 | 1 5 4 6 4 1
13 | 0 3 4 13 13 7
14 | 1 5 14 14 11 5
15 | 8 9 11 20 13 8
16 | 13 10 15 25 14 10
17 | 9 11 30 28 16 17
18 | 20 21 48 55 24 22
19 | 24 20 49 60 27 21
20 | 28 23 55 65 35 18
---+---------+---------+---------+---------+---------+-------
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
| August 1996
```

Notes:
. local time = JST = UTC + 9 hours
. the radiant was not located favorably when the Perseids maximum occurred: yet a significant relative increase (with respect to the adjacent days) is seen between 0h-2h UT on August 12.

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location:
Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 9 or 18 inch/hour + occasional listening.

Dead time corrected counts of reflections during one hour intervals starting at:

```
| August 1996
UT | 8 9 10 11 12 13 14
-----+---------------------------------------
0 | 170 240! 154
1 | 188 354! 142
2 | 167 160 158
3 | 164 140 168
4 | 170 170 122 144
5 | 135 143 133 100
6 | 112 108 102 105
7 | 115 92 114 110
8 | 100 111 91 104 115
9 | 75 116 c 82 83
```

10 | 50 64 82 76 80
11 | 38 56 76 66 87
12 | * 96 63 68
13 | * 88 64 62
14 | * * 60 50
15 | 52 * 60 61
16 | 48 * 86 50
17 | 122 56 * 54 58
18 | 124 140 * 44 47
19 | 123 72 * 80 61
20 | 128 53 94 * 102 52
21 | 130 82 135
22 | 161 91 130
23 | 147 167! 118
-----+--------------------------------------
UT | 8 9 10 11 12 13 14
| August 1996

Remarks: * thunder-storm.
c continuous reception.
! Perseids outburst, maximum between 01 - 02 h UT.

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were
recorded on a pen-recorder chart.

1996 | UT
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---+-----------
1 | 16 23 41 41 40 43 38 35 29 34 27 19 | 34.0 30.3
2 | 8 18 22 34 40 35 34 44 35 25 26 15 | 26.2 29.8
3 | 19 20 27 25 42 37 22 36 29 30 21 15 | 28.3 25.5
4 | 12 27 26 30 45 26 42 41 42 35 25 21 | 27.7 34.3
5 | 12 16 21 33 44 30 30 29 26 30 23 18 | 26.0 26.0
6 | 10 21 21 33 35 23 34 26 38 26 24 26 | 23.8 29.0
7 | 9 12 21 34 26 17 26 32 40 25 20 21 | 19.8 27.3
8 | 13 20 23 34 32 30 24 30 24 21 15 | 25.3 22.8
9 | 9 11 21 19 25 29 25 24 23 32 24 20 | 19.0 24.7
10 | 11 18 25 32 30 35 39 32 29 30 30 19 | 25.2 29.8
11 | 15 15 23 27 32 28 21 34 | 23.3 27.5
12 | 15 21 24 31 23 22 25 22 30 25 31 27 | 22.7 26.7
13 | 12 21 24 30 37 29 24 33 37 20 25 16 | 25.5 25.8
14 | 16 24 17 27 36 34 24 33 19 24 | 21.0 28.3

```
15 | 12 10 17 19 27 16 21 18 19 15 22 20 | 16.8 19.2
16 | 15 21 21 20 26 29 24 29 19 24 24 22 | 22.0 23.7
17 | 13 21 26 28 27 22 25 20 27 28 26 20 | 22.8 24.3
18 | 18 24 28 23 23 24 26 24 24 29 22 25 | 23.3 25.0
19 | 10 17 14 24 11 15 16 19 25 22 20 15 | 15.2 19.5
20 | 11 13 15 17 18 23 23 18 23 16 15 22 | 16.2 19.5
21 | 10 12 21 15 14 17 15 23 15 14 13 16 | 14.8 16.0
22 | 9 14 23 20 21 16 14 17 23 20 25 15 | 17.2 19.0
23 | 9 18 19 18 17 16 26 26 15 26 23 28 | 16.2 24.0
24 | 20 16 15 14 26 21 23 31 31 23 25 13 | 18.7 24.3
25 | 22 14 14 14 20 21 19 21 22 22 27 | 16.8 22.0
26 | 7 14 17 12 15 23 17 29 24 26 29 20 | 14.7 24.2
27 | 11 27 14 25 13 15 18 22 20 23 25 17 | 17.5 20.8
28 | 17 24 24 25 25 22 23 23 36 20 21 22 | 22.8 24.2
29 | 9 14 20 12 19 17 19 19 16 20 22 20 | 15.2 19.3
30 | 11 20 18 16 21 15 18 20 23 14 | 16.3 18.5
31 | 14 11 12 18 16 20 18 13 16 15 | 15.2 15.5
-----+-------------------------------------------------+-----------
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT
```

**(1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

Total echoes

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
9-10 | 27 33 30 32 35 48 41 38 - 30 - - - 19 15 9 16 7 7 13 12 19 25 38
10-11 | 39 35 27 39 29 59 47 40 42 51 45 29 21 21 8 8 14 4 12 10 20 39 49 48
11-12 | 47 62 50 67 72 76 66 46 49 47 44 27 31 20 20 11 11 18 13 8 19 27 26 29
12-13 | 31 35 41 34 34 40 55 34 34 33 17 20 20 12 8 8 3 2 7 6
```

Long duration echoes (>5sec):

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
9-10 | 3 2 3 1 2 2 3 1 - 1 - - - 0 0 0 0 0 0 0 0 0 1 3
10-11 | 0 2 2 5 2 6 5 6 4 10 4 1 3 1 0 0 0 0 0 1 1 0 3 0
11-12 | 3 6 5 8 4 8 7 2 3 2 4 1 0 0 0 0 0 0 0 0 0 0 1 3
12-13 | 5 1 0 3 1 6 5 5 3 1 0 0 1 0 0 0 1 0 2 0
```

- Perseids maximum took place on 1996/08/12 02h UT.
- local time = JST = UT + 9 hours

Chikara Shimoda

Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)

Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+--
31- 1 | 51 56 53 56 56 45 45 51 44 35 33 21 34 27 24 20 12 13 13 17 33 28 35 56
1- 2 | 72 50 50 51 40 50 35 32 31 25 37 24 17 24 20 14 15 16 15 14 24 26 36 65
2- 3 | 65 48 69 66 49 41 44 51 41 36 32 25 21 26 26 20 13 12 14 25 36 48 50
3- 4 | 68 49 55 52 56 51 31@42 43 33 19@24 26 22 19 20 12 14 13 13 18 22 28 45
4- 5 | 49 32 40 42 31 29 44 42 26 28@18@18 14 19 18 12 15 12 17 14@12 @27 39
5- 6 | 41 47 48 43 45 55 65@54 35 33 32 25 25 26 23 14 17 15 13 15 27 31 @37
6- 7 | 67 53 59 68 70 68 45 47 24 @24@14@14@12@12@12 16 20 24 36 61
7- 8 | 50 48 59 75 74 55 50 56 45 39 29 32 22 24 21 14 11 12 12 25 27 42 73
8- 9 | 55 43 57 62 66 76 71 60 32 28 31 26 35 22@31 19 16 14 10 17 25 30 41 48
9-10 | 61 52 40 63 72 67 78 61 45 32 24 32 21 23 22@20@12@12 13 21 36 33 48 51
10-11 | 54 70 80 70 87 76 60@59@52 @38 33 28 18@18 17 15 17 19 24@34 38 56
11-12 | 51 61 79 93107 98@71 71 93 64 62 43 37 25 29@12 14 17 13 14 25 50 68 80
12-13 | 74 93 97116104 82102 91@50 45 49 38 40 39@15 21 21 26 15@21 29 24 42 47
13-14 | 62 68 77 78102 93 87 89 58 40 36 34 36 32@21@22 14 12 16 23 28 35 36
14-15 | 32 30 39 52 45 31 30@36 48 35 32 29 18 21@22 13 18 16 15 12 19 29 43 45
15-16 | 44 41 38 44 39 22 42@27 34 36 35 27 29 21 17 17 15 13 12 14 17 34 35 32
16-17 | 46 50 53 48 47 47 47@51 52 29 27 20 20 21 21 17 21 18 12 19 29 20 32 35
17-18 | 37 23 28 30 40 39 50 48@40 39 35 39 23 22@26@17 24 16 17 19 27 35 37 34
18-19 | 51 31 33 46 37 38 47 27@35 25 20@23 @21 31 27 37
19-20 | 37 33 48 41 44 46 37 41@48 32 27 28 18 24@22 17 15 16 14 15@25 38 28 33
20-21 | 33 30 42 51 34 30@37 33 38 29 27 21 31 23 22 20 14 12 15@16 18 31 23 37
21-22 | 43 35 41 43 47 @48 41@32 @37 27 31 24 24 18 16@14@17 24 36 36
22-23 | 42 35 35 43 44 46 51 48 44 39 37 29 35 28 17 26 23 16 17 16@21 32 39 44
23-24 | 39 35 39 38 43 37@44 52 46 44 38 36 34 28 28 25 19 18 16 14 19 30 38 34
24-25 | 26 29 39 35 35 29@30 @20 24 34 58
25-26 | 38 40 43 49 52 37 46@48@45@31 27 37 27 25 24 23 18 20 20 19 18 26 39 35
26-27 | 39 39 48 42 34 41 38 31@33@34 35 26 24 24 20 20 25 17 20 20 34 25 38 38
27-28 | 31 31 48 56 51 54 50 57 49
------+--
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT

Long lasting (>20 sec.) echo rates:

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+--

```
10-11 | 6 5 7 6 13 9 7 6 11 6 3 2 2 2 1 1 0 0 0 0 0 0 1 2
11-12 | 1 6 5 16 21 21@13 18 17 23 16 10 8 2 3 0 0 0 0 0 2 2 5 5
12-13 | 6 18 17 27 12 9 21 18@10 9 9 5 2 0 0 0 0 0 0 1 0 0 4 6
13-14 | 5 6 6 14 16 20 21 15 10 5 2 2 2 1 0 0 0 0 0 0 0 0 0 0 0
14-15 | 0 1 2 3 5 5 2 @2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
15-16 | 2 2 1 2 0 0 2 0 0 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0
16-17 | 0 1 3 1 4 2 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1
17-18 | 1 1 0 0 0 0 1 2 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
18-19 | 0 1 0 0 3 2 0 0 @0 0 0 @0 0 0 0 0
19-20 | 0 0 0 0 0 0 0 0 @1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
20-21 | 1 0 0 1 0 5 1 0 1 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0
------+------------------------------------------------------------------------
UT | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
```

Notes:

- @nn =corrected hourly rates (observed for less than 60 min).

- local time = JST = UT + 9 hours.

Kazuhiro Suzuki

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

delta Aquarids 1996

```
| July 1996
UT | 27 28 29 30
----+-----------------------------------
0 | 409 409 559 584
1 | 433 426 544 433
2 | 472 398 598 421
3 | 502 428 353 393
4 | 484 394 534 366
5 | 291 350 409 316
6 | 270 309 290 359
7 | 362 216 247 405
8 | 568 238 291 333
```

```
9 | 329 143 328 309
10 | 235 167 211 258
11 | 183 134 246 221
12 | 168 204 251 219
13 | 186 207 165 220
14 | 192 180 117 154
15 | 203 177 97 150
16 | 154 136 124 144
17 | 121 124 131 150
18 | 128 79 163 133
19 | 176 95 115 177
20 | 147 112 139 213
21 | 156 174 248 250
22 | 275 358 364 348
23 | 321 514 462 450
----+---------------------------------
UT | 27 28 29 30
| July 1996

Perseids 1996

| August 1996
UT | 11 12 13 14
----+---------------------------------
0 | 457 1415 547 380
1 | 509 1179 662 728
2 | 417 1085 759 416
3 | 424 760 628 422
4 | 430 595 552 545
5 | 396 732 654 300
6 | 457 914 536 372
7 | 641 1018 658 488
8 | 449 767 540 436
9 | 394 847 585 348
10 | 312 584 551 291
11 | 415 542 606 381
12 | 231 708 530 286
13 | 270 518 286 188
14 | 214 265 325 134
15 | 187 199 198 127
16 | 176 278 156 129
17 | 221 191 117 81
18 | 158 243 164 99
19 | 377 200 149 136
20 | 329 277 134 127
21 | 419 321 507 218
22 | 487 633 355 354
23 | 717 453 296 279
----+---------------------------------
UT | 11 12 13 14
| August 1996
```

. strong Perseids activity between Aug 12, 0h-2h UT, and Aug 12, 6h-8h UT.

Ilkka Yrjola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (6 degr 51' E, 53 degr 19' N)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 130 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: Listening

Dead time corrected counts of reflections during one hour intervals
starting at:

1694. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-04 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609040854.BAA24666@UCSD.EDU>
Source record: 21666

```
From smtp Mon Sep 2 08:21 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Mon, 2 Sep 96 08:21 PDT
Received: by mail.ucsd.edu; id EAA23650
sendmail 8.6.12/UCSD-2.2-sun
Mon, 2 Sep 1996 04:30:42 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA23633
sendmail 8.6.12/UCSD-2.2-sun
Mon, 2 Sep 1996 04:30:40 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 6030
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199609021130.EAA23633@mail.ucsd.edu>
Date: Mon, 2 Sep 96 04:30:39 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #268
To: Ham-Space@ucsd.edu

Ham-Space Digest Mon, 2 Sep 96 Volume 96 : Issue 268

Today's Topics:
(none)
Ham-Space Digest V96 #266
MIR PRIRODA module status
Pacsat Software for Linux/X ? (2 msgs)
Radio Astronomy
tsr-80 for packet?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Sep 96 10:13:59 GMT
From: smtp@caoesgis.oes.CA.GOV
```

Subject: (none)

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

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Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
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Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

Date: Mon, 2 Sep 1996 01:36:29 GMT
From: Tovar <KD6PAG@alive.com>
Subject: MIR PRIRODA module status

> It is quite easy to determine if a signal is from Mir. Watch the
> frequency of the transmission. For a space signal you will observe
> a phenomenon called doppler shift: the signal will start out on a
> higher frequency than specified, and it will become lower and lower
> during the pass. On 2 metres the difference will be 3-4 KHz, so it
> should be easily observable. On 70 cm it is about 10 KHz, so it is
> enough to miss the signal when you are not prepared.

Agreed! Fading and timing are also relevant, and both observers
were not willing to say that it was definitely Mir, but might be.
It's not also that either observer couldn't determine where the
signal was coming from, but rather that, at least in my case, this
was a background task and at the time, this was considered less
important than the foreground task to determine the source of the
signals.

The point of the posting was to inquire about the 70 cm side, that
is, has anyone heard Mir on 70 cm in the past several weeks, or know
why not?
-- KD6PAG

Date: 1 Sep 1996 15:54:45 GMT
From: tsellic@ibm.net
Subject: Pacsat Software for Linux/X ?

In <3226FC32.1896C9DE@iquest.net>, Jeff Davis <n9avg@iquest.net> writes:
>Hello all!
>
>I have been using WiSP for the pacsats for quite sometime.
>
>Now that I have given up windoze and become a Linuz zealot are there any
>Linux/X-windows sat tracking/communication packages available?
>
>Thanks,
>
>--
>Jeff Davis <n9avg@iquest.net>
>PGP Key ID BC53CAF9
>http://www.iquest.net/~n9avg

Check out SatTrack v3.1. It offers real-time tracking of
over 500 satellites, text and X graphics displays of single
or multiple satellites. It can also control antennas and
radios. Neat stuff, IMHO.

Terry WA9TTY

Date: 1 Sep 1996 16:04:33 GMT
From: tsellic@ibm.net
Subject: Pacsat Software for Linux/X ?

In <50cbka$2qf2@news-s01.ny.us.ibm.net>, tsellic@ibm.net writes:
>Check out SatTrack v3.1. It offers real-time tracking of

Duh, forgot to tell you where to get it!
It's available from AMSAT http://128.54.16.15.
They also have other programs broken down into
groups based on operating systems, so they also have
other Linux software

Terry WA9TTY

Date: 30 Aug 1996 07:58:54 GMT
From: rs93463@midnet.com (Stephen Reader)
Subject: Radio Astronomy

Hi uk.radio.amateur!
Help required, does anybody have a current
contact address for "BARAS" British Amateur Radio Astonomy Society. And can
anybody help with info and advice on setting up a radio telescope to
monitor solar emisionns. Any info , help or advice will be much apreciated.

73 de Steve.
Stephen Reader RNARS 0951. RS93463

--- OffRoad 1.9e registered to Stephen Reader

Date: 1 Sep 1996 22:02:39 GMT
From: n3tuk@idsonline.com (Luis Velis)
Subject: tsr-80 for packet?

Hi
i just picked up at a flea market a used tsr-80 computer without manual
and i just wondering if I can use it for packet..?
Any info will be welcome!!

luis/n3tuk

End of Ham-Space Digest V96 #268
****

1695. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-04 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609040910.CAA26591@UCSD.EDU>
Source record: 21667

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

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End of Ham-Space Digest V96 #266
****

1696. WTB: SatTrak-IV

Newsgroup: rec.radio.amateur.space
Date: 1996-09-04 00:00:00 UTC
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Message-ID: <322D9EED.6385@virginia.edu>
Source record: 21668

If anyone has one of Ron Long's (Kiron Corp) SatTrak-IV satellite tracker/tuner units for sale, please let me know. I'd be interested in either a completed unit, or an unassembled kit.

you can E-mail me direct at:
sem2r@virginia.edu

Thanks.

1697. Ham-Space Digest V96 #270

Newsgroup: rec.radio.amateur.space
Date: 1996-09-04 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609041734.AA061758452@relay2.geis.com>
Source record: 21669

GE Item Number: 8809857
Original Msg Id: 376893
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #270
System: MARLBORO#
Date: Wed 4-Sep-96 17:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1698. Re: Ham-Space Digest V96 #269

Newsgroup: rec.radio.amateur.space
Date: 1996-09-05 00:00:00 UTC
From: jjc@infi.NET
Message-ID: <2.2.16.19960905010406.412f15e2@mailhost.infi.net>
Source record: 21571

At 04:30 AM 9/3/96 PDT, Ham-Space Mailing List and Newsgroup wrote:

>Date: 2 Sep 1996 09:40:03 GMT
>From: johliott@minyos.its.rmit.EDU.AU (John Elliot)
>Subject: immarsat
>
>Anybody out there scanning IMMarsat ?. Can you advise me of active freqs
>or a web site where they may be some info ?.

The easiest way to find the satellite once you have the equipment to do so up and running is pointing in the general direction of the bird and tuning your receiver to 1.537 Ghz (1537 Mhz). This is the frequency for the US AFRTS (Armed Forces Radio and Television Service) and makes a great beacon to tweak your antenna pointing and checkout your system.

..Jim

<:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:>
<:> Jim Conrad - Ocean View Communications - jjc@infi.net <:>
<:> 757-490-8217 Office - 757-587-8251 Fax - 757-473-6740 Pager <:>
<:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:><:>

1699. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-05 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609050908.CAA24382@UCSD.EDU>
Source record: 21572

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
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Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

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End of Ham-Space Digest V96 #266
****

1700. Ham-Space Digest V96 #271

Newsgroup: rec.radio.amateur.space
Date: 1996-09-05 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609051132.AA072643120@relay2.geis.com>
Source record: 21573

GE Item Number: 6670681
Original Msg Id: 377336
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #271
System: MARLBORO#
Date: Thu 5-Sep-96 11:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1701. Re: your LISTSERV request "delete ham-space@ucsd.edu ham-space digest"

Newsgroup: rec.radio.amateur.space
Date: 1996-09-05 00:00:00 UTC
From: Listserv@ucsd
Message-ID: <199609052100.OAA05100@mail.ucsd.edu>
Source record: 21574

```
Per request by niklas@labtronic.se
"delete ham-space@ucsd.edu ham-space digest"
'ham-space@ucsd.edu' was NOT FOUND on the 'ham-space' mailing list.
```

1702. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-05 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <322FA084.60F0@email.mot.com>
Source record: 21575
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

Mary Ellen Powers wrote:
>
> All,
>
> Does anyone know how much power the 6 meter module for a yaese 736 puts
> out. I have one, brand new, and I can't seem to get any more that about 3
> watts our of it. Is this correct???

Not Really! The 736 should put out 25W on 6. The older 726R put out
10W. The 736 1.2Ghz module is around 10W out.

Chuck KD9JQ

1703. Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: Mary Ellen Powers <mpowers@ne1h.radio.org>
Message-ID: <01bb9b94$9981b420$b4c41cce@hurricane.ne1h.radio.org>
Source record: 21576
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

All,

Does anyone know how much power the 6 meter module for a yaese 736 puts out. I have one, brand new, and I can't seem to get any more that about 3 watts our of it. Is this correct???

Thanks,
Alan Adamson

ps. please email to ne1h@ne1h.radio.org

1704. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <50o9hp$r4n@dfw-ixnews2.ix.netcom.com>
Source record: 21577
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

In <01bb9b94$9981b420$b4c41cce@hurricane.ne1h.radio.org> "Mary Ellen Powers" <mpowers@ne1h.radio.org> writes:
>
>All,
>
>Does anyone know how much power the 6 meter module for a yaese 736 puts
>out. I have one, brand new, and I can't seem to get any more that about 3
>watts our of it. Is this correct???
>
>Thanks,
>Alan Adamson
>
>
>ps. please email to ne1h@ne1h.radio.org
>

You should get about 10 watts out of the 6 meter module. I have the service manual if you need any data.

73 Jerry

1705. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609060906.CAA13078@UCSD.EDU>
Source record: 21578

```
From smtp Wed Sep 4 09:36 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 4 Sep 96 09:36 PDT
Received: from mail.ucsd.edu (ucsd.edu) by teale.ca.gov (5.x/SMI-SVR4)
id AA07982; Wed, 4 Sep 1996 09:26:06 -0700
Received: by mail.ucsd.edu; id EAA17795
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:56 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17781
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15570
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609041130.EAA17781@mail.ucsd.edu>
Date: Wed, 4 Sep 96 04:30:51 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #270
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 270

Today's Topics:
'modes.dat' for 'SatTrack'
(none)
ARLK063 Keplerian data
Ham-Space Digest V96 #266
Help: re pacsats (2 msgs)
Indiana repeater/ATV/Packet APRS Balloon Launch
Kep Data AUG 30
Radio Astronomy
WTB: Low Output or Dead High Power Transmitting Tubes

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Date: Wed, 28 Aug 1996 22:23:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: 'modes.dat' for 'SatTrack'

In <322252A2.167E@alive.com> Tovar <tvr@alive.com> writes:

>Can someone suggest where/how i can get a current version of 'modes.dat'
>(which contains frequencies and modes of operation), including, for
>example, JAS-2? It seems like a real waste to get the whole SatTrack
>package just to get that one file. Or, did i miss something and there's
>some easy way of getting that?

You can just edit it yourself, using a text editor.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 4 Sep 96 10:11:13 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 3 Sep 1996 18:04:54 -0400
From: w1aw@arrl.org
Subject: ARLK063 Keplerian data

SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

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Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
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Date: 2 Sep 1996 20:42:50 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 2 Sep 1996 20:46:14 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

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thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
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setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 3 Sep 1996 21:47:11 GMT
From: darwin@indy.net (Darwin Teague)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

Date: 03 Sep 1996 16:32:41 GMT
From: karl_dundee@RedwoodFN.org (karl dundee)
Subject: Kep Data AUG 30

SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614

```
WO-18
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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Date: Mon, 02 Sep 1996 22:51:13 GMT
From: marty@trucom.com (Marty Albert)
Subject: Radio Astronomy

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
```

>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

Date: Mon, 2 Sep 1996 08:02:39
From: jim.b@okisemi.com (Jim Bieberich)
Subject: WTB: Low Output or Dead High Power Transmitting Tubes

I want to buy dead power transmitting tubes. Tubes must not be broken or
physically damaged. I'm interested in tubes with power dissapations 250 watts
to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

Date: (null)
From: (null)

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
```

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1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #270
******************************
```

1706. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609060914.CAA13867@UCSD.EDU>
Source record: 21579

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
```

>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

1707. Re: immarsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: curator@www.cops.aust.com
Message-ID: <50p6ir$c62@kettle.magna.com.au>
Source record: 21580

In article <slrn52nono.g5t.rs@gillespie.ee.ethz.ch>, rs@ife.ee.ethz.ch says...
>
>In article <50ea1j$n7m@aggedor.rmit.EDU.AU>, John Elliot wrote:
>>Anybody out there scanning IMMarsat ?. Can you advise me of active freqs
>>or a web site where they may be some info ?.
>
>They are at http://www.inmarsat.org/inmarsat/
>
>73,
>Rolf
>

Hi Rolf

I have an inmarsat system running in Australia, try to listen to AFRTS on 1537Mhz NBFM, it i the same TX on all four satellites. I have heard the odd military TX, as well as heaps of fax and data traffic, and internation phone traffic...

Paul

curator@www.cops.aust.com

1708. pansat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: Eddie Speed <espeed@carmen.murdoch.edu.au>
Message-ID: <3230F685.1E7E@carmen.murdoch.edu.au>
Source record: 21581

Anyone know when (if) the pansat with spread spectrum will be launched?
Eddie

1709. Ham-Space Digest V96 #272

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609061733.AA235391233@relay2.geis.com>
Source record: 21582

GE Item Number: 1094128
Original Msg Id: 377926
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #272
System: MARLBORO#
Date: Fri 6-Sep-96 17:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1710. Re: immarsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <50pjm9$dor@freenet-news.carleton.ca>
Source record: 21583

Paul Britton (curator@www.cops.aust.com) writes:
> In article <slrn52nono.g5t.rs@gillespie.ee.ethz.ch>, rs@ife.ee.ethz.ch
>
> I have an inmarsat system running in Australia, try to listen to AFRTS
> on 1537Mhz NBFM, it i the same TX on all four satellites. I have heard
> the odd military TX, as well as heaps of fax and data traffic, and
> internation phone traffic...
>
> Paul
>
> curator@www.cops.aust.com
>
If it's NBFM, it must be standard A INMARSAT.

Are there any decoders available for standard B or standard M, which
are digital?

Just curious, as always.

Russ, va3rr

1711. FS: S-Band Signal Generators

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: bass@cais.cais.com
Message-ID: <50q8td$5do@news2.cais.com>
Source record: 21584

Hi.

I've got one S-Band signal generator that works fine that I will
sell for a very low price. E-mail me if you need one and want
more details.

Thanks,

Tim (lab@valuerocket.com) More M&TE --> http://www.valuerocket.com/

--
We're just two lost souls
swimming in a fish bowl,
year after year,

Running over the same old ground.
What have we found?
The same old fears.

Wish you were here.
-Roger Waters

1712. ARLS012 Shuttle rescheduled

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls012.1996@arrl.org>
Source record: 21585
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS012
ARLS012 Shuttle rescheduled

ZCZC AS20
QST de W1AW
Space Bulletin 012 ARLS012
From ARRL Headquarters
Newington, CT September 6, 1996
To all radio amateurs

SB SPACE ARL ARLS012
ARLS012 Shuttle rescheduled

The space shuttle Atlantis has been returned to the launch pad in the wake of the threat of Hurricane Fran to central Florida. Atlantis had been moved off the pad and into the nearby vehicle assembly building as a precaution, due to the approach of the storm. NASA managers have set a new launch date of September 16 for mission STS-79, which will carry the Shuttle Amateur Radio EXperiment, or SAREX. The launch window opens at about 0854 UTC.

Three hams will be aboard Atlantis for STS-79: Jay Apt, N5QWL, Carl Walz, KC5TIE, and John Blaha, KC5TZQ. Prearranged ham radio contacts are scheduled with schools in Kansas, Ohio, and England, and with family and friends of the crew. The astronauts will also make random contacts with the amateur community as their busy schedules permit.

During the flight, the shuttle will rendezvous and dock with the Russian space station Mir, ferrying supplies, personnel, and scientific equipment to the complex 240 miles above Earth. Blaha will switch places with astronaut Shannon Lucid, who has been aboard Mir since March.

Additional SAREX information can be found on the ARRLWeb SAREX page, http://www.arrl.org/sarex/
NNNN
/EX

1713. Satellite Cyberposts Available at http://www.sarrio.com

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: wb6siv@cyberg8t.com
Message-ID: <wb6siv-0609961918220001@host14.cyberg8t.com>
Source record: 21586

Use the WWW to announce your interest in working hams all over the world
by satellite. Below are two examples of such posts that have been added to
my Cyberpost web page. I provide an e-mail link to the posting station, so
schedules can be easily arranged or changed if neccessary.

Post your contact needs and prepare to have those needs quickly met with
the help of the Web. 73's Ray

Station: N2QXF

Name: Nick
QTH: New Jersey
Mode:Satellite
Comments: Need to get asked for RS-10 and or RS-15 Mode A for Alaska and
Hawaii for WAS
Satellite.......time flexible.
Equip.
13el beam w/ 180 watts SSB/or CW uplink
Rotatable Dipole @ 40ft for dwnlink
FT-290RII plus amp uplink
IC-736 Downlink
Skeds by email or call 24hr beeper 917 738 7602
Will get on the air for stations needing NJ and/or FN21 on sat.
Nick
Post Date: Sept. 6, 1996

Station: NY1F

Name:Burt Eldridge
QTH: Vermont, USA
Grid: FN32ru
Comments: Satellite skeds stations outside No. America.
All satellites LEO's or AO-10/13
Post Date: 8/21/96
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located
at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount
CD-Roms!

1714. Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-06 00:00:00 UTC
From: Chris.Boone@106-4267.woodybbs.com
Message-ID: <01e_9609070650@woodybbs.com>
Source record: 21587

5*** Quoting Hank Riley to All dated 09-03-96 ***
>
> VHF/UHF Repeater: Input - 144.30 MHz FM
> Dual Output - 444.85 MHz FM
> - 52.525 MHz FM
>
Too bad you guys are illegal....144.3 cannot be used for a rptr input...and Im sure the guys on 52.525 OUT of your area would have liked to have known beforehand about it....(I may hear it down here in TX if conditions permit...)

Next time, PLEASE read the rules and run a crossband rptr using legal freqs... (try using 147.43 or something similar as the input....144.5 is the rptr subband lowest point...)

Chris
WB5ITT
cboone@earthlink.net

(PS did repost this on the TX HAM echo and the guys in Houston on ATV may be looking....I have been part of past S TX Balloon chase teams)
--
|Fidonet: Chris Boone 1:106/4267
|Internet: Chris.Boone@106-4267.woodybbs.com
|
| Standard disclaimer: The views of this user are strictly his own.

1715. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: wd6dih@ix.netcom.com
Message-ID: <50qjqk$boi@sjx-ixn2.ix.netcom.com>
Source record: 21588
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

FT-736R 6-Meter Power Output

The Yaesu FT-736R (6-Meter) power output is 10 Watts. 3 watts sounds
too low. Make sure your watt meter is working corectly..

73's

Kevin, WD6DIH

In <01bb9b94$9981b420$b4c41cce@hurricane.ne1h.radio.org> "Mary Ellen
Powers" <mpowers@ne1h.radio.org> writes:
>
>All,
>
>Does anyone know how much power the 6 meter module for a yaese 736
puts
>out. I have one, brand new, and I can't seem to get any more that
about 3
>watts our of it. Is this correct???
>
>Thanks,
>Alan Adamson
>
>
>ps. please email to ne1h@ne1h.radio.org
>

1716. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609070905.CAA29664@UCSD.EDU>
Source record: 21589

```
From smtp Wed Sep 4 09:36 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 4 Sep 96 09:36 PDT
Received: from mail.ucsd.edu (ucsd.edu) by teale.ca.gov (5.x/SMI-SVR4)
id AA07982; Wed, 4 Sep 1996 09:26:06 -0700
Received: by mail.ucsd.edu; id EAA17795
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:56 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17781
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15570
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609041130.EAA17781@mail.ucsd.edu>
Date: Wed, 4 Sep 96 04:30:51 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #270
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 270

Today's Topics:
'modes.dat' for 'SatTrack'
(none)
ARLK063 Keplerian data
Ham-Space Digest V96 #266
Help: re pacsats (2 msgs)
Indiana repeater/ATV/Packet APRS Balloon Launch
Kep Data AUG 30
Radio Astronomy
WTB: Low Output or Dead High Power Transmitting Tubes

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
```

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 28 Aug 1996 22:23:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: 'modes.dat' for 'SatTrack'

In <322252A2.167E@alive.com> Tovar <tvr@alive.com> writes:

>Can someone suggest where/how i can get a current version of 'modes.dat'
>(which contains frequencies and modes of operation), including, for
>example, JAS-2? It seems like a real waste to get the whole SatTrack
>package just to get that one file. Or, did i miss something and there's
>some easy way of getting that?

You can just edit it yourself, using a text editor.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 4 Sep 96 10:11:13 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 3 Sep 1996 18:04:54 -0400
From: w1aw@arrl.org
Subject: ARLK063 Keplerian data

SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

Date: 2 Sep 1996 20:42:50 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 2 Sep 1996 20:46:14 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 3 Sep 1996 21:47:11 GMT
From: darwin@indy.net (Darwin Teague)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

Date: 03 Sep 1996 16:32:41 GMT
From: karl_dundee@RedwoodFN.org (karl dundee)
Subject: Kep Data AUG 30

SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614

```
WO-18
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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Date: Mon, 02 Sep 1996 22:51:13 GMT
From: marty@trucom.com (Marty Albert)
Subject: Radio Astronomy

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
```

>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

Date: Mon, 2 Sep 1996 08:02:39
From: jim.b@okisemi.com (Jim Bieberich)
Subject: WTB: Low Output or Dead High Power Transmitting Tubes

I want to buy dead power transmitting tubes. Tubes must not be broken or
physically damaged. I'm interested in tubes with power dissapations 250 watts
to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

Date: (null)
From: (null)

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
```

```
1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #270
******************************
```

1717. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609070911.CAA01281@UCSD.EDU>
Source record: 21590

```
From smtp Thu Sep 5 04:02 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 5 Sep 96 04:02 PDT
Received: by mail.ucsd.edu; id WAA28614
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:36 -0700 for ham-space-list
Received: by mail.ucsd.edu; id WAA28585
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:31 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32564
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199609050546.WAA28585@mail.ucsd.edu>
Date: Wed, 4 Sep 96 22:46:28 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #271
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 271

Today's Topics:
Ham-Space Digest V96 #270
Indiana repeater/ATV/Packet APRS Balloon Launch
Radio Meteor Obs. Bull. August 1996: Perseids
WTB: SatTrak-IV

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 4 Sep 96 17:28:48 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #270
```

GE Item Number: 8809857
Original Msg Id: 376893
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #270
System: MARLBORO#
Date: Wed 4-Sep-96 17:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 03 Sep 1996 21:27:43 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

Darwin Teague wrote:

> Could you please tell me how to receive the video? Is it a TV-UHF frequency? I
> have an old Rabbit receiver, but don't know what frequency it's on....

You can receive ATV the following ways:

Using an ATV down converter (converts 439.25 to TV channel 3) and a
70cm Beam Antenna

Using an old TV or VCR with manual tuning hooked up to an outside
antenna.
You will have to tune the TV to UHF channel 14 and then try using
your
fine tuning control and tune DOWN. The ATV frequency is BELOW
UHF ch 14.

Using a newer TV or VCR that is cable-ready. Hook the TV or VCR up
to an
outside antenna and then set it for CABLE CHANNEL 60.

The first method is BY FAR the best. Down converters are around $80 and
you can
make your own beam (I did). Make sure your receiving antenna has the
same
polarity as the transmitter. Cross polorization loss on 70cm can be as
much
as 20db.

Mark
<KB9KHM>

Date: Wed, 4 Sep 1996 21:16:33 GMT
From: steyaert@vvs.innet.be (Christian Steyaert)
Subject: Radio Meteor Obs. Bull. August 1996: Perseids

Radio Meteor Observation Bulletin No. 37 September 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P. Bus
Location: Groningen, Netherlands (6 degr 33' E, 53 degr 13' N)
Frequency: 72.11 MHz
Transmitter Location: Wroclaw, Poland, 130 kW, Distance 740 km
Antenna: Yagi, 3 elements, geographical azimuth 106 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 uV
Observing method: Listening

Mean dead time corrected Sporadic Radio Meteor activity between
1996 July 13 and 1996 August 5.
Between brackets the statistical error of one sigma.

Mean Sporadic activity, starting at UT:

10h 11 12 13 14

85(5) 96(9) 90(10) 93(6) 84(8)

18h 19 20 21 22 23 0 1 2-2.5

91(9) 102(8) 112(6) 130(13) 131(11) 166(19) 178(18) 180(12) 103(11)

Mean Sporadic activity of long duration reflections > 1 sec, starting at UT:

10h 11 12 13 14 | 18 19 20 21 22 23 0 1 2-2.5
---
2 2 2 2 3 | 4 4 2 6 5 4 7 6 6

Dead time corrected counts of reflections during one hour intervals.
Between brackets the number of long duration reflections > 1 sec,
starting at UT:

August 11 August 12
18h 19 20 21 22 23 0 1 2-2.5

115(19) 127(12) 169(20) 216(24) 188(16) 271(36) 281(52) 320(70) 116(25)

August 12
10h 11 12 13 14

106(18) 180(21) 138(26) 130(16) 114(10)

. very high activity between Aug 11 23h UT and Aug 12 2h UT.

E.P. Bus

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

August 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Aug	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	23	52	71	103	136	102	113	125	62	84	41
2- 3	33	47	64	89	103	100	115	115	85	91	51
3- 4	13	54	94	%	140	105	191	96	74	112	40
15-16	%	39	9	26	49	43	51	53	52	60	38
16-17	25	33	24	34	57	44	65	64	47	58	32
17-18	11	27	41	53	65	54	65	81	58	67	64
18-19											
19-20	11	36	49	177%	206%	49	92	65	58	64	30
20-21	20	20	28	29	38	26	28	32	32	40	-
21-22	22	15	32	30	45	58	64	72	62	59	72
22-23	14	29	28	37	42	52	67	72	52	55	30
23-24	8	21	24	45	64	72	33	56	55	36	23
24-25	14	8	17	49	36	34	56	44	39	38	33
25-26	7	22	37	24	46	34	39	34	30	25	22
26-27	4	9	12	21	22	40	32	54	46	49	37
27-28	Thunderstorms										
28-29	Thunderstorms										

```
29-30 | 9 6 6 9 11 12 20 14 29 27 20
30-31 | 18 5 10 26 31 28 30 39 45 34 24
31-01 | 4 5 13 14 20 24 31 22 31 23 21
------+-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Aug | UT
```

Notes:

. local time = UT + 2 hours.
. % direct reception
. ? high count to be checked for potential sporadic E.

Maurice De Meyere

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector
Receiver: AR-8000 at 59.2505 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display (FFTDSP38 program from AF9Y) on the PC where 640 channels of 2 Hz width are recorded and stored continuously. The sensitivity of each 2 Hz wide channel is about -171 dBm. Every meteor reflection (in SSB mode) produces a distinct whistle, which is recorded easily by the real time FFT program and saved in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width is used for meteor identification, the other nearby "channels" are used to monitor interference, which can be identified easily this way. If any interference occurs, the whole 200 second recording of one picture is not used for further processing.

The following figures show the total length of the meteor reflections during one hour,expressed as percentage. The number here shows 10 times this value. (e.g. 100 means 10 percent).

```
| June 1996
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
---+-------------------------------------------------------------------
2 | , , , , ,163,125, , , , , , , , ,
3 | 58, 80, 40,149, ,205,204,203, 85, 45,227,221, 59, 72,188,170,205
4 |115,132,148,161, ,237,208,180,207, 99,206,224, 67, 61,198,186,180
5 |137,161,226,192,134,253,265,244,175, 74,184,261, 75,179,147,259,188
6 |123,181,201,182,209,261,239,284,189,105,231,232, ,196,164,257,125
7 |114, ,188,172,228,286,301,231,314, 89,181,224, 80,176,185, ,247
8 |113, ,295,158,246,233,325,305,183,142,138,174,111,152, , ,
9 |108,132,275,196,212,242,316,258,272,163,171,147, 89,152,186, ,184
10 | 81,173,102,135,212,263,376,278,273,141,108, 79,102,159,173, ,184
11 | 86, , 97,155,101, ,457,268,195,165,101, , 82,170,157, ,108
```

```
12 |105, , 73,151, 57, ,468,359,257,213,148,134, 77,183,164, ,204
13 |145, ,281,241,250,277,514,399,223,231,252,268, ,183,232, ,289
14 |114,131,246,297,217,224,397,281,208,224,172,175, , ,225, ,
15 | 86, 98,234,221,178,193, ,186,167,204,145,172, ,141,156, 96,148
16 | 55,101, , , ,157, ,154,107, , 84,107, ,143,154, 50,167
17 | 51, ,156, , ,123,197,152, , 91, , , ,136,106, 54,125
18 | 50, ,107, , , 71,132,163, , 56,142, , , , , 35, 76
19 |
20 | , 65, , 75,140,106, 88,136,123, 60, 69, 24, 28, 83,204, 76,244
21 | 99, 60, 69, , 90,140,123, 85,116, 52, 76, 31, 29,109,103, 85, 15
22 | 92, 80, 93, , 64,108,158,133,105, 71, 76, 42, 27,135,169,125, 17
---+--------------------------------------------------------------
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
| June 1996

(new) Location: near Villach, Austria (13 37' E, 46 45 ' N)
(new) Antenna: 3 el Yagi
Receiver: AR-8000 at 48.2492 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter (assumed): 250 kw TV video carrier near Madrid, Spain,
distance 1550 km, southwest direction.

| Aug 1996
UT | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
----+-----------------------------------------------------------------
0 | , 10, 16, 13, 9, 6, 8, 12, 15, , 53, 59, 52, 24, 32, 13, 6
1 | 4, 9, 18, 5, 9, 4, 3, , , 7, 25, 69, 65, 26, 35, 14, 15
2 | 13, 16, 12, 13, 20, 3, 16, 15, 36, 10, 43, 34, 65, 52, 24, 11, 4
3 | 16, 18, 31, 24, 14, 9, 13, 21, 11, 6, 36, 35, 59, 36, 29, 8, 9
4 | 24, 22, 31, 15, 18, 24, 13, 18, 22, 18, 40, 67, 63, 42, 38, 29, 10
5 | 17, 12, , 12, 13, 15, 22, 19, 20, 21, 28, 71, 37, 26, , 19, 11
6 | 14, 11, , 13, 43, 16, 20, 16, 10, 22, 34, 46, 39, 24, , 10, 3
7 |
8 | 31, , , , , 13, 15, 26, 11, 15, , 73, 41, 20, , 9, 13
9 | , , 4, 13, 23, 8, 32, , 10, 18, 40, 38, 18, 11, , 5, 4
10 | 42, 28, 8, 8, 2, 15, 20, 11, 7, , 29, 32, 32, 18, , 16,
11 | , 12, 7, 7, 8, 8, 10, 13, 8, , 23, 32, 57, 10, , 7, 10
12 | , 8, , 6, 9, 5, , 7, 5, , 7, , 23, 10, , 4, 4
13 | 5, 13, 3, , , 2, , 6, 11, , 13, 15, 7, 7, , 7,
14 | , , 2, 8, , , , 7, 29, , 27, 19, 2, 9, , 4,
15 | , , 3, 6, , , , , 10, , 10, 22, , 5, , 2,
16 | , , , , 6, , , , 5, , 3, 18, , , , ,
17 | , , 5, , , , , , , , 48, 20, , , , ,
18 | , , , , , , , , , , , , , , , 3,
19 | , , , , 13, , , , , 18, 7, 10, , , , ,
20 | 6, 12, , , , , 3, , , 25, 17, , 9, 4, , ,
21 | , 10, , 3, 4, 7, 5, , 6, 9, 10, 18, 15, 18, , ,
22 | 18, 8, , 5, 10, 7, 7, 21, 45, 8, 28, 24, 15, 12, 4, 5,
23 | 13, 6, 8, 24, , 22, 13, 30, 6, 18, , 30, 18, 18, , 10,
----+-----------------------------------------------------------------
| 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
```

| Aug 1996

Notes:
. blank value means either no data available, interference,
sporadic "E", power failure, shutdown during thunderstorms or
transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).

. maximum Perseid activity during the early hours (UT) of Aug 12.

. *** Radio Meteor Gallery is open ***
I'd like to invite you all to my new Radio Meteor Gallery,
with the best spectrograph pictures out of about one million
recorded meteor reflections during last year. URL is
<http://www.net4you.co.at/user/kuneth/gallery.html>

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW , sensitivity -154 dBm min
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Long duration echoes (t>2 sec):

| August 1996
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
---+---------+---------+---------+---------+---------+-------
21 | 17 37 27 72 53 37
22 | 17 20 22 55 34 29
23 | 5 11 14 31 34 21
00 | 10 15 5 24* 15 11
01 | 4 7 4 31* 19 11
02 | 2 5 0 16* 12 9
03 | 2 5 2 10 6 11
04 | 2 1 3 4 8 9
05 | 0 2 1 4 4 1
06 | 0 2 0 0 1 0
07 | 1 0 1 0 1 2
08 | 0 2 0 0 3 1
09 | 0 1 5 0 2 4
10 | 0 4 0 0 2 2
11 | 1 1 6 0 2 3

```
12 | 1 5 4 6 4 1
13 | 0 3 4 13 13 7
14 | 1 5 14 14 11 5
15 | 8 9 11 20 13 8
16 | 13 10 15 25 14 10
17 | 9 11 30 28 16 17
18 | 20 21 48 55 24 22
19 | 24 20 49 60 27 21
20 | 28 23 55 65 35 18
---+---------+---------+---------+---------+---------+---------+-------
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
| August 1996
```

Notes:
. local time = JST = UTC + 9 hours
. the radiant was not located favorably when the Perseids maximum occurred: yet a significant relative increase (with respect to the adjacent days) is seen between 0h-2h UT on August 12.

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location:
Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 9 or 18 inch/hour + occasional listening.

Dead time corrected counts of reflections during one hour intervals starting at:

```
| August 1996
UT | 8 9 10 11 12 13 14
-----+---------------------------------------
0 | 170 240! 154
1 | 188 354! 142
2 | 167 160 158
3 | 164 140 168
4 | 170 170 122 144
5 | 135 143 133 100
6 | 112 108 102 105
7 | 115 92 114 110
8 | 100 111 91 104 115
9 | 75 116 c 82 83
10 | 50 64 82 76 80
```

```
11 | 38 56 76 66 87
12 | * 96 63 68
13 | * 88 64 62
14 | * * 60 50
15 | 52 * 60 61
16 | 48 * 86 50
17 | 122 56 * 54 58
18 | 124 140 * 44 47
19 | 123 72 * 80 61
20 | 128 53 94 * 102 52
21 | 130 82 135
22 | 161 91 130
23 | 147 167! 118
-----+--------------------------------------
UT | 8 9 10 11 12 13 14
| August 1996
```

Remarks: * thunder-storm.
c continuous reception.
! Perseids outburst, maximum between 01 - 02 h UT.

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were recorded on a pen-recorder chart.

```
1996 | UT
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---------------------------------------------+-----------
1 | 16 23 41 41 40 43 38 35 29 34 27 19 | 34.0 30.3
2 | 8 18 22 34 40 35 34 44 35 25 26 15 | 26.2 29.8
3 | 19 20 27 25 42 37 22 36 29 30 21 15 | 28.3 25.5
4 | 12 27 26 30 45 26 42 41 42 35 25 21 | 27.7 34.3
5 | 12 16 21 33 44 30 30 29 26 30 23 18 | 26.0 26.0
6 | 10 21 21 33 35 23 34 26 38 26 24 26 | 23.8 29.0
7 | 9 12 21 34 26 17 26 32 40 25 20 21 | 19.8 27.3
8 | 13 20 23 34 32 30 24 30 24 21 15 | 25.3 22.8
9 | 9 11 21 19 25 29 25 24 23 32 24 20 | 19.0 24.7
10 | 11 18 25 32 30 35 39 32 29 30 30 19 | 25.2 29.8
11 | 15 15 23 27 32 28 21 34 | 23.3 27.5
12 | 15 21 24 31 23 22 25 22 30 25 31 27 | 22.7 26.7
13 | 12 21 24 30 37 29 24 33 37 20 25 16 | 25.5 25.8
14 | 16 24 17 27 36 34 24 33 19 24 | 21.0 28.3
15 | 12 10 17 19 27 16 21 18 19 15 22 20 | 16.8 19.2
```

```
16 | 15 21 21 20 26 29 24 29 19 24 24 22 | 22.0 23.7
17 | 13 21 26 28 27 22 25 20 27 28 26 20 | 22.8 24.3
18 | 18 24 28 23 23 24 26 24 24 29 22 25 | 23.3 25.0
19 | 10 17 14 24 11 15 16 19 25 22 20 15 | 15.2 19.5
20 | 11 13 15 17 18 23 23 18 23 16 15 22 | 16.2 19.5
21 | 10 12 21 15 14 17 15 23 15 14 13 16 | 14.8 16.0
22 | 9 14 23 20 21 16 14 17 23 20 25 15 | 17.2 19.0
23 | 9 18 19 18 17 16 26 26 15 26 23 28 | 16.2 24.0
24 | 20 16 15 14 26 21 23 31 31 23 25 13 | 18.7 24.3
25 | 22 14 14 14 20 21 19 21 22 22 27 | 16.8 22.0
26 | 7 14 17 12 15 23 17 29 24 26 29 20 | 14.7 24.2
27 | 11 27 14 25 13 15 18 22 20 23 25 17 | 17.5 20.8
28 | 17 24 24 25 25 22 23 23 36 20 21 22 | 22.8 24.2
29 | 9 14 20 12 19 17 19 19 16 20 22 20 | 15.2 19.3
30 | 11 20 18 16 21 15 18 20 23 14 | 16.3 18.5
31 | 14 11 12 18 16 20 18 13 16 15 | 15.2 15.5
-----+-----------------------------------------------+-----------
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

**(1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

Total echoes

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
9-10 | 27 33 30 32 35 48 41 38 - 30 - - - 19 15 9 16 7 7 13 12 19 25 38
10-11 | 39 35 27 39 29 59 47 40 42 51 45 29 21 21 8 8 14 4 12 10 20 39 49 48
11-12 | 47 62 50 67 72 76 66 46 49 47 44 27 31 20 20 11 11 18 13 8 19 27 26 29
12-13 | 31 35 41 34 34 40 55 34 34 33 17 20 20 12 8 8 3 2 7 6

Long duration echoes (>5sec):

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
9-10 | 3 2 3 1 2 2 3 1 - 1 - - - 0 0 0 0 0 0 0 0 0 1 3
10-11 | 0 2 2 5 2 6 5 6 4 10 4 1 3 1 0 0 0 0 0 1 1 0 3 0
11-12 | 3 6 5 8 4 8 7 2 3 2 4 1 0 0 0 0 0 0 0 0 0 0 1 3
12-13 | 5 1 0 3 1 6 5 5 3 1 0 0 1 0 0 0 1 0 2 0

- Perseids maximum took place on 1996/08/12 02h UT.
- local time = JST = UT + 9 hours

Chikara Shimoda

------------------------------------------------------------
Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
```

Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
31- 1 | 51 56 53 56 56 45 45 51 44 35 33 21 34 27 24 20 12 13 13 17 33 28 35 56
1- 2 | 72 50 50 51 40 50 35 32 31 25 37 24 17 24 20 14 15 16 15 14 24 26 36 65
2- 3 | 65 48 69 66 49 41 44 51 41 36 32 25 21 26 26 20 13 12 14 25 36 48 50
3- 4 | 68 49 55 52 56 51 31@42 43 33 19@24 26 22 19 20 12 14 13 13 18 22 28 45
4- 5 | 49 32 40 42 31 29 44 42 26 28@18@18 14 19 18 12 15 12 17 14@12 @27 39
5- 6 | 41 47 48 43 45 55 65@54 35 33 32 25 25 26 23 14 17 15 13 15 27 31 @37
6- 7 | 67 53 59 68 70 68 45 47 24 @24@14@14@12@12@12 16 20 24 36 61
7- 8 | 50 48 59 75 74 55 50 56 45 39 29 32 22 24 21 14 11 12 12 25 27 42 73
8- 9 | 55 43 57 62 66 76 71 60 32 28 31 26 35 22@31 19 16 14 10 17 25 30 41 48
9-10 | 61 52 40 63 72 67 78 61 45 32 24 32 21 23 22@20@12@12 13 21 36 33 48 51
10-11 | 54 70 80 70 87 76 60@59@52 @38 33 28 18@18 17 15 17 19 24@34 38 56
11-12 | 51 61 79 93107 98@71 71 93 64 62 43 37 25 29@12 14 17 13 14 25 50 68 80
12-13 | 74 93 97116104 82102 91@50 45 49 38 40 39@15 21 21 26 15@21 29 24 42 47
13-14 | 62 68 77 78102 93 87 89 58 40 36 34 36 32@21@22 14 12 16 23 28 35 36
14-15 | 32 30 39 52 45 31 30@36 48 35 32 29 18 21@22 13 18 16 15 12 19 29 43 45
15-16 | 44 41 38 44 39 22 42@27 34 36 35 27 29 21 17 17 15 13 12 14 17 34 35 32
16-17 | 46 50 53 48 47 47 47@51 52 29 27 20 20 21 21 17 21 18 12 19 29 20 32 35
17-18 | 37 23 28 30 40 39 50 48@40 39 35 39 23 22@26@17 24 16 17 19 27 35 37 34
18-19 | 51 31 33 46 37 38 47 27@35 25 20@23 @21 31 27 37
19-20 | 37 33 48 41 44 46 37 41@48 32 27 28 18 24@22 17 15 16 14 15@25 38 28 33
20-21 | 33 30 42 51 34 30@37 33 38 29 27 21 31 23 22 20 14 12 15@16 18 31 23 37
21-22 | 43 35 41 43 47 @48 41@32 @37 27 31 24 24 18 16@14@17 24 36 36
22-23 | 42 35 35 43 44 46 51 48 44 39 37 29 35 28 17 26 23 16 17 16@21 32 39 44
23-24 | 39 35 39 38 43 37@44 52 46 44 38 36 34 28 28 25 19 18 16 14 19 30 38 34
24-25 | 26 29 39 35 35 29@30 @20 24 34 58
25-26 | 38 40 43 49 52 37 46@48@45@31 27 37 27 25 24 23 18 20 20 19 18 26 39 35
26-27 | 39 39 48 42 34 41 38 31@33@34 35 26 24 24 20 20 25 17 20 20 34 25 38 38
27-28 | 31 31 48 56 51 54 50 57 49
------+------------------------------------------------------------------------
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT
```

Long lasting (>20 sec.) echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
10-11 | 6 5 7 6 13 9 7 6 11 6 3 2 2 2 1 1 0 0 0 0 0 0 0 1 2
```

```
11-12 | 1 6 5 16 21 21@13 18 17 23 16 10 8 2 3 0 0 0 0 0 2 2 5 5
12-13 | 6 18 17 27 12 9 21 18@10 9 9 5 2 0 0 0 0 0 0 1 0 0 4 6
13-14 | 5 6 6 14 16 20 21 15 10 5 2 2 2 1 0 0 0 0 0 0 0 0 0 0 0
14-15 | 0 1 2 3 5 5 2 @2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
15-16 | 2 2 1 2 0 0 2 0 0 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0
16-17 | 0 1 3 1 4 2 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
17-18 | 1 1 0 0 0 0 1 2 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
18-19 | 0 1 0 0 3 2 0 0 @0 0 0 @0 0 0 0 0
19-20 | 0 0 0 0 0 0 0 0 @1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
20-21 | 1 0 0 1 0 5 1 0 1 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0
------+------------------------------------------------------------------------
UT | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
```

Notes:

- @nn =corrected hourly rates (observed for less than 60 min).

- local time = JST = UT + 9 hours.

Kazuhiro Suzuki

```
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)
```

Counts in one hour intervals starting at:

delta Aquarids 1996

```
| July 1996
UT | 27 28 29 30
----+-----------------------------------
0 | 409 409 559 584
1 | 433 426 544 433
2 | 472 398 598 421
3 | 502 428 353 393
4 | 484 394 534 366
5 | 291 350 409 316
6 | 270 309 290 359
7 | 362 216 247 405
8 | 568 238 291 333
9 | 329 143 328 309
```

```
10 | 235 167 211 258
11 | 183 134 246 221
12 | 168 204 251 219
13 | 186 207 165 220
14 | 192 180 117 154
15 | 203 177 97 150
16 | 154 136 124 144
17 | 121 124 131 150
18 | 128 79 163 133
19 | 176 95 115 177
20 | 147 112 139 213
21 | 156 174 248 250
22 | 275 358 364 348
23 | 321 514 462 450
----+---------------------------------
UT | 27 28 29 30
| July 1996

Perseids 1996

| August 1996
UT | 11 12 13 14
----+---------------------------------
0 | 457 1415 547 380
1 | 509 1179 662 728
2 | 417 1085 759 416
3 | 424 760 628 422
4 | 430 595 552 545
5 | 396 732 654 300
6 | 457 914 536 372
7 | 641 1018 658 488
8 | 449 767 540 436
9 | 394 847 585 348
10 | 312 584 551 291
11 | 415 542 606 381
12 | 231 708 530 286
13 | 270 518 286 188
14 | 214 265 325 134
15 | 187 199 198 127
16 | 176 278 156 129
17 | 221 191 117 81
18 | 158 243 164 99
19 | 377 200 149 136
20 | 329 277 134 127
21 | 419 321 507 218
22 | 487 633 355 354
23 | 717 453 296 279
----+---------------------------------
UT | 11 12 13 14
| August 1996
```

. strong Perseids activity between Aug 12, 0h-2h UT, and Aug 12, 6h-8h UT.

Ilkka Yrjola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (6 degr 51' E, 53 degr 19' N)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 130 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: Listening

Dead time corrected counts of reflections during one hour intervals
starting at:

Date: Wed, 4 Sep 1996 15:23:25 GMT
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Subject: WTB: SatTrak-IV

If anyone has one of Ron Long's (Kiron Corp) SatTrak-IV satellite tracker/tuner
units for sale, please let me know. I'd be interested in either a completed unit,
or an unassembled kit.

you can E-mail me direct at:
sem2r@virginia.edu

Thanks.

End of Ham-Space Digest V96 #271
****

1718. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609070914.CAA01299@UCSD.EDU>
Source record: 21591

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
```

>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

1719. Re: problems with satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: fleckm@comtch.iea.com
Message-ID: <32318b47.0@news.iea.net>
Source record: 21592

AO-10 and AO-13 are "week" (weak)? It is going to depend on your station setup.
I do not have an ideal station... a 3 element 2m beam, a 6 element 440 beam, both
are fixed to point to the horizon. I CAN rotate the mast to point North, South, etc....
but I can not elevate the beams. I do have a 2m preamp which really helps in
reception! But, both Sats are "weak". From what I have read and from my limited
experience, the antennas are the key factor, even more so than on HF.
What kind of station do you have? If you let us know, maybe someone has a
similar setup and could offer further advice.

Mike
N7DLI

1720. Ham-Space Digest V96 #273

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609071533.AA268230394@relay2.geis.com>
Source record: 21593

GE Item Number: 7974538
Original Msg Id: 378366
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #273
System: MARLBORO#
Date: Sat 7-Sep-96 15:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1721. Ham-Space Digest V96 #274

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609071533.AA268270398@relay2.geis.com>
Source record: 21594

GE Item Number: 3493832
Original Msg Id: 378372
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #274
System: MARLBORO#
Date: Sat 7-Sep-96 15:36

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1722. How does THIS sound for EME?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <50scpv$2bjf@ns1-1.CC.Lehigh.EDU>
Source record: 21595

Ok, here is my latest attempt to HEAR my echo at all
9' solid dish with a 2ele Dipole 440mhz antenna (attached to the TV feed;))
100ft of 9913 at 50watts FM
yes..FM
would this setup work for a REAL eme radio like a multi-mode one?
if so, should i at least hear my echo break squelch at all with FM?
oooooor i'm I out of luck, and should forget it untill i get a multimode rig?

thanks
DAvid

|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

1723. Re: How does THIS sound for EME?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: wb6w@netcom.com
Message-ID: <wb6wDxDMCt.H01@netcom.com>
Source record: 21596

My newsreader claims that c002@Lehigh.EDU wrote:
: Ok, here is my latest attempt to HEAR my echo at all
: 9' solid dish with a 2ele Dipole 440mhz antenna (attached to the TV feed;))
: 100ft of 9913 at 50watts FM
: yes..FM
: would this setup work for a REAL eme radio like a multi-mode one?
: if so, should i at least hear my echo break squelch at all with FM?
: ooooooor i'm I out of luck, and should forget it
: untill i get a multimode rig?

: thanks
: DAvid

David -

I think that your station (as described) is quite a few db short of
being EME capable. I suggest that you work through what is called the
"link calculation" to see how strong your echo was and how strong it
will need to be for you to hear it. I suspect that you will learn many
interesting things by doing this bit of engineering.

Good luck!

: |---|
: | David Roseman | c002@lehigh.edu |
: | | The Flying HAm - BBS |
: | Utopia Telecommunications | Technomage - BBS |
: | 610.838.2989 | N3SQE/1 - HAm |
: | (Parttime system) | |
: |-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|

--
****
* "Two wrongs don't make a right, but three lefts do." *
* *
* wb6w@netcom.com - Glenn Thomas *
****

1724. W. CT Hamfest close to NY state line, 15-Sep

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <3231C57F.C72@ix.netcom.com>
Source record: 21597
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.digital.misc

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Just 14 miles from the NY/CT State line!

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

1725. ARLK064 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk064.1996@arrl.org>
Source record: 21598
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK064
ARLK064 Keplerian data

ZCZC SK64
QST de W1AW
Keplerian Bulletin 64 ARLK064
From ARRL Headquarters
Newington, CT September 7, 1996
To all radio amateurs

SB KEP ARL ARLK064
ARLK064 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96250.13400120 .00000514 00000-0 11876-4 0 06609
2 16609 51.6512 76.2256 0010435 138.1744 222.0019 15.61888634602658
AO-10
1 14129U 83058B 96249.09208200 -.00000004 00000-0 10000-3 0 4514
2 14129 25.9603 191.0418 6035820 46.2894 349.9690 2.05880321 71518
RS-10/11
1 18129U 87054A 96250.05117683 .00000040 00000-0 27380-4 0 02630
2 18129 82.9244 88.7745 0010687 296.4829 63.5228 13.72369207461268
UO-11
1 14781U 84021B 96249.95925934 .00000125 00000-0 29002-4 0 09177
2 14781 97.8056 237.1143 0011286 187.0434 173.0619 14.69477201669519
RS-12/13
1 21089U 91007A 96250.15917419 .00000008 00000-0 -77648-5 0 09284
2 21089 82.9242 129.3077 0030769 9.9224 350.2542 13.74072671280154
AO-13
1 19216U 88051B 96249.95716827 .00033133 12391-5 16161-2 0 2686
2 19216 57.1364 93.5168 7437889 49.8325 354.6995 2.12109294 31540
UO-14
1 20437U 90005B 96250.14933111 .00000016 00000-0 23041-4 0 02146
2 20437 98.5413 331.6381 0011078 329.2932 30.7604 14.29930169345624
RS-15
1 23439U 94085A 96249.10037779 -.00000039 00000-0 10000-3 0 01631
2 23439 64.8143 253.8471 0160074 185.1183 174.8106 11.27528493069794
```

```
AO-16
1 20439U 90005D 96250.17405183 .00000058 00000-0 39232-4 0 00158
2 20439 98.5563 334.0277 0011530 330.1418 29.9107 14.29983658345647
DO-17
1 20440U 90005E 96250.25822356 .00000008 00000-0 19779-4 0 74
2 20440 98.5570 334.7866 0011512 328.7421 31.3073 14.30125098345686
WO-18
1 20441U 90005F 96250.17983824 -.00000004 00000-0 15183-4 0 00188
2 20441 98.5553 334.6401 0012072 328.5323 31.5136 14.30094410345677
LO-19
1 20442U 90005G 96250.16946612 .00000039 00000-0 31948-4 0 00153
2 20442 98.5598 335.1612 0012238 327.9938 32.0500 14.30204671345691
FO-20
1 20480U 90013C 96250.07821212 -.00000015 00000-0 47949-4 0 09154
2 20480 99.0244 259.5467 0540247 301.2509 53.6730 12.83234511308267
AO-21
1 21087U 91006A 96250.09818446 .00000094 00000-0 82657-4 0 07551
2 21087 82.9382 261.8178 0036069 343.5457 16.4525 13.74571402281121
UO-22
1 21575U 91050B 96250.16724456 .00000009 00000-0 17153-4 0 07305
2 21575 98.3448 314.1177 0008341 27.0849 333.0775 14.37034954269698
KO-23
1 22077U 92052B 96250.50075951 -.00000037 00000-0 10000-3 0 6037
2 22077 66.0793 19.2077 0014843 276.9607 82.9721 12.86297789191261
KO-25
1 22828U 93061F 96249.20339871 .00000005 00000-0 19342-4 0 4762
2 22828 98.5725 323.5363 0010513 346.7397 13.3512 14.28150384121537
IO-26
1 22826U 93061D 96249.17113888 .00000034 00000-0 31398-4 0 05009
2 22826 98.5774 323.4433 0010345 0.5712 359.5474 14.27811893153417
AO-27
1 22825U 93061C 96249.25099560 -.00000000 00000-0 17403-4 0 4999
2 22825 98.5748 323.3376 0009354 0.6423 359.4767 14.27702634153416
PO-28
1 22829U 93061G 96249.15102663 -.00000002 00000-0 16681-4 0 05092
2 22829 98.5739 323.5501 0010350 347.8746 12.2189 14.28131769153445

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
September 10, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1726. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: Mike Snowden <Pmikes@fishnet.net>
Message-ID: <3232178B.797C@fishnet.net>
Source record: 21599
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

Mary Ellen Powers wrote:
>
> All,
>
> Does anyone know how much power the 6 meter module for a yaese 736 puts
> out. I have one, brand new, and I can't seem to get any more that about 3
> watts our of it. Is this correct???
>
> Thanks,
> Alan Adamson
>
> ps. please email to ne1h@ne1h.radio.org

Hello Mary. I have a newer FT 736. On 6 it should put out 10 watts in the FM mode. If your not getting full pwr out, carefully check all your connections and the SWR. If your SWR is high, the rig automatically "folds" back the output pwr tp protect the rig. I found that by putting an SWR/PWR meter between the rig and my amp the rig would put out full pwr. Another trick is to trim a short piece to until you get a flat SWR and full pwr. Good luck..Oh Yaesu will deny any knowledge of a problem. After much frustration, I got the real story from the designer of "TE" amps, here in sthe So Cal area. 73 Mike K6YPB

1727. Help with UoSAT-OSCAR-11 on 145.826 Mhz

Newsgroup: rec.radio.amateur.space
Date: 1996-09-07 00:00:00 UTC
From: Lawrence Wetmore <wetmorel@hal.ndhm.gtegsc.com>
Message-ID: <3231A6A3.137F@hal.ndhm.gtegsc.com>
Source record: 21600

Saw an article in SpaceNews that UoSAT-OSCAR-11 is active on 145.826 Mhz, but I have not been able to hear any activity. Would like to hear from other hams who have been successful in monitoring the ASCII data from this satellite.

Thanks, Larry WA1FRK Needham, MA

1728. Old Quiktrak question!

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: cbuttsch@slonet.ORG
Message-ID: <Pine.GSO.3.95.960907182435.4704D-100000@spork.callamer.com>
Source record: 21601

Date: Sat, 7 Sep 1996 18:05:45 -0700 (PDT)
From: Clifford Buttschardt <cbuttsch@slonet.org>
Subject: Old Quiktrak question!

Some of you might remember how to load Keparian elements into Quiktrak (not Instant Track!) using the QK.EXE command. I would like to eliminate all the existing keps as they simply have become disorganized and hard to recall in the present maze of satellites.
Then by the use of a text editor download and reorganize these elements. I've tried simply using the insert key after eliminating the VISUAL reference to the satellite but the KEP data file retains the existing order. The DOC is very vague on this item!
Quiktrak remains one of my favorite programs. Can anyone recall how this can be accomplished? 73 Cliff Buttschardt K7RR ex W6HDO

1729. Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: marty@trucom.com
Message-ID: <50tsfe$cge@thepit.trucom.com>
Source record: 21602
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Hello, Folks:

I have just put up my new home page and invite all to drop in for a look. Included at the site are the following areas:

Ham Radio -- Mostly packet, mostly high speed

Pipe Smokers -- Very, very much still under construction

Astronomy -- Mostly Amateur Radio Astronomy (good 2nd interest for Hams!)

Mapping -- Mostly about elevation maps

Heartland Internet Services -- Lots of Web Presence information

The URL to use is:

http://www.trucom.com/ppages/marty

Thanks!

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Heartland Internet Services
http://www.trucom.com/ppages/marty
****

1730. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609080905.CAA21254@UCSD.EDU>
Source record: 21603

```
From smtp Wed Sep 4 09:36 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 4 Sep 96 09:36 PDT
Received: from mail.ucsd.edu (ucsd.edu) by teale.ca.gov (5.x/SMI-SVR4)
id AA07982; Wed, 4 Sep 1996 09:26:06 -0700
Received: by mail.ucsd.edu; id EAA17795
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:56 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17781
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15570
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609041130.EAA17781@mail.ucsd.edu>
Date: Wed, 4 Sep 96 04:30:51 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #270
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 270

Today's Topics:
'modes.dat' for 'SatTrack'
(none)
ARLK063 Keplerian data
Ham-Space Digest V96 #266
Help: re pacsats (2 msgs)
Indiana repeater/ATV/Packet APRS Balloon Launch
Kep Data AUG 30
Radio Astronomy
WTB: Low Output or Dead High Power Transmitting Tubes

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
```

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 28 Aug 1996 22:23:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: 'modes.dat' for 'SatTrack'

In <322252A2.167E@alive.com> Tovar <tvr@alive.com> writes:

>Can someone suggest where/how i can get a current version of 'modes.dat'
>(which contains frequencies and modes of operation), including, for
>example, JAS-2? It seems like a real waste to get the whole SatTrack
>package just to get that one file. Or, did i miss something and there's
>some easy way of getting that?

You can just edit it yourself, using a text editor.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 4 Sep 96 10:11:13 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 3 Sep 1996 18:04:54 -0400
From: w1aw@arrl.org
Subject: ARLK063 Keplerian data

SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

Date: 2 Sep 1996 20:42:50 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 2 Sep 1996 20:46:14 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 3 Sep 1996 21:47:11 GMT
From: darwin@indy.net (Darwin Teague)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

Date: 03 Sep 1996 16:32:41 GMT
From: karl_dundee@RedwoodFN.org (karl dundee)
Subject: Kep Data AUG 30

SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614

```
WO-18
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: Mon, 02 Sep 1996 22:51:13 GMT
From: marty@trucom.com (Marty Albert)
Subject: Radio Astronomy

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
```

>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

Date: Mon, 2 Sep 1996 08:02:39
From: jim.b@okisemi.com (Jim Bieberich)
Subject: WTB: Low Output or Dead High Power Transmitting Tubes

I want to buy dead power transmitting tubes. Tubes must not be broken or
physically damaged. I'm interested in tubes with power dissapations 250 watts
to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

Date: (null)
From: (null)

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
```

```
1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #270
******************************
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1731. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609080910.CAA22543@UCSD.EDU>
Source record: 21604

```
From smtp Thu Sep 5 04:02 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 5 Sep 96 04:02 PDT
Received: by mail.ucsd.edu; id WAA28614
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:36 -0700 for ham-space-list
Received: by mail.ucsd.edu; id WAA28585
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:31 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32564
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199609050546.WAA28585@mail.ucsd.edu>
Date: Wed, 4 Sep 96 22:46:28 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #271
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 271

Today's Topics:
Ham-Space Digest V96 #270
Indiana repeater/ATV/Packet APRS Balloon Launch
Radio Meteor Obs. Bull. August 1996: Perseids
WTB: SatTrak-IV

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
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Date: 4 Sep 96 17:28:48 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #270
```

GE Item Number: 8809857
Original Msg Id: 376893
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #270
System: MARLBORO#
Date: Wed 4-Sep-96 17:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 03 Sep 1996 21:27:43 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

Darwin Teague wrote:

> Could you please tell me how to receive the video? Is it a TV-UHF frequency? I
> have an old Rabbit receiver, but don't know what frequency it's on....

You can receive ATV the following ways:

Using an ATV down converter (converts 439.25 to TV channel 3) and a
70cm Beam Antenna

Using an old TV or VCR with manual tuning hooked up to an outside
antenna.
You will have to tune the TV to UHF channel 14 and then try using
your
fine tuning control and tune DOWN. The ATV frequency is BELOW
UHF ch 14.

Using a newer TV or VCR that is cable-ready. Hook the TV or VCR up
to an
outside antenna and then set it for CABLE CHANNEL 60.

The first method is BY FAR the best. Down converters are around $80 and
you can
make your own beam (I did). Make sure your receiving antenna has the
same
polarity as the transmitter. Cross polorization loss on 70cm can be as
much
as 20db.

Mark
<KB9KHM>

Date: Wed, 4 Sep 1996 21:16:33 GMT
From: steyaert@vvs.innet.be (Christian Steyaert)
Subject: Radio Meteor Obs. Bull. August 1996: Perseids

Radio Meteor Observation Bulletin No. 37 September 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P. Bus
Location: Groningen, Netherlands (6 degr 33' E, 53 degr 13' N)
Frequency: 72.11 MHz
Transmitter Location: Wroclaw, Poland, 130 kW, Distance 740 km
Antenna: Yagi, 3 elements, geographical azimuth 106 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 uV
Observing method: Listening

Mean dead time corrected Sporadic Radio Meteor activity between
1996 July 13 and 1996 August 5.
Between brackets the statistical error of one sigma.

Mean Sporadic activity, starting at UT:

10h 11 12 13 14

85(5) 96(9) 90(10) 93(6) 84(8)

18h 19 20 21 22 23 0 1 2-2.5

91(9) 102(8) 112(6) 130(13) 131(11) 166(19) 178(18) 180(12) 103(11)

Mean Sporadic activity of long duration reflections > 1 sec, starting at UT:

10h 11 12 13 14 | 18 19 20 21 22 23 0 1 2-2.5
---
2 2 2 2 3 | 4 4 2 6 5 4 7 6 6

Dead time corrected counts of reflections during one hour intervals.
Between brackets the number of long duration reflections > 1 sec,
starting at UT:

August 11 August 12
18h 19 20 21 22 23 0 1 2-2.5

115(19) 127(12) 169(20) 216(24) 188(16) 271(36) 281(52) 320(70) 116(25)

August 12
10h 11 12 13 14

106(18) 180(21) 138(26) 130(16) 114(10)

. very high activity between Aug 11 23h UT and Aug 12 2h UT.

E.P. Bus

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

August 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Aug	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	23	52	71	103	136	102	113	125	62	84	41
2- 3	33	47	64	89	103	100	115	115	85	91	51
3- 4	13	54	94	%	140	105	191	96	74	112	40
15-16	%	39	9	26	49	43	51	53	52	60	38
16-17	25	33	24	34	57	44	65	64	47	58	32
17-18	11	27	41	53	65	54	65	81	58	67	64
18-19											
19-20	11	36	49	177%	206%	49	92	65	58	64	30
20-21	20	20	28	29	38	26	28	32	32	40	-
21-22	22	15	32	30	45	58	64	72	62	59	72
22-23	14	29	28	37	42	52	67	72	52	55	30
23-24	8	21	24	45	64	72	33	56	55	36	23
24-25	14	8	17	49	36	34	56	44	39	38	33
25-26	7	22	37	24	46	34	39	34	30	25	22
26-27	4	9	12	21	22	40	32	54	46	49	37
27-28	Thunderstorms										
28-29	Thunderstorms										

```
29-30 | 9 6 6 9 11 12 20 14 29 27 20
30-31 | 18 5 10 26 31 28 30 39 45 34 24
31-01 | 4 5 13 14 20 24 31 22 31 23 21
------+-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Aug | UT
```

Notes:

. local time = UT + 2 hours.
. % direct reception
. ? high count to be checked for potential sporadic E.

Maurice De Meyere

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector
Receiver: AR-8000 at 59.2505 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display (FFTDSP38 program from AF9Y) on the PC where 640 channels of 2 Hz width are recorded and stored continuously. The sensitivity of each 2 Hz wide channel is about -171 dBm. Every meteor reflection (in SSB mode) produces a distinct whistle, which is recorded easily by the real time FFT program and saved in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width is used for meteor identification, the other nearby "channels" are used to monitor interference, which can be identified easily this way. If any interference occurs, the whole 200 second recording of one picture is not used for further processing.

The following figures show the total length of the meteor reflections during one hour,expressed as percentage. The number here shows 10 times this value. (e.g. 100 means 10 percent).

```
| June 1996
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
---+-------------------------------------------------------------------
2 | , , , , ,163,125, , , , , , , , ,
3 | 58, 80, 40,149, ,205,204,203, 85, 45,227,221, 59, 72,188,170,205
4 |115,132,148,161, ,237,208,180,207, 99,206,224, 67, 61,198,186,180
5 |137,161,226,192,134,253,265,244,175, 74,184,261, 75,179,147,259,188
6 |123,181,201,182,209,261,239,284,189,105,231,232, ,196,164,257,125
7 |114, ,188,172,228,286,301,231,314, 89,181,224, 80,176,185, ,247
8 |113, ,295,158,246,233,325,305,183,142,138,174,111,152, , ,
9 |108,132,275,196,212,242,316,258,272,163,171,147, 89,152,186, ,184
10 | 81,173,102,135,212,263,376,278,273,141,108, 79,102,159,173, ,184
11 | 86, , 97,155,101, ,457,268,195,165,101, , 82,170,157, ,108
```

```
12 |105, , 73,151, 57, ,468,359,257,213,148,134, 77,183,164, ,204
13 |145, ,281,241,250,277,514,399,223,231,252,268, ,183,232, ,289
14 |114,131,246,297,217,224,397,281,208,224,172,175, , ,225, ,
15 | 86, 98,234,221,178,193, ,186,167,204,145,172, ,141,156, 96,148
16 | 55,101, , , ,157, ,154,107, , 84,107, ,143,154, 50,167
17 | 51, ,156, , ,123,197,152, , 91, , , ,136,106, 54,125
18 | 50, ,107, , , 71,132,163, , 56,142, , , , , 35, 76
19 |
20 | , 65, , 75,140,106, 88,136,123, 60, 69, 24, 28, 83,204, 76,244
21 | 99, 60, 69, , 90,140,123, 85,116, 52, 76, 31, 29,109,103, 85, 15
22 | 92, 80, 93, , 64,108,158,133,105, 71, 76, 42, 27,135,169,125, 17
---+--------------------------------------------------------------
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
| June 1996

(new) Location: near Villach, Austria (13 37' E, 46 45 ' N)
(new) Antenna: 3 el Yagi
Receiver: AR-8000 at 48.2492 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter (assumed): 250 kw TV video carrier near Madrid, Spain,
distance 1550 km, southwest direction.

| Aug 1996
UT | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
----+-----------------------------------------------------------------
0 | , 10, 16, 13, 9, 6, 8, 12, 15, , 53, 59, 52, 24, 32, 13, 6
1 | 4, 9, 18, 5, 9, 4, 3, , , 7, 25, 69, 65, 26, 35, 14, 15
2 | 13, 16, 12, 13, 20, 3, 16, 15, 36, 10, 43, 34, 65, 52, 24, 11, 4
3 | 16, 18, 31, 24, 14, 9, 13, 21, 11, 6, 36, 35, 59, 36, 29, 8, 9
4 | 24, 22, 31, 15, 18, 24, 13, 18, 22, 18, 40, 67, 63, 42, 38, 29, 10
5 | 17, 12, , 12, 13, 15, 22, 19, 20, 21, 28, 71, 37, 26, , 19, 11
6 | 14, 11, , 13, 43, 16, 20, 16, 10, 22, 34, 46, 39, 24, , 10, 3
7 |
8 | 31, , , , , 13, 15, 26, 11, 15, , 73, 41, 20, , 9, 13
9 | , , 4, 13, 23, 8, 32, , 10, 18, 40, 38, 18, 11, , 5, 4
10 | 42, 28, 8, 8, 2, 15, 20, 11, 7, , 29, 32, 32, 18, , 16,
11 | , 12, 7, 7, 8, 8, 10, 13, 8, , 23, 32, 57, 10, , 7, 10
12 | , 8, , 6, 9, 5, , 7, 5, , 7, , 23, 10, , 4, 4
13 | 5, 13, 3, , , 2, , 6, 11, , 13, 15, 7, 7, , 7,
14 | , , 2, 8, , , , 7, 29, , 27, 19, 2, 9, , 4,
15 | , , 3, 6, , , , , 10, , 10, 22, , 5, , 2,
16 | , , , , 6, , , , 5, , 3, 18, , , , ,
17 | , , 5, , , , , , , , 48, 20, , , , ,
18 | , , , , , , , , , , , , , , , 3,
19 | , , , , 13, , , , , 18, 7, 10, , , , ,
20 | 6, 12, , , , , 3, , , 25, 17, , 9, 4, , ,
21 | , 10, , 3, 4, 7, 5, , 6, 9, 10, 18, 15, 18, , ,
22 | 18, 8, , 5, 10, 7, 7, 21, 45, 8, 28, 24, 15, 12, 4, 5,
23 | 13, 6, 8, 24, , 22, 13, 30, 6, 18, , 30, 18, 18, , 10,
----+-----------------------------------------------------------------
| 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
```

| Aug 1996

Notes:
. blank value means either no data available, interference,
sporadic "E", power failure, shutdown during thunderstorms or
transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).

. maximum Perseid activity during the early hours (UT) of Aug 12.

. *** Radio Meteor Gallery is open ***
I'd like to invite you all to my new Radio Meteor Gallery,
with the best spectrograph pictures out of about one million
recorded meteor reflections during last year. URL is
<http://www.net4you.co.at/user/kuneth/gallery.html>

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW , sensitivity -154 dBm min
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Long duration echoes (t>2 sec):

| August 1996
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
---+---------+---------+---------+---------+---------+-------
21 | 17 37 27 72 53 37
22 | 17 20 22 55 34 29
23 | 5 11 14 31 34 21
00 | 10 15 5 24* 15 11
01 | 4 7 4 31* 19 11
02 | 2 5 0 16* 12 9
03 | 2 5 2 10 6 11
04 | 2 1 3 4 8 9
05 | 0 2 1 4 4 1
06 | 0 2 0 0 1 0
07 | 1 0 1 0 1 2
08 | 0 2 0 0 3 1
09 | 0 1 5 0 2 4
10 | 0 4 0 0 2 2
11 | 1 1 6 0 2 3

```
12 | 1 5 4 6 4 1
13 | 0 3 4 13 13 7
14 | 1 5 14 14 11 5
15 | 8 9 11 20 13 8
16 | 13 10 15 25 14 10
17 | 9 11 30 28 16 17
18 | 20 21 48 55 24 22
19 | 24 20 49 60 27 21
20 | 28 23 55 65 35 18
---+---------+---------+---------+---------+---------+---------+-------
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
| August 1996
```

Notes:
. local time = JST = UTC + 9 hours
. the radiant was not located favorably when the Perseids maximum occurred: yet a significant relative increase (with respect to the adjacent days) is seen between 0h-2h UT on August 12.

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location:
Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 9 or 18 inch/hour + occasional listening.

Dead time corrected counts of reflections during one hour intervals starting at:

```
| August 1996
UT | 8 9 10 11 12 13 14
-----+--------------------------------------
0 | 170 240! 154
1 | 188 354! 142
2 | 167 160 158
3 | 164 140 168
4 | 170 170 122 144
5 | 135 143 133 100
6 | 112 108 102 105
7 | 115 92 114 110
8 | 100 111 91 104 115
9 | 75 116 c 82 83
10 | 50 64 82 76 80
```

```
11 | 38 56 76 66 87
12 | * 96 63 68
13 | * 88 64 62
14 | * * 60 50
15 | 52 * 60 61
16 | 48 * 86 50
17 | 122 56 * 54 58
18 | 124 140 * 44 47
19 | 123 72 * 80 61
20 | 128 53 94 * 102 52
21 | 130 82 135
22 | 161 91 130
23 | 147 167! 118
-----+--------------------------------------
UT | 8 9 10 11 12 13 14
| August 1996
```

Remarks: * thunder-storm.
c continuous reception.
! Perseids outburst, maximum between 01 - 02 h UT.

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were recorded on a pen-recorder chart.

```
1996 | UT
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---------------------------------------------+-----------
1 | 16 23 41 41 40 43 38 35 29 34 27 19 | 34.0 30.3
2 | 8 18 22 34 40 35 34 44 35 25 26 15 | 26.2 29.8
3 | 19 20 27 25 42 37 22 36 29 30 21 15 | 28.3 25.5
4 | 12 27 26 30 45 26 42 41 42 35 25 21 | 27.7 34.3
5 | 12 16 21 33 44 30 30 29 26 30 23 18 | 26.0 26.0
6 | 10 21 21 33 35 23 34 26 38 26 24 26 | 23.8 29.0
7 | 9 12 21 34 26 17 26 32 40 25 20 21 | 19.8 27.3
8 | 13 20 23 34 32 30 24 30 24 21 15 | 25.3 22.8
9 | 9 11 21 19 25 29 25 24 23 32 24 20 | 19.0 24.7
10 | 11 18 25 32 30 35 39 32 29 30 30 19 | 25.2 29.8
11 | 15 15 23 27 32 28 21 34 | 23.3 27.5
12 | 15 21 24 31 23 22 25 22 30 25 31 27 | 22.7 26.7
13 | 12 21 24 30 37 29 24 33 37 20 25 16 | 25.5 25.8
14 | 16 24 17 27 36 34 24 33 19 24 | 21.0 28.3
15 | 12 10 17 19 27 16 21 18 19 15 22 20 | 16.8 19.2
```

```
16 | 15 21 21 20 26 29 24 29 19 24 24 22 | 22.0 23.7
17 | 13 21 26 28 27 22 25 20 27 28 26 20 | 22.8 24.3
18 | 18 24 28 23 23 24 26 24 24 29 22 25 | 23.3 25.0
19 | 10 17 14 24 11 15 16 19 25 22 20 15 | 15.2 19.5
20 | 11 13 15 17 18 23 23 18 23 16 15 22 | 16.2 19.5
21 | 10 12 21 15 14 17 15 23 15 14 13 16 | 14.8 16.0
22 | 9 14 23 20 21 16 14 17 23 20 25 15 | 17.2 19.0
23 | 9 18 19 18 17 16 26 26 15 26 23 28 | 16.2 24.0
24 | 20 16 15 14 26 21 23 31 31 23 25 13 | 18.7 24.3
25 | 22 14 14 14 20 21 19 21 22 22 27 | 16.8 22.0
26 | 7 14 17 12 15 23 17 29 24 26 29 20 | 14.7 24.2
27 | 11 27 14 25 13 15 18 22 20 23 25 17 | 17.5 20.8
28 | 17 24 24 25 25 22 23 23 36 20 21 22 | 22.8 24.2
29 | 9 14 20 12 19 17 19 19 16 20 22 20 | 15.2 19.3
30 | 11 20 18 16 21 15 18 20 23 14 | 16.3 18.5
31 | 14 11 12 18 16 20 18 13 16 15 | 15.2 15.5
-----+-----------------------------------------------+-----------
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

**(1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

Total echoes

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 27 33 30 32 35 48 41 38 - 30 - - - 19 15 9 16 7 7 13 12 19 25 38
10-11 | 39 35 27 39 29 59 47 40 42 51 45 29 21 21 8 8 14 4 12 10 20 39 49 48
11-12 | 47 62 50 67 72 76 66 46 49 47 44 27 31 20 20 11 11 18 13 8 19 27 26 29
12-13 | 31 35 41 34 34 40 55 34 34 33 17 20 20 12 8 8 3 2 7 6

Long duration echoes (>5sec):

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 3 2 3 1 2 2 3 1 - 1 - - - 0 0 0 0 0 0 0 0 0 1 3
10-11 | 0 2 2 5 2 6 5 6 4 10 4 1 3 1 0 0 0 0 0 1 1 0 3 0
11-12 | 3 6 5 8 4 8 7 2 3 2 4 1 0 0 0 0 0 0 0 0 0 0 1 3
12-13 | 5 1 0 3 1 6 5 5 3 1 0 0 1 0 0 0 1 0 2 0

- Perseids maximum took place on 1996/08/12 02h UT.
- local time = JST = UT + 9 hours

Chikara Shimoda

------------------------------------------------------------
Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
```

Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
31- 1 | 51 56 53 56 56 45 45 51 44 35 33 21 34 27 24 20 12 13 13 17 33 28 35 56
1- 2 | 72 50 50 51 40 50 35 32 31 25 37 24 17 24 20 14 15 16 15 14 24 26 36 65
2- 3 | 65 48 69 66 49 41 44 51 41 36 32 25 21 26 26 20 13 12 14 25 36 48 50
3- 4 | 68 49 55 52 56 51 31@42 43 33 19@24 26 22 19 20 12 14 13 13 18 22 28 45
4- 5 | 49 32 40 42 31 29 44 42 26 28@18@18 14 19 18 12 15 12 17 14@12 @27 39
5- 6 | 41 47 48 43 45 55 65@54 35 33 32 25 25 26 23 14 17 15 13 15 27 31 @37
6- 7 | 67 53 59 68 70 68 45 47 24 @24@14@14@12@12@12 16 20 24 36 61
7- 8 | 50 48 59 75 74 55 50 56 45 39 29 32 22 24 21 14 11 12 12 25 27 42 73
8- 9 | 55 43 57 62 66 76 71 60 32 28 31 26 35 22@31 19 16 14 10 17 25 30 41 48
9-10 | 61 52 40 63 72 67 78 61 45 32 24 32 21 23 22@20@12@12 13 21 36 33 48 51
10-11 | 54 70 80 70 87 76 60@59@52 @38 33 28 18@18 17 15 17 19 24@34 38 56
11-12 | 51 61 79 93107 98@71 71 93 64 62 43 37 25 29@12 14 17 13 14 25 50 68 80
12-13 | 74 93 97116104 82102 91@50 45 49 38 40 39@15 21 21 26 15@21 29 24 42 47
13-14 | 62 68 77 78102 93 87 89 58 40 36 34 36 32@21@22 14 12 16 23 28 35 36
14-15 | 32 30 39 52 45 31 30@36 48 35 32 29 18 21@22 13 18 16 15 12 19 29 43 45
15-16 | 44 41 38 44 39 22 42@27 34 36 35 27 29 21 17 17 15 13 12 14 17 34 35 32
16-17 | 46 50 53 48 47 47 47@51 52 29 27 20 20 21 21 17 21 18 12 19 29 20 32 35
17-18 | 37 23 28 30 40 39 50 48@40 39 35 39 23 22@26@17 24 16 17 19 27 35 37 34
18-19 | 51 31 33 46 37 38 47 27@35 25 20@23 @21 31 27 37
19-20 | 37 33 48 41 44 46 37 41@48 32 27 28 18 24@22 17 15 16 14 15@25 38 28 33
20-21 | 33 30 42 51 34 30@37 33 38 29 27 21 31 23 22 20 14 12 15@16 18 31 23 37
21-22 | 43 35 41 43 47 @48 41@32 @37 27 31 24 24 18 16@14@17 24 36 36
22-23 | 42 35 35 43 44 46 51 48 44 39 37 29 35 28 17 26 23 16 17 16@21 32 39 44
23-24 | 39 35 39 38 43 37@44 52 46 44 38 36 34 28 28 25 19 18 16 14 19 30 38 34
24-25 | 26 29 39 35 35 29@30 @20 24 34 58
25-26 | 38 40 43 49 52 37 46@48@45@31 27 37 27 25 24 23 18 20 20 19 18 26 39 35
26-27 | 39 39 48 42 34 41 38 31@33@34 35 26 24 24 20 20 25 17 20 20 34 25 38 38
27-28 | 31 31 48 56 51 54 50 57 49
------+------------------------------------------------------------------------
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT
```

Long lasting (>20 sec.) echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
10-11 | 6 5 7 6 13 9 7 6 11 6 3 2 2 2 1 1 0 0 0 0 0 0 1 2
```

```
11-12 | 1 6 5 16 21 21@13 18 17 23 16 10 8 2 3 0 0 0 0 0 2 2 5 5
12-13 | 6 18 17 27 12 9 21 18@10 9 9 5 2 0 0 0 0 0 0 1 0 0 4 6
13-14 | 5 6 6 14 16 20 21 15 10 5 2 2 2 1 0 0 0 0 0 0 0 0 0 0 0
14-15 | 0 1 2 3 5 5 2 @2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
15-16 | 2 2 1 2 0 0 2 0 0 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0
16-17 | 0 1 3 1 4 2 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
17-18 | 1 1 0 0 0 0 1 2 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
18-19 | 0 1 0 0 3 2 0 0 @0 0 0 @0 0 0 0 0
19-20 | 0 0 0 0 0 0 0 0 @1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
20-21 | 1 0 0 1 0 5 1 0 1 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0
------+------------------------------------------------------------------------
UT | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
```

Notes:

- @nn =corrected hourly rates (observed for less than 60 min).

- local time = JST = UT + 9 hours.

Kazuhiro Suzuki

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

delta Aquarids 1996

```
| July 1996
UT | 27 28 29 30
----+-----------------------------------
0 | 409 409 559 584
1 | 433 426 544 433
2 | 472 398 598 421
3 | 502 428 353 393
4 | 484 394 534 366
5 | 291 350 409 316
6 | 270 309 290 359
7 | 362 216 247 405
8 | 568 238 291 333
9 | 329 143 328 309
```

```
10 | 235 167 211 258
11 | 183 134 246 221
12 | 168 204 251 219
13 | 186 207 165 220
14 | 192 180 117 154
15 | 203 177 97 150
16 | 154 136 124 144
17 | 121 124 131 150
18 | 128 79 163 133
19 | 176 95 115 177
20 | 147 112 139 213
21 | 156 174 248 250
22 | 275 358 364 348
23 | 321 514 462 450
----+---------------------------------
UT | 27 28 29 30
| July 1996

Perseids 1996

| August 1996
UT | 11 12 13 14
----+---------------------------------
0 | 457 1415 547 380
1 | 509 1179 662 728
2 | 417 1085 759 416
3 | 424 760 628 422
4 | 430 595 552 545
5 | 396 732 654 300
6 | 457 914 536 372
7 | 641 1018 658 488
8 | 449 767 540 436
9 | 394 847 585 348
10 | 312 584 551 291
11 | 415 542 606 381
12 | 231 708 530 286
13 | 270 518 286 188
14 | 214 265 325 134
15 | 187 199 198 127
16 | 176 278 156 129
17 | 221 191 117 81
18 | 158 243 164 99
19 | 377 200 149 136
20 | 329 277 134 127
21 | 419 321 507 218
22 | 487 633 355 354
23 | 717 453 296 279
----+---------------------------------
UT | 11 12 13 14
| August 1996
```

. strong Perseids activity between Aug 12, 0h-2h UT, and Aug 12, 6h-8h UT.

Ilkka Yrjola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (6 degr 51' E, 53 degr 19' N)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 130 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: Listening

Dead time corrected counts of reflections during one hour intervals
starting at:

Date: Wed, 4 Sep 1996 15:23:25 GMT
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Subject: WTB: SatTrak-IV

If anyone has one of Ron Long's (Kiron Corp) SatTrak-IV satellite tracker/tuner
units for sale, please let me know. I'd be interested in either a completed unit,
or an unassembled kit.

you can E-mail me direct at:
sem2r@virginia.edu

Thanks.

End of Ham-Space Digest V96 #271
****

1732. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609080913.CAA22562@UCSD.EDU>
Source record: 21605

```
From smtp Sat Aug 31 08:26 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Sat, 31 Aug 96 08:26 PDT
Received: by mail.ucsd.edu; id EAA26210
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:58 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA26192
sendmail 8.6.12/UCSD-2.2-sun
Sat, 31 Aug 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 1492
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199608311130.EAA26192@mail.ucsd.edu>
Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #266
To: Ham-Space@ucsd.edu

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
```

>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

1733. Ham-Space Digest V96 #275

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609081432.AA023843149@relay2.geis.com>
Source record: 21606

GE Item Number: 8641034
Original Msg Id: 378531
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #275
System: MARLBORO#
Date: Sun 8-Sep-96 14:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1734. Ham-Space Digest V96 #276

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609081532.AA138306772@relay2.geis.com>
Source record: 21607

GE Item Number: 1542111
Original Msg Id: 378547
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #276
System: MARLBORO#
Date: Sun 8-Sep-96 15:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1735. NORAD 2line kepler.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: dr-guru@cuci.nl
Message-ID: <3233011f.1095698@news>
Source record: 21608

Where to find them???
I HAD the URL ,but lost it. :-(
Ton Muller
Live long and prosper.

1736. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Message-ID: <32331568.35BE@expert.cc.purdue.edu>
Source record: 21609

> Too bad you guys are illegal....144.3 cannot be used for a rptr input...and Im
> sure the guys on 52.525 OUT of your area would have liked to have known
> beforehand about it....(I may hear it down here in TX if conditions permit...)

144.5 may be the lowest repeater input frequency according to a band
plan, but
as long as they are not causing harmful interference, there is no LEAGAL
requirement why they can't use 144.300 as a repeater input.

Mark
<KB9KHM>

1737. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-08 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <32334E1F.675B@email.mot.com>
Source record: 21610
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

The full spec's for the FT-736 can be found at;

http://www.yaesu.com/736spec.html

It seems Yaesu has changed the spec to state input power, not output power anymore. When I was looking at it a few years back all bands were 25W out except 1.2Ghz, which was 10W. Now you don't know what you'll get. Way too expensive for me and not know what you're getting!

Chuck KD9JQ

1738. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609090915.CAA16468@UCSD.EDU>
Source record: 21520

```
From smtp Sat Sep 7 07:52 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sat, 7 Sep 96 07:52 PDT
Received: by mail.ucsd.edu; id EAA09426
sendmail 8.6.12/UCSD-2.2-sun
Sat, 7 Sep 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA09412
sendmail 8.6.12/UCSD-2.2-sun
Sat, 7 Sep 1996 04:30:35 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2609
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609071130.EAA09412@mail.ucsd.edu>
Date: Sat, 7 Sep 96 04:30:34 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #274
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sat, 7 Sep 96 Volume 96 : Issue 274

Today's Topics:
(none)
Ham-Space Digest V96 #266

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 7 Sep 96 10:15:36 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

------------------------------
```

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

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Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

End of Ham-Space Digest V96 #274
****

1739. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609090913.CAA16428@UCSD.EDU>
Source record: 21521

```
From smtp Thu Sep 5 04:02 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 5 Sep 96 04:02 PDT
Received: by mail.ucsd.edu; id WAA28614
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:36 -0700 for ham-space-list
Received: by mail.ucsd.edu; id WAA28585
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:31 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32564
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199609050546.WAA28585@mail.ucsd.edu>
Date: Wed, 4 Sep 96 22:46:28 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #271
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 271

Today's Topics:
Ham-Space Digest V96 #270
Indiana repeater/ATV/Packet APRS Balloon Launch
Radio Meteor Obs. Bull. August 1996: Perseids
WTB: SatTrak-IV

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 4 Sep 96 17:28:48 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #270
```

GE Item Number: 8809857
Original Msg Id: 376893
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #270
System: MARLBORO#
Date: Wed 4-Sep-96 17:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 03 Sep 1996 21:27:43 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

Darwin Teague wrote:

> Could you please tell me how to receive the video? Is it a TV-UHF frequency? I
> have an old Rabbit receiver, but don't know what frequency it's on....

You can receive ATV the following ways:

Using an ATV down converter (converts 439.25 to TV channel 3) and a
70cm Beam Antenna

Using an old TV or VCR with manual tuning hooked up to an outside
antenna.
You will have to tune the TV to UHF channel 14 and then try using
your
fine tuning control and tune DOWN. The ATV frequency is BELOW
UHF ch 14.

Using a newer TV or VCR that is cable-ready. Hook the TV or VCR up
to an
outside antenna and then set it for CABLE CHANNEL 60.

The first method is BY FAR the best. Down converters are around $80 and
you can
make your own beam (I did). Make sure your receiving antenna has the
same
polarity as the transmitter. Cross polorization loss on 70cm can be as
much
as 20db.

Mark
<KB9KHM>

Date: Wed, 4 Sep 1996 21:16:33 GMT
From: steyaert@vvs.innet.be (Christian Steyaert)
Subject: Radio Meteor Obs. Bull. August 1996: Perseids

Radio Meteor Observation Bulletin No. 37 September 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P. Bus
Location: Groningen, Netherlands (6 degr 33' E, 53 degr 13' N)
Frequency: 72.11 MHz
Transmitter Location: Wroclaw, Poland, 130 kW, Distance 740 km
Antenna: Yagi, 3 elements, geographical azimuth 106 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 uV
Observing method: Listening

Mean dead time corrected Sporadic Radio Meteor activity between
1996 July 13 and 1996 August 5.
Between brackets the statistical error of one sigma.

Mean Sporadic activity, starting at UT:

10h 11 12 13 14

85(5) 96(9) 90(10) 93(6) 84(8)

18h 19 20 21 22 23 0 1 2-2.5

91(9) 102(8) 112(6) 130(13) 131(11) 166(19) 178(18) 180(12) 103(11)

Mean Sporadic activity of long duration reflections > 1 sec, starting at UT:

10h 11 12 13 14 | 18 19 20 21 22 23 0 1 2-2.5
---
2 2 2 2 3 | 4 4 2 6 5 4 7 6 6

Dead time corrected counts of reflections during one hour intervals.
Between brackets the number of long duration reflections > 1 sec,
starting at UT:

August 11 August 12
18h 19 20 21 22 23 0 1 2-2.5

115(19) 127(12) 169(20) 216(24) 188(16) 271(36) 281(52) 320(70) 116(25)

August 12
10h 11 12 13 14

106(18) 180(21) 138(26) 130(16) 114(10)

. very high activity between Aug 11 23h UT and Aug 12 2h UT.

E.P. Bus

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

August 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Aug	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	23	52	71	103	136	102	113	125	62	84	41
2- 3	33	47	64	89	103	100	115	115	85	91	51
3- 4	13	54	94	%	140	105	191	96	74	112	40
15-16	%	39	9	26	49	43	51	53	52	60	38
16-17	25	33	24	34	57	44	65	64	47	58	32
17-18	11	27	41	53	65	54	65	81	58	67	64
18-19											
19-20	11	36	49	177%	206%	49	92	65	58	64	30
20-21	20	20	28	29	38	26	28	32	32	40	-
21-22	22	15	32	30	45	58	64	72	62	59	72
22-23	14	29	28	37	42	52	67	72	52	55	30
23-24	8	21	24	45	64	72	33	56	55	36	23
24-25	14	8	17	49	36	34	56	44	39	38	33
25-26	7	22	37	24	46	34	39	34	30	25	22
26-27	4	9	12	21	22	40	32	54	46	49	37
27-28	Thunderstorms										
28-29	Thunderstorms										

```
29-30 | 9 6 6 9 11 12 20 14 29 27 20
30-31 | 18 5 10 26 31 28 30 39 45 34 24
31-01 | 4 5 13 14 20 24 31 22 31 23 21
------+-----------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Aug | UT
```

Notes:

. local time = UT + 2 hours.
. % direct reception
. ? high count to be checked for potential sporadic E.

Maurice De Meyere

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector
Receiver: AR-8000 at 59.2505 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display (FFTDSP38 program from AF9Y) on the PC where 640 channels of 2 Hz width are recorded and stored continuously. The sensitivity of each 2 Hz wide channel is about -171 dBm. Every meteor reflection (in SSB mode) produces a distinct whistle, which is recorded easily by the real time FFT program and saved in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width is used for meteor identification, the other nearby "channels" are used to monitor interference, which can be identified easily this way. If any interference occurs, the whole 200 second recording of one picture is not used for further processing.

The following figures show the total length of the meteor reflections during one hour,expressed as percentage. The number here shows 10 times this value. (e.g. 100 means 10 percent).

```
| June 1996
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
---+-------------------------------------------------------------------
2 | , , , , ,163,125, , , , , , , , ,
3 | 58, 80, 40,149, ,205,204,203, 85, 45,227,221, 59, 72,188,170,205
4 |115,132,148,161, ,237,208,180,207, 99,206,224, 67, 61,198,186,180
5 |137,161,226,192,134,253,265,244,175, 74,184,261, 75,179,147,259,188
6 |123,181,201,182,209,261,239,284,189,105,231,232, ,196,164,257,125
7 |114, ,188,172,228,286,301,231,314, 89,181,224, 80,176,185, ,247
8 |113, ,295,158,246,233,325,305,183,142,138,174,111,152, , ,
9 |108,132,275,196,212,242,316,258,272,163,171,147, 89,152,186, ,184
10 | 81,173,102,135,212,263,376,278,273,141,108, 79,102,159,173, ,184
11 | 86, , 97,155,101, ,457,268,195,165,101, , 82,170,157, ,108
```

```
12 |105, , 73,151, 57, ,468,359,257,213,148,134, 77,183,164, ,204
13 |145, ,281,241,250,277,514,399,223,231,252,268, ,183,232, ,289
14 |114,131,246,297,217,224,397,281,208,224,172,175, , ,225, ,
15 | 86, 98,234,221,178,193, ,186,167,204,145,172, ,141,156, 96,148
16 | 55,101, , , ,157, ,154,107, , 84,107, ,143,154, 50,167
17 | 51, ,156, , ,123,197,152, , 91, , , ,136,106, 54,125
18 | 50, ,107, , , 71,132,163, , 56,142, , , , , 35, 76
19 |
20 | , 65, , 75,140,106, 88,136,123, 60, 69, 24, 28, 83,204, 76,244
21 | 99, 60, 69, , 90,140,123, 85,116, 52, 76, 31, 29,109,103, 85, 15
22 | 92, 80, 93, , 64,108,158,133,105, 71, 76, 42, 27,135,169,125, 17
---+--------------------------------------------------------------
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
| June 1996

(new) Location: near Villach, Austria (13 37' E, 46 45 ' N)
(new) Antenna: 3 el Yagi
Receiver: AR-8000 at 48.2492 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter (assumed): 250 kw TV video carrier near Madrid, Spain,
distance 1550 km, southwest direction.

| Aug 1996
UT | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
----+-----------------------------------------------------------------
0 | , 10, 16, 13, 9, 6, 8, 12, 15, , 53, 59, 52, 24, 32, 13, 6
1 | 4, 9, 18, 5, 9, 4, 3, , , 7, 25, 69, 65, 26, 35, 14, 15
2 | 13, 16, 12, 13, 20, 3, 16, 15, 36, 10, 43, 34, 65, 52, 24, 11, 4
3 | 16, 18, 31, 24, 14, 9, 13, 21, 11, 6, 36, 35, 59, 36, 29, 8, 9
4 | 24, 22, 31, 15, 18, 24, 13, 18, 22, 18, 40, 67, 63, 42, 38, 29, 10
5 | 17, 12, , 12, 13, 15, 22, 19, 20, 21, 28, 71, 37, 26, , 19, 11
6 | 14, 11, , 13, 43, 16, 20, 16, 10, 22, 34, 46, 39, 24, , 10, 3
7 |
8 | 31, , , , , 13, 15, 26, 11, 15, , 73, 41, 20, , 9, 13
9 | , , 4, 13, 23, 8, 32, , 10, 18, 40, 38, 18, 11, , 5, 4
10 | 42, 28, 8, 8, 2, 15, 20, 11, 7, , 29, 32, 32, 18, , 16,
11 | , 12, 7, 7, 8, 8, 10, 13, 8, , 23, 32, 57, 10, , 7, 10
12 | , 8, , 6, 9, 5, , 7, 5, , 7, , 23, 10, , 4, 4
13 | 5, 13, 3, , , 2, , 6, 11, , 13, 15, 7, 7, , 7,
14 | , , 2, 8, , , , 7, 29, , 27, 19, 2, 9, , 4,
15 | , , 3, 6, , , , , 10, , 10, 22, , 5, , 2,
16 | , , , , 6, , , , 5, , 3, 18, , , , ,
17 | , , 5, , , , , , , , 48, 20, , , , ,
18 | , , , , , , , , , , , , , , , 3,
19 | , , , , 13, , , , , 18, 7, 10, , , , ,
20 | 6, 12, , , , , 3, , , 25, 17, , 9, 4, , ,
21 | , 10, , 3, 4, 7, 5, , 6, 9, 10, 18, 15, 18, , ,
22 | 18, 8, , 5, 10, 7, 7, 21, 45, 8, 28, 24, 15, 12, 4, 5,
23 | 13, 6, 8, 24, , 22, 13, 30, 6, 18, , 30, 18, 18, , 10,
----+-----------------------------------------------------------------
| 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
```

| Aug 1996

Notes:
. blank value means either no data available, interference,
sporadic "E", power failure, shutdown during thunderstorms or
transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).

. maximum Perseid activity during the early hours (UT) of Aug 12.

. *** Radio Meteor Gallery is open ***
I'd like to invite you all to my new Radio Meteor Gallery,
with the best spectrograph pictures out of about one million
recorded meteor reflections during last year. URL is
<http://www.net4you.co.at/user/kuneth/gallery.html>

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW , sensitivity -154 dBm min
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Long duration echoes (t>2 sec):

| August 1996
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
---+---------+---------+---------+---------+---------+-------
21 | 17 37 27 72 53 37
22 | 17 20 22 55 34 29
23 | 5 11 14 31 34 21
00 | 10 15 5 24* 15 11
01 | 4 7 4 31* 19 11
02 | 2 5 0 16* 12 9
03 | 2 5 2 10 6 11
04 | 2 1 3 4 8 9
05 | 0 2 1 4 4 1
06 | 0 2 0 0 1 0
07 | 1 0 1 0 1 2
08 | 0 2 0 0 3 1
09 | 0 1 5 0 2 4
10 | 0 4 0 0 2 2
11 | 1 1 6 0 2 3

```
12 | 1 5 4 6 4 1
13 | 0 3 4 13 13 7
14 | 1 5 14 14 11 5
15 | 8 9 11 20 13 8
16 | 13 10 15 25 14 10
17 | 9 11 30 28 16 17
18 | 20 21 48 55 24 22
19 | 24 20 49 60 27 21
20 | 28 23 55 65 35 18
---+---------+---------+---------+---------+---------+---------+-------
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
| August 1996
```

Notes:
. local time = JST = UTC + 9 hours
. the radiant was not located favorably when the Perseids maximum occurred: yet a significant relative increase (with respect to the adjacent days) is seen between 0h-2h UT on August 12.

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location:
Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 9 or 18 inch/hour + occasional listening.

Dead time corrected counts of reflections during one hour intervals starting at:

```
| August 1996
UT | 8 9 10 11 12 13 14
-----+--------------------------------------
0 | 170 240! 154
1 | 188 354! 142
2 | 167 160 158
3 | 164 140 168
4 | 170 170 122 144
5 | 135 143 133 100
6 | 112 108 102 105
7 | 115 92 114 110
8 | 100 111 91 104 115
9 | 75 116 c 82 83
10 | 50 64 82 76 80
```

```
11 | 38 56 76 66 87
12 | * 96 63 68
13 | * 88 64 62
14 | * * 60 50
15 | 52 * 60 61
16 | 48 * 86 50
17 | 122 56 * 54 58
18 | 124 140 * 44 47
19 | 123 72 * 80 61
20 | 128 53 94 * 102 52
21 | 130 82 135
22 | 161 91 130
23 | 147 167! 118
-----+--------------------------------------
UT | 8 9 10 11 12 13 14
| August 1996
```

Remarks: * thunder-storm.
c continuous reception.
! Perseids outburst, maximum between 01 - 02 h UT.

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were recorded on a pen-recorder chart.

```
1996 | UT
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+-----------------------------------------------+-----------
1 | 16 23 41 41 40 43 38 35 29 34 27 19 | 34.0 30.3
2 | 8 18 22 34 40 35 34 44 35 25 26 15 | 26.2 29.8
3 | 19 20 27 25 42 37 22 36 29 30 21 15 | 28.3 25.5
4 | 12 27 26 30 45 26 42 41 42 35 25 21 | 27.7 34.3
5 | 12 16 21 33 44 30 30 29 26 30 23 18 | 26.0 26.0
6 | 10 21 21 33 35 23 34 26 38 26 24 26 | 23.8 29.0
7 | 9 12 21 34 26 17 26 32 40 25 20 21 | 19.8 27.3
8 | 13 20 23 34 32 30 24 30 24 21 15 | 25.3 22.8
9 | 9 11 21 19 25 29 25 24 23 32 24 20 | 19.0 24.7
10 | 11 18 25 32 30 35 39 32 29 30 30 19 | 25.2 29.8
11 | 15 15 23 27 32 28 21 34 | 23.3 27.5
12 | 15 21 24 31 23 22 25 22 30 25 31 27 | 22.7 26.7
13 | 12 21 24 30 37 29 24 33 37 20 25 16 | 25.5 25.8
14 | 16 24 17 27 36 34 24 33 19 24 | 21.0 28.3
15 | 12 10 17 19 27 16 21 18 19 15 22 20 | 16.8 19.2
```

```
16 | 15 21 21 20 26 29 24 29 19 24 24 22 | 22.0 23.7
17 | 13 21 26 28 27 22 25 20 27 28 26 20 | 22.8 24.3
18 | 18 24 28 23 23 24 26 24 24 29 22 25 | 23.3 25.0
19 | 10 17 14 24 11 15 16 19 25 22 20 15 | 15.2 19.5
20 | 11 13 15 17 18 23 23 18 23 16 15 22 | 16.2 19.5
21 | 10 12 21 15 14 17 15 23 15 14 13 16 | 14.8 16.0
22 | 9 14 23 20 21 16 14 17 23 20 25 15 | 17.2 19.0
23 | 9 18 19 18 17 16 26 26 15 26 23 28 | 16.2 24.0
24 | 20 16 15 14 26 21 23 31 31 23 25 13 | 18.7 24.3
25 | 22 14 14 14 20 21 19 21 22 22 27 | 16.8 22.0
26 | 7 14 17 12 15 23 17 29 24 26 29 20 | 14.7 24.2
27 | 11 27 14 25 13 15 18 22 20 23 25 17 | 17.5 20.8
28 | 17 24 24 25 25 22 23 23 36 20 21 22 | 22.8 24.2
29 | 9 14 20 12 19 17 19 19 16 20 22 20 | 15.2 19.3
30 | 11 20 18 16 21 15 18 20 23 14 | 16.3 18.5
31 | 14 11 12 18 16 20 18 13 16 15 | 15.2 15.5
-----+-----------------------------------------------+-----------
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

**(1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

Total echoes

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 27 33 30 32 35 48 41 38 - 30 - - - 19 15 9 16 7 7 13 12 19 25 38
10-11 | 39 35 27 39 29 59 47 40 42 51 45 29 21 21 8 8 14 4 12 10 20 39 49 48
11-12 | 47 62 50 67 72 76 66 46 49 47 44 27 31 20 20 11 11 18 13 8 19 27 26 29
12-13 | 31 35 41 34 34 40 55 34 34 33 17 20 20 12 8 8 3 2 7 6

Long duration echoes (>5sec):

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 3 2 3 1 2 2 3 1 - 1 - - - 0 0 0 0 0 0 0 0 0 1 3
10-11 | 0 2 2 5 2 6 5 6 4 10 4 1 3 1 0 0 0 0 0 1 1 0 3 0
11-12 | 3 6 5 8 4 8 7 2 3 2 4 1 0 0 0 0 0 0 0 0 0 0 1 3
12-13 | 5 1 0 3 1 6 5 5 3 1 0 0 1 0 0 0 1 0 2 0

- Perseids maximum took place on 1996/08/12 02h UT.
- local time = JST = UT + 9 hours

Chikara Shimoda

------------------------------------------------------------
Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
```

Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
31- 1 | 51 56 53 56 56 45 45 51 44 35 33 21 34 27 24 20 12 13 13 17 33 28 35 56
1- 2 | 72 50 50 51 40 50 35 32 31 25 37 24 17 24 20 14 15 16 15 14 24 26 36 65
2- 3 | 65 48 69 66 49 41 44 51 41 36 32 25 21 26 26 20 13 12 14 25 36 48 50
3- 4 | 68 49 55 52 56 51 31@42 43 33 19@24 26 22 19 20 12 14 13 13 18 22 28 45
4- 5 | 49 32 40 42 31 29 44 42 26 28@18@18 14 19 18 12 15 12 17 14@12 @27 39
5- 6 | 41 47 48 43 45 55 65@54 35 33 32 25 25 26 23 14 17 15 13 15 27 31 @37
6- 7 | 67 53 59 68 70 68 45 47 24 @24@14@14@12@12@12 16 20 24 36 61
7- 8 | 50 48 59 75 74 55 50 56 45 39 29 32 22 24 21 14 11 12 12 25 27 42 73
8- 9 | 55 43 57 62 66 76 71 60 32 28 31 26 35 22@31 19 16 14 10 17 25 30 41 48
9-10 | 61 52 40 63 72 67 78 61 45 32 24 32 21 23 22@20@12@12 13 21 36 33 48 51
10-11 | 54 70 80 70 87 76 60@59@52 @38 33 28 18@18 17 15 17 19 24@34 38 56
11-12 | 51 61 79 93107 98@71 71 93 64 62 43 37 25 29@12 14 17 13 14 25 50 68 80
12-13 | 74 93 97116104 82102 91@50 45 49 38 40 39@15 21 21 26 15@21 29 24 42 47
13-14 | 62 68 77 78102 93 87 89 58 40 36 34 36 32@21@22 14 12 16 23 28 35 36
14-15 | 32 30 39 52 45 31 30@36 48 35 32 29 18 21@22 13 18 16 15 12 19 29 43 45
15-16 | 44 41 38 44 39 22 42@27 34 36 35 27 29 21 17 17 15 13 12 14 17 34 35 32
16-17 | 46 50 53 48 47 47 47@51 52 29 27 20 20 21 21 17 21 18 12 19 29 20 32 35
17-18 | 37 23 28 30 40 39 50 48@40 39 35 39 23 22@26@17 24 16 17 19 27 35 37 34
18-19 | 51 31 33 46 37 38 47 27@35 25 20@23 @21 31 27 37
19-20 | 37 33 48 41 44 46 37 41@48 32 27 28 18 24@22 17 15 16 14 15@25 38 28 33
20-21 | 33 30 42 51 34 30@37 33 38 29 27 21 31 23 22 20 14 12 15@16 18 31 23 37
21-22 | 43 35 41 43 47 @48 41@32 @37 27 31 24 24 18 16@14@17 24 36 36
22-23 | 42 35 35 43 44 46 51 48 44 39 37 29 35 28 17 26 23 16 17 16@21 32 39 44
23-24 | 39 35 39 38 43 37@44 52 46 44 38 36 34 28 28 25 19 18 16 14 19 30 38 34
24-25 | 26 29 39 35 35 29@30 @20 24 34 58
25-26 | 38 40 43 49 52 37 46@48@45@31 27 37 27 25 24 23 18 20 20 19 18 26 39 35
26-27 | 39 39 48 42 34 41 38 31@33@34 35 26 24 24 20 20 25 17 20 20 34 25 38 38
27-28 | 31 31 48 56 51 54 50 57 49
------+------------------------------------------------------------------------
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT
```

Long lasting (>20 sec.) echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
10-11 | 6 5 7 6 13 9 7 6 11 6 3 2 2 2 1 1 0 0 0 0 0 0 0 1 2
```

```
11-12 | 1 6 5 16 21 21@13 18 17 23 16 10 8 2 3 0 0 0 0 0 2 2 5 5
12-13 | 6 18 17 27 12 9 21 18@10 9 9 5 2 0 0 0 0 0 0 1 0 0 4 6
13-14 | 5 6 6 14 16 20 21 15 10 5 2 2 2 1 0 0 0 0 0 0 0 0 0 0 0
14-15 | 0 1 2 3 5 5 2 @2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
15-16 | 2 2 1 2 0 0 2 0 0 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0
16-17 | 0 1 3 1 4 2 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
17-18 | 1 1 0 0 0 0 1 2 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
18-19 | 0 1 0 0 3 2 0 0 @0 0 0 @0 0 0 0 0
19-20 | 0 0 0 0 0 0 0 0 @1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
20-21 | 1 0 0 1 0 5 1 0 1 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0
------+------------------------------------------------------------------------
UT | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
```

Notes:

- @nn =corrected hourly rates (observed for less than 60 min).

- local time = JST = UT + 9 hours.

Kazuhiro Suzuki

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

delta Aquarids 1996

```
| July 1996
UT | 27 28 29 30
----+-----------------------------------
0 | 409 409 559 584
1 | 433 426 544 433
2 | 472 398 598 421
3 | 502 428 353 393
4 | 484 394 534 366
5 | 291 350 409 316
6 | 270 309 290 359
7 | 362 216 247 405
8 | 568 238 291 333
9 | 329 143 328 309
```

```
10 | 235 167 211 258
11 | 183 134 246 221
12 | 168 204 251 219
13 | 186 207 165 220
14 | 192 180 117 154
15 | 203 177 97 150
16 | 154 136 124 144
17 | 121 124 131 150
18 | 128 79 163 133
19 | 176 95 115 177
20 | 147 112 139 213
21 | 156 174 248 250
22 | 275 358 364 348
23 | 321 514 462 450
----+---------------------------------
UT | 27 28 29 30
| July 1996

Perseids 1996

| August 1996
UT | 11 12 13 14
----+---------------------------------
0 | 457 1415 547 380
1 | 509 1179 662 728
2 | 417 1085 759 416
3 | 424 760 628 422
4 | 430 595 552 545
5 | 396 732 654 300
6 | 457 914 536 372
7 | 641 1018 658 488
8 | 449 767 540 436
9 | 394 847 585 348
10 | 312 584 551 291
11 | 415 542 606 381
12 | 231 708 530 286
13 | 270 518 286 188
14 | 214 265 325 134
15 | 187 199 198 127
16 | 176 278 156 129
17 | 221 191 117 81
18 | 158 243 164 99
19 | 377 200 149 136
20 | 329 277 134 127
21 | 419 321 507 218
22 | 487 633 355 354
23 | 717 453 296 279
----+---------------------------------
UT | 11 12 13 14
| August 1996
```

. strong Perseids activity between Aug 12, 0h-2h UT, and Aug 12, 6h-8h UT.

Ilkka Yrjola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (6 degr 51' E, 53 degr 19' N)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 130 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: Listening

Dead time corrected counts of reflections during one hour intervals
starting at:

Date: Wed, 4 Sep 1996 15:23:25 GMT
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Subject: WTB: SatTrak-IV

If anyone has one of Ron Long's (Kiron Corp) SatTrak-IV satellite tracker/tuner
units for sale, please let me know. I'd be interested in either a completed unit,
or an unassembled kit.

you can E-mail me direct at:
sem2r@virginia.edu

Thanks.

End of Ham-Space Digest V96 #271
****

1740. New Web Site for Links to Use of GPS onbord Spacecraft

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: "Richard B. Langley" <lang@unb.ca>
Message-ID: <5113bs$a37@sol.sun.csd.unb.ca>
Source record: 21522
Cross-posted to: rec.radio.amateur.space,sci.geo.satellite-nav

http://gauss.gge.unb.ca/grads/sunil/sgps.htm

==========
Richard B. Langley Internet: LANG@UNB.CA or SE@UNB.CA
Geodetic Research Laboratory BITnet: LANG@UNB or SE@UNB
Dept. of Geodesy and Geomatics Engineering Phone: (506) 453-5142
University of New Brunswick FAX: (506) 453-4943
Fredericton, N.B., Canada E3B 5A3 Telex: 014-46202
==========

1741. W. CT Hamfest This Sunday, Newtown, CT 15-Sep

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <3234C9E2.6547@ix.netcom.com>
Source record: 21523
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.antenna

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Just 14 miles from the NY/CT State line!

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

1742. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.281.39@anjo.com>
Source record: 21524

RE: Re: Indiana repeater/ATV/Packet APRS Balloon Launch
BY: kb9khm@expert.cc.purdue.edu to ALL on Sun Sep 08 1996 13:50:16

```
> From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
>
> > Too bad you guys are illegal....144.3 cannot be used for a rptr input...an
> > sure the guys on 52.525 OUT of your area would have liked to have known
> > beforehand about it....( I may hear it down here in TX if conditions
> permit...)
>
> 144.5 may be the lowest repeater input frequency according to a band
> plan, but as long as they are not causing harmful interference, there
> is no LEAGAL requirement why they can't use 144.300 as a repeater input.
>
> Mark
> <KB9KHM>
```

That attitude exemplifies all that is wrong with Amateur Radio.

73, de Gus 8P6SM
Barbados - The easternmost isle

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

1743. RCS 2200 -- Camus mode radios -- where to get them?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: ljubisic@EUnet.yu
Message-ID: <5127dk$b36@Solair3.EUnet.yu>
Source record: 21525

Hi!

I am having a little problem. I have to expand our company's radio system, and I have to purchase radios with DTMF keypad (we have also radio-phone system), but they have to be RCS 2200 - Camus mode compliant. We are using Motorola MX3000 (Stornophone7000) devices at the moment, but due to it's price and quantity we would like to buy, we are seeking for some cheaper solution. (By the way, I heard something about some new software for MX3000. Anybody has it? What are new features, if any?)

So, I was told that Alinco's DJ-130 model is Camus compatible, but local dealer couldn't confirm it. Also, I heard that DJ-182 with its Al-trunk logic board (which operates with CTCSS) could be MODIEFIED to be Camus mode compatible. Is there anybody from Alinco who could tell me if this is possible, and how?

Also, one friend told me that ICOM-H16T (#17), with Logic-A-Unit (EP701, PCB B1580H) is Camus mode compatible, and he wasn't sure, but also told me that ICOM IC-F30LT with UT-96 5 tone unit is also Camus capable. But, same thing as with Alinco, local delares couldn't confirm or deny it. Anybody knows it? Is there any e-mail contact in Icom where I could check it?

And finaly, it doesn't have to be Alinco or Icom, it could be also Yaesu, Kenwood, Standard, Harris... but I have to know is it Camus mode compatible, and how to order such option or modification from manufactorer/dealer.

If anybody knows something about it, I would like to ask him to send me a note _by mail_, since I wouldn't like to miss such importnat message by skiping it somehow in newsgroup.

Thanx for understanding!

1744. NORAD Two-Line Orbital Element Sets (TLE862)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <5126ok$s2@blackbird.afit.af.mil>
Source record: 21526

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #862 -
Alouette 1
1 00424U 62049A 96250.92447637 .00000028 00000-0 22680-4 0 2260
2 00424 80.4568 203.0863 0021513 181.9281 178.1779 13.67874631693517
ATS 1
1 02608U 66110A 96250.60747912 -.00000247 00000-0 10000-3 0 9794
2 02608 14.6092 351.9549 0008833 100.9744 259.1708 1.00307859 25689
ATS 3
1 03029U 67111A 96252.56784101 -.00000121 00000-0 10000-3 0 5418
2 03029 14.9158 358.8964 0009194 261.8339 186.2934 1.00272984105600
Starlette
1 07646U 75010A 96252.18912273 -.00000152 00000-0 -62179-5 0 9960
2 07646 49.8277 181.1680 0206344 144.7383 216.7360 13.82191175 90446
LAGEOS
1 08820U 76039A 96250.18824499 .00000031 00000-0 00000+0 0 2222
2 08820 109.8474 53.7545 0043702 110.6132 249.9135 6.38664747219008
ETS-2
1 09852U 77014A 96250.27655556 -.00000311 00000-0 10000-3 0 740
2 09852 13.3336 31.9821 0005743 117.7745 242.3394 1.00011233 18456
GOES 2
1 10061U 77048A 96249.53567396 .00000052 00000-0 10000-3 0 7267
2 10061 12.4749 36.1883 0013246 147.1186 180.7188 1.00289272 15246
IUE
1 10637U 78012A 96252.47898735 -.00000267 00000-0 10000-3 0 2768
2 10637 35.9141 81.8117 1375248 59.1473 324.6749 1.00213422 20773
GOES 3
1 10953U 78062A 96252.39210752 -.00000138 00000-0 10000-3 0 7067
2 10953 11.4737 39.0537 0002123 99.3100 248.8360 1.00267978 19887

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SeaSat 1
1 10967U 78064A 96250.19148953 -.00000036 00000-0 32610-4 0 5138
2 10967 107.9924 342.3559 0002543 255.4940 104.5921 14.38119912953098
Nimbus 7
1 11080U 78098A 96250.12029176 -.00000060 00000-0 -16987-4 0 6127
2 11080 98.9312 108.3812 0009581 107.0522 253.1685 13.83689735902360
GOES 5
1 12472U 81049A 96248.56912788 .00000073 00000-0 10000-3 0 9470
2 12472 8.3173 49.3705 0008370 50.7903 309.3867 1.00248006 13898
Cosmos 1383
1 13301U 82066A 96252.99397433 .00000019 00000-0 43229-5 0 5273
2 13301 82.9261 72.3502 0028556 11.4671 348.7130 13.68076323708834
LandSat 4
1 13367U 82072A 96252.18413904 .00000044 00000-0 19486-4 0 9926
2 13367 98.0660 300.5454 0005918 242.4706 117.5892 14.57184095752629
DMSP B5D2-1
1 13736U 82118A 96253.15706431 .00000036 00000-0 33408-4 0 747
2 13736 98.6249 80.1913 0008759 137.6390 222.5466 14.25800505713031
IRAS
1 13777U 83004A 96252.52218285 .00000366 00000-0 28168-3 0 4254
2 13777 98.9662 76.2506 0011355 224.9316 135.0926 13.99262776365029
Cosmos 1447
1 13916U 83021A 96252.57867283 .00000042 00000-0 28394-4 0 6188
2 13916 82.9459 129.3745 0036693 281.0480 78.6554 13.74343814675191
TDRS 1
1 13969U 83026B 96249.39325535 -.00000311 00000-0 10000-3 0 6247
2 13969 9.0963 42.8945 0002151 118.2561 276.2361 1.00275736 22194
GOES 6
1 14050U 83041A 96249.35145266 -.00000225 00000-0 10000-3 0 5370
2 14050 7.1517 52.8633 0004225 71.0870 261.0869 1.00230182106990
OSCAR 10
1 14129U 83058B 96249.09208200 -.00000004 00000-0 10000-3 0 4514
2 14129 25.9603 191.0418 6035820 46.2894 349.9690 2.05880321 71518
LandSat 5
1 14780U 84021A 96253.20600743 .00000005 00000-0 11368-4 0 5446
2 14780 98.3209 310.9877 0003195 43.7472 316.3979 14.57053552666196
UoSat 2
1 14781U 84021B 96252.95533641 .00000126 00000-0 29078-4 0 9119
2 14781 97.8059 239.9792 0011317 177.4199 182.7069 14.69478128669951
Cosmos 1574
1 15055U 84062A 96252.21723260 .00000071 00000-0 59539-4 0 8186
2 15055 82.9570 184.7010 0028800 108.0103 252.4196 13.73638922612384
Cosmos 1602
1 15331U 84105A 96252.55036790 .00000149 00000-0 14630-4 0 5011
2 15331 82.5316 34.9203 0021832 35.7167 324.5500 14.84780777645340
ERBS
1 15354U 84108B 96251.57834190 -.00000255 00000-0 -15460-5 0 2144
2 15354 56.9961 49.0134 0006711 69.7600 290.4151 14.94974213649162
NOAA 9
1 15427U 84123A 96252.78945789 .00000051 00000-0 50613-4 0 8341
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2 15427 98.9382 317.7323 0015977 76.5496 283.7452 14.13802522605440
Mir
1 16609U 86017A 96250.58188252 -.00000558 00000-0 -17568-6 0 6568
2 16609 51.6494 73.9656 0011068 139.4184 220.7637 15.61883714602723
SPOT 1
1 16613U 86019A 96250.24938964 -.00000045 00000-0 00000+0 0 9829
2 16613 98.8264 318.1319 0001617 59.9448 300.1888 14.19983522231813
Cosmos 1766
1 16881U 86055A 96250.58903480 .00000044 00000-0 23742-5 0 4151
2 16881 82.5179 94.4624 0020886 69.1200 291.2228 14.83757550545914
EGP
1 16908U 86061A 96250.04835807 -.00000083 00000-0 10000-3 0 1147
2 16908 50.0086 108.4020 0011428 218.8641 141.1372 12.44414930126477
NOAA 10
1 16969U 86073A 96252.82689758 -.00000011 00000-0 13445-4 0 7668
2 16969 98.5280 247.5131 0013972 106.8879 253.3831 14.25000965518516
MOS-1
1 17527U 87018A 96252.74819586 -.00000043 00000-0 00000+0 0 4585
2 17527 98.9354 312.8673 0019116 96.1701 264.2014 14.00434900486680
GOES 7
1 17561U 87022A 96249.36008037 -.00000179 00000-0 10000-3 0 405
2 17561 3.2192 68.8656 0004367 314.7967 355.9404 1.00266135 18109
Kvant-1
1 17845U 87030A 96251.79754154 -.00000065 00000-0 53687-5 0 7419
2 17845 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813537025
DMSP B5D2-3
1 18123U 87053A 96252.50719746 .00000008 00000-0 26270-4 0 5851
2 18123 98.7704 81.4348 0015057 20.3170 339.8607 14.15452264476288
RS-10/11
1 18129U 87054A 96249.10337796 .00000027 00000-0 13347-4 0 2580
2 18129 82.9245 89.4755 0010794 299.4694 60.5383 13.72369069461131
Meteor 2-16
1 18312U 87068A 96253.17764714 .00000011 00000-0 -37885-5 0 5070
2 18312 82.5556 285.4641 0012531 352.6507 7.4466 13.84083876457795
Meteor 2-17
1 18820U 88005A 96252.78538556 .00000070 00000-0 49191-4 0 379
2 18820 82.5425 340.6009 0018244 53.5313 306.7525 13.84761292435090
DMSP B5D2-4
1 18822U 88006A 96253.05862439 -.00000002 00000-0 17510-4 0 3394
2 18822 98.3822 81.1182 0006796 112.7899 247.3998 14.23199657446509
Glonass 34
1 19163U 88043A 96249.77002942 .00000015 00000-0 10000-3 0 1109
2 19163 65.2959 83.1192 0003520 158.9042 201.1811 2.13102358 63953
Glonass 36
1 19165U 88043C 96248.88854408 .00000006 00000-0 10000-3 0 5142
2 19165 65.2677 83.1109 0002597 359.5707 0.4817 2.13102146 64558
METEOSAT 3
1 19215U 88051A 96243.82940682 -.00000185 00000-0 10000-3 0 2760
2 19215 3.4164 67.3515 0004456 108.1871 252.2739 0.96948974 17903
AO-13
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1 19216U 88051B 96252.78470251 .00041505 15964-5 12387-2 0 2710
2 19216 57.1383 92.8569 7441075 49.8272 354.8011 2.12337617 31601
OKEAN 1
1 19274U 88056A 96251.86971869 .00000218 00000-0 24177-4 0 1164
2 19274 82.5124 194.1891 0017866 209.8073 150.2084 14.82516155441622
Meteor 3-2
1 19336U 88064A 96253.11184406 .00000051 00000-0 10000-3 0 5107
2 19336 82.5398 107.0571 0017029 26.4417 333.7572 13.16978262390527
Glonass 39
1 19503U 88085C 96250.32656751 -.00000064 00000-0 10000-3 0 4006
2 19503 65.5502 321.9790 0006138 160.9917 199.0893 2.13101761 62071
NOAA 11
1 19531U 88089A 96252.71282460 -.00000010 00000-0 19777-4 0 6495
2 19531 99.1859 272.9960 0012467 11.1358 349.0082 14.13102632410246
TDRS 2
1 19548U 88091B 96248.87542072 -.00000206 00000-0 10000-3 0 2308
2 19548 2.6525 71.5671 0005192 123.6105 188.8738 1.00264030 16322
Glonass 40
1 19749U 89001A 96251.77180997 .00000035 00000-0 10000-3 0 6190
2 19749 65.2507 82.5791 0004823 254.7518 105.2604 2.13101530 59613
Glonass 41
1 19750U 89001B 96252.76525089 .00000041 00000-0 10000-3 0 5272
2 19750 65.2583 82.6109 0006542 245.4237 114.5783 2.13101822 59657
GPS BII-01
1 19802U 89013A 96252.90393957 .00000007 00000-0 00000+0 0 2821
2 19802 55.3688 107.3015 0019495 178.1545 181.9428 2.00552739 55391
Akebono
1 19822U 89016A 96252.86862670 .00006578 00000-0 31829-3 0 7746
2 19822 75.0701 75.3205 3743716 43.0326 340.9177 7.93277183173329
Meteor 2-18
1 19851U 89018A 96250.29862693 .00000018 00000-0 23496-5 0 5047
2 19851 82.5187 216.3949 0015820 105.3708 254.9202 13.84415740380058
MOP-1
1 19876U 89020B 96247.74606452 -.00000168 00000-0 10000-3 0 2119
2 19876 2.1486 71.1997 0017333 289.7805 70.4943 0.97110889 7382
TDRS 3
1 19883U 89021B 96249.28681713 -.00000289 00000-0 00000+0 0 2515
2 19883 0.0372 104.4467 0004738 95.9681 206.5231 1.00267578 27395
GPS BII-02
1 20061U 89044A 96249.25826249 -.00000015 00000-0 10000-3 0 2626
2 20061 54.1487 283.0952 0164624 220.2878 138.5300 2.00562357 53065
Nadezhda 1
1 20103U 89050A 96252.81820407 .00000012 00000-0 -38210-5 0 8949
2 20103 82.9549 46.9927 0036673 178.6269 181.4993 13.73869280360164
GPS BII-03
1 20185U 89064A 96252.07817757 -.00000003 00000-0 10000-3 0 3137
2 20185 55.1397 107.7828 0037688 304.9426 54.6318 2.00810956 51690
GMS 4
1 20217U 89070A 96248.44576831 -.00000390 00000-0 10000-3 0 4456
2 20217 1.9407 75.1720 0000856 227.6022 321.4803 1.00281702 26210
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INTERCOSMOS 24
1 20261U 89080A 96249.85492482 .00000016 00000-0 19125-5 0 5253
2 20261 82.5917 219.1862 1240911 218.1748 132.4844 12.47346549315968
GPS BII-04
1 20302U 89085A 96252.12161538 .00000002 00000-0 10000-3 0 2795
2 20302 53.2377 222.7453 0060335 208.3702 151.8257 2.00569166 50492
Meteor 3-3
1 20305U 89086A 96252.88698795 .00000044 00000-0 10000-3 0 6411
2 20305 82.5516 66.7293 0008386 105.4190 254.7869 13.04434930329115
COBE
1 20322U 89089A 96250.57943187 -.00000208 00000-0 -10522-3 0 2414
2 20322 98.9443 264.4593 0008872 164.4672 195.6760 14.03459663348343
Kvant-2
1 20335U 89093A 96251.79754154 -.00000065 00000-0 53687-5 0 6833
2 20335 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813386036
GPS BII-05
1 20361U 89097A 96249.14524949 -.00000037 00000-0 10000-3 0 1147
2 20361 56.0738 50.1063 0088689 135.1359 225.6103 2.00565109 39913
COSMOS 2054 (Altair-1)
1 20391U 89101A 96250.07949266 -.00000155 00000-0 00000+0 0 4153
2 20391 4.0046 62.9712 0004583 89.6805 205.1264 1.00274462 24804
SPOT 2
1 20436U 90005A 96252.56456061 -.00000043 00000-0 00000+0 0 1142
2 20436 98.6920 324.7876 0001487 70.7199 289.4138 14.20045214343672
UO-14
1 20437U 90005B 96252.73834673 .00000023 00000-0 25893-4 0 2095
2 20437 98.5413 334.1778 0010872 321.3347 38.7054 14.29930463345990
UO-15
1 20438U 90005C 96252.29262211 -.00000037 00000-0 26360-5 0 40
2 20438 98.5340 331.5297 0010102 329.8194 30.2405 14.29236104345792
PACSAT
1 20439U 90005D 96252.27317581 .00000015 00000-0 22651-4 0 76
2 20439 98.5563 336.0909 0011414 324.2830 35.7583 14.29983527345945
DO-17
1 20440U 90005E 96250.25822356 .00000008 00000-0 19779-4 0 74
2 20440 98.5570 334.7866 0011512 328.7421 31.3073 14.30125098345686
WO-18
1 20441U 90005F 96252.76855551 .00000012 00000-0 21286-4 0 123
2 20441 98.5561 337.1861 0011955 321.0559 38.9760 14.30094759346044
LO-19
1 20442U 90005G 96252.26826549 -.00000020 00000-0 91944-5 0 77
2 20442 98.5594 337.2230 0012025 321.8882 38.1420 14.30204429345993
GPS BII-06
1 20452U 90008A 96253.02706355 -.00000045 00000-0 10000-3 0 2147
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2 20619 65.1666 321.0926 0025118 206.1635 153.7776 2.13102707 49094
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2 21397 82.5227 66.1556 0023547 131.2327 229.0918 14.76501360283141
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2 21552 56.2760 45.7949 0072083 247.5806 111.6689 2.00559866 37927
ERS-1
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2 21574 98.5508 323.8154 0001202 83.2955 276.8366 14.32245334269140
UO-22
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2 21575 98.3447 315.1303 0008325 24.5845 335.5736 14.37034998269848
ORBCOMM-X
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TDRS 4
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Meteor 3-5
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2 21701 56.9852 142.4685 0005368 99.2701 260.8938 14.96536126272592
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2 21854 65.1745 81.5182 0015896 22.8824 337.2571 2.13104346 35897
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NOAA 13
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UFO F2
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Glonass 64
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Nadezhda 4
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RESURS 1-3
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NOAA 14
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1 23455U 94089A 96252.78212123 .00000018 00000-0 34369-4 0 7366
2 23455 98.9521 198.0314 0010413 11.6301 348.5104 14.11608446 87243
Glonass 71
1 23511U 95009A 96249.96335494 -.00000066 00000-0 00000+0 0 2296
2 23511 64.6350 321.3559 0007729 217.5533 142.4513 2.13103738 11692
Glonass 72
1 23512U 95009B 96252.42925121 -.00000048 00000-0 00000+0 0 2430
2 23512 64.6267 321.2737 0005822 305.9434 54.0673 2.13101598 11744
Glonass 73
1 23513U 95009C 96252.72104541 -.00000045 00000-0 10000-4 0 2522
2 23513 64.6324 321.2797 0014905 203.2285 156.7651 2.13102713 11758
GMS 5
1 23522U 95011B 96252.58943778 -.00000304 00000-0 10000-3 0 1540
2 23522 0.4012 6.4055 0000675 190.5334 143.2000 1.00263795 5284
DMSP B5D2-8
1 23533U 95015A 96252.79560536 -.00000028 00000-0 84427-5 0 6595
2 23533 98.8434 254.1931 0006774 170.3032 189.8269 14.12751539 75439
OSC 1
1 23545U 95017A 96250.27403195 .00000339 00000-0 11339-3 0 1610
2 23545 69.9717 342.0081 0010970 67.2145 293.0134 14.45394844 75370
OSC 2
1 23546U 95017B 96252.24623474 .00000215 00000-0 78122-4 0 1880
2 23546 69.9789 337.5657 0010509 55.0970 305.1153 14.45364775 75665
Microlab 1
1 23547U 95017C 96252.26498276 .00000068 00000-0 36401-4 0 1333
2 23547 69.9811 337.2725 0010812 58.5357 301.6841 14.45575392 75674
OFEQ 3
1 23549U 95018A 96251.60746742 .00018930 00000-0 47146-3 0 3142
2 23549 143.3665 11.0184 0218515 112.9579 249.4362 15.17054120 78869
GFZ-1
1 23558U 86017JE 96252.87964959 .00002603 00000-0 34387-4 0 1550
2 23558 51.6501 51.0167 0006735 174.3835 185.7247 15.62651966603094
ERS-2
1 23560U 95021A 96251.78554893 .00000010 00000-0 19900-4 0 2756
2 23560 98.5488 324.6615 0001071 68.4244 291.7047 14.32246928 72396
Spektr
1 23579U 95024A 96251.79754154 -.00000065 00000-0 53687-5 0 4352
2 23579 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813 74347
GOES 9
1 23581U 95025A 96253.16313390 .00000067 00000-0 10000-3 0 2429
2 23581 0.2374 268.5799 0001607 272.5504 91.0079 1.00266599 4763
Helios 1A
1 23605U 95033A 96250.62314346 .00000107 00000-0 29412-4 0 3069
2 23605 98.1240 185.1727 0001655 56.0124 304.1260 14.63832593 62477
UPM SAT 1
1 23606U 95033B 96251.90140012 .00000091 00000-0 24744-4 0 2108
2 23606 98.1064 187.7574 0006529 292.4182 67.6330 14.67277611 62843
CERISE
1 23607U 95033C 96249.86931381 .00000157 00000-0 36700-4 0 1150
2 23607 98.1067 185.5850 0006070 301.3035 58.7573 14.66960468 62565
```

```
TDRS 6
1 23613U 95035B 96249.51179227 .00000078 00000-0 00000+0 0 2145
2 23613 0.8454 82.5965 0003455 135.6399 140.1529 1.00282587 4184
Glonass 74
1 23620U 95037A 96251.09702471 -.00000000 00000-0 00000+0 0 1790
2 23620 64.8208 201.2353 0018404 172.3737 187.6390 2.13102896 8752
Glonass 75
1 23621U 95037B 96253.15153937 -.00000013 00000-0 00000+0 0 1870
2 23621 64.8323 201.1702 0018280 183.1843 176.7835 2.13102196 8798
Glonass 76
1 23622U 95037C 96250.39415690 .00000007 00000-0 00000+0 0 1907
2 23622 64.8248 201.2606 0036595 167.3031 192.7796 2.13102483 8738
Prognoz-M2
1 23632U 95039A 96236.90175950 .00000546 00000-0 00000+0 0 764
2 23632 69.1880 250.4140 8134692 322.7360 322.7980 0.26342500 1028
SICH-1
1 23657U 95046A 96250.68875607 .00000170 00000-0 22511-4 0 1069
2 23657 82.5347 125.5548 0028157 141.2034 219.1209 14.73492847 54835
RADARSAT
1 23710U 95059A 96251.90508849 -.00000044 00000-0 00000+0 0 1818
2 23710 98.5810 257.4208 0001136 74.6622 285.4686 14.29971149 44062
Glonass 79
1 23734U 95068A 96252.38900410 -.00000010 00000-0 00000+0 0 1629
2 23734 64.8213 201.1154 0019210 319.8412 39.9979 2.13102077 5745
Glonass 78
1 23735U 95068B 96251.18518766 -.00000001 00000-0 00000+0 0 1558
2 23735 64.8170 201.1449 0008360 219.8643 140.0613 2.13125213 5717
Glonass 77
1 23736U 95068C 96250.27719585 .00000008 00000-0 00000+0 0 1310
2 23736 64.8099 201.1847 0008245 207.2695 152.6769 2.13102200 5699
XTE
1 23757U 95074A 96249.19753043 .00000662 00000-0 26309-4 0 833
2 23757 22.9862 227.1193 0013630 297.2593 62.6509 14.97686600 37476
1996010D
1 23797U 96010D 96234.35242076 .99999999 10378-4 13647-2 0 3270
2 23797 47.7747 196.4758 0684182 80.1127 84.9850 15.00429044 5552
Soyuz TM-23
1 23798U 96011A 96245.27132169 .00005247 00000-0 65112-4 0 1666
2 23798 51.6489 100.7445 0011164 121.0253 239.1434 15.61872319 30082
Polar
1 23802U 96013A 96252.46081663 .00000084 00000-0 00000+0 0 512
2 23802 86.1973 25.1635 6552680 282.4627 16.0467 1.36678253 2698
1996010E
1 23824U 96010E 96249.31881342 .00008175 00000-0 10808-1 0 995
2 23824 47.6666 231.2056 7291628 46.9927 354.4556 2.22082899 4397
GPS BIIA-25
1 23833U 96019A 96249.17012270 -.00000105 00000-0 00000+0 0 788
2 23833 54.6742 344.7832 0034717 152.2498 207.9669 2.00564435 3284
Priroda
1 23848U 96023A 96251.79754154 -.00000065 00000-0 53687-5 0 1246
```

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2 23848 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813 21438
MSX
1 23851U 96024A 96252.50468168 -.00000047 00000-0 00000+0 0 893
2 23851 99.3867 233.5368 0006088 285.5804 74.4553 13.97603904 19131
MSTI 3
1 23868U 96031A 96249.55433857 .00001120 00000-0 24486-4 0 539
2 23868 97.1207 78.5967 0010876 240.7094 119.3064 15.46249150 17239
TOMS-EP
1 23940U 96037A 96250.80033907 .00001816 00000-0 84319-4 0 384
2 23940 97.4313 155.2504 0014930 57.5888 302.6719 15.21212859 10046
GPS BIIA-26
1 23953U 96041A 96252.07750353 -.00000002 00000-0 00000+0 0 416
2 23953 55.0528 104.9663 0022463 351.4257 8.6308 2.00570694 1135
Progress M-32
1 24071U 96043A 96251.79754154 -.00000065 00000-0 53687-5 0 460
2 24071 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813 5956
ITALSAT F2
1 24208U 96044A 96251.96977925 .00000018 00000-0 00000+0 0 186
2 24208 0.0818 301.4448 0103810 29.6686 191.0414 1.01806721 320
TELECOM 2D
1 24209U 96044B 96252.64065220 -.00000005 00000-0 00000+0 0 287
2 24209 0.4478 277.0335 0002850 267.7315 36.5919 1.00271904 451
1996044C
1 24210U 96044C 96223.93772132 -.00000394 00000-0 10000-4 0 47
2 24210 5.4294 117.8507 7294336 179.2896 182.7981 2.28186586 35
1996044D
1 24211U 96044D 96252.70531170 .00018585 00000-0 36912-2 0 194
2 24211 5.5567 105.4645 7278752 203.5575 90.3458 2.29279691 703
1996045A
1 24273U 96045A 96252.04106065 -.00000097 00000-0 -32713-2 0 366
2 24273 62.8644 244.9310 7414527 280.3212 10.8402 2.00609405 484
1996045B
1 24274U 96045B 96253.18337373 .00567430 81405-5 45898-3 0 584
2 24274 62.8002 151.0063 0105396 134.6672 226.3136 16.02750429 4023
1996045C
1 24275U 96045C 96245.29398450 .22461920 88251-5 22247-3 0 570
2 24275 62.8009 180.6992 0019770 132.0048 228.5278 16.49481451 2788
1996045D
1 24276U 96045D 96249.33834367 -.00001147 00000-0 10000-3 0 81
2 24276 62.8491 245.3154 7447982 280.1898 10.6681 1.96677465 423
ADEOS
1 24277U 96046A 96253.21040363 .00009479 00000-0 38605-2 0 568
2 24277 98.6241 328.8731 0000670 128.6186 231.5272 14.27644318 3286
JAS 2
1 24278U 96046B 96250.24567394 -.00000036 00000-0 00000+0 0 114
2 24278 98.5783 323.6280 0351297 201.3989 157.2149 13.52625015 2739
1996046C
1 24279U 96046C 96253.23817160 -.00000036 00000-0 00000+0 0 183
2 24279 98.7574 326.3015 0300074 184.8015 175.0175 13.46313738 3140
Soyuz TM-24
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1 24280U 96047A 96251.79754154 -.00000065 00000-0 53687-5 0 286
2 24280 51.6498 67.8400 0010571 141.7549 218.3198 15.61876813 3338
1996047B
1 24281U 96047B 96234.52902945 .24767605 12666-4 25953-3 0 320
2 24281 51.6202 153.3934 0002903 126.7041 233.9304 16.50538701 659
Zhongxing 7
1 24282U 96048A 96252.21187570 .00014203 00000-0 38858-3 0 255
2 24282 27.2719 101.2514 5636462 210.1851 99.6923 4.68895120 980
1996048B
1 24283U 96048B 96250.59066658 .00023116 00000-0 76662-3 0 290
2 24283 27.2828 102.8157 5643547 207.5797 105.4255 4.67018189 900
FAST
1 24285U 96049A 96252.59756342 .00000816 00000-0 77100-4 0 102
2 24285 83.0054 169.9081 2207772 129.7149 252.0398 10.81718709 1975
1996049B
1 24286U 96049B 96252.88033670 .00000792 00000-0 74541-4 0 184
2 24286 82.9908 169.7648 2209498 129.2727 252.6124 10.81408111 1991
1996050A
1 24291U 96050A 96252.70822553 .00040811 61448-5 26121-3 0 127
2 24291 62.7929 334.8177 0655870 109.4432 257.8690 14.57963566 1530
1996050B
1 24292U 96050B 96243.24482888 -.00000033 00000-0 10000-3 0 56
2 24292 62.8038 7.8992 5620887 288.2420 20.4463 4.14434750 39
1996050C
1 24293U 96050C 96249.51641068 -.00004402 00000-0 00000+0 0 93
2 24293 62.7644 5.4829 5633355 288.4517 20.2728 4.14517282 335
1996050D
1 24294U 96050D 96252.69939245 .00066188 67496-5 39556-3 0 114
2 24294 62.7661 334.3539 0609254 108.4894 258.3373 14.69036550 1541
1996050E
1 24295U 96050E 96252.32937902 .00132289 59640-5 42548-3 0 116
2 24295 62.8115 335.7296 0668061 109.5543 257.8895 14.64124974 1485
1996050F
1 24296U 96050F 96245.65280580 .00006874 00000-0 95936-1 0 60
2 24296 62.7921 7.0388 5629079 288.3121 20.3205 4.15062608 140
1996051A
1 24297U 96051A 96250.84884447 -.00000047 00000-0 00000+0 0 53
2 24297 71.0128 160.4611 0002078 38.9332 321.1935 14.12570604 351
1996051B
1 24298U 96051B 96252.90289676 -.00000047 00000-0 00000+0 0 113
2 24298 71.0201 156.1916 0011583 9.7891 350.3449 14.12405069 649
1996051C
1 24299U 96051C 96250.19110572 -.00000041 00000-0 00000+0 0 36
2 24299 71.0366 162.4012 0191172 69.5592 292.5928 13.73491071 243
1996051D
1 24300U 96051D 96252.89023414 -.00000041 00000-0 00000+0 0 36
2 24300 71.0337 157.0744 0198010 90.8961 271.4823 13.72075718 617
1996051E
1 24301U 96051E 96250.19599038 -.00000041 00000-0 00000+0 0 38
2 24301 71.0004 161.9405 0211495 67.2909 295.0439 13.69808109 248
```

```
1996051F
1 24302U 96051F 96249.27109441 -.00000041 00000-0 00000+0 0 20
2 24302 70.9959 163.6440 0211367 91.1434 29.5709 13.68883447 114
1996051G
1 24303U 96051G 96253.20149205 -.00000046 00000-0 00000+0 0 37
2 24303 71.1095 155.7380 0072840 326.9098 32.7480 14.07172755 681
1996052A
1 24304U 96052A 96252.58017511 -.00000763 00000-0 -84299-3 0 160
2 24304 82.9344 202.6791 0028475 266.7866 93.0012 13.72891348 426
1996052B
1 24305U 96052B 96252.87126858 .00001713 00000-0 18328-2 0 206
2 24305 82.9388 202.4604 0029624 269.3358 90.4390 13.73088343 455
1996052C
1 24306U 96052C 96253.23291240 .00007993 00000-0 84675-2 0 154
2 24306 82.9346 202.1956 0022101 267.7501 92.1103 13.74124658 511
1996053A
1 24307U 96053A 96252.42962384 .00000003 00000-0 00000+0 0 39
2 24307 2.6362 288.8347 0007265 303.6198 349.0974 0.98533748 11
1996053B
1 24308U 96053B 96253.25509876 .00605390 11898-4 26559-3 0 183
2 24308 51.5942 245.9539 0002099 178.3404 181.7674 16.21776852 413
1996053C
1 24309U 96053C 96253.25106655 .08685406 12194-4 11795-2 0 158
2 24309 51.5883 245.9068 0004013 141.4301 218.7233 16.34478130 414
1996054A
1 24315U 96054A 96252.56178716 -.00003049 28864-5 00000+0 0 17
2 24315 25.0240 139.5903 8107449 179.2420 184.0067 1.34147242 02
1996054B
1 24316U 96054B 96252.57584733 -.00003019 28589-5 00000+0 0 21
2 24316 25.0170 140.7590 8103996 178.0804 189.6568 1.35041748 09
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

1745. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <5126sh$sf@blackbird.afit.af.mil>
Source record: 21527

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1746. looking for:i5jux

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: TOM <kbs@powertech.no>
Message-ID: <3233CAC7.47@powertech.no>
Source record: 21611

I am looking for i5jux`s e-mail. help please.

tom, la9gx

1747. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609090908.CAA16144@UCSD.EDU>
Source record: 21612

```
From smtp Wed Sep 4 09:36 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 4 Sep 96 09:36 PDT
Received: from mail.ucsd.edu (ucsd.edu) by teale.ca.gov (5.x/SMI-SVR4)
id AA07982; Wed, 4 Sep 1996 09:26:06 -0700
Received: by mail.ucsd.edu; id EAA17795
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:56 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17781
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15570
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609041130.EAA17781@mail.ucsd.edu>
Date: Wed, 4 Sep 96 04:30:51 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #270
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 270

Today's Topics:
'modes.dat' for 'SatTrack'
(none)
ARLK063 Keplerian data
Ham-Space Digest V96 #266
Help: re pacsats (2 msgs)
Indiana repeater/ATV/Packet APRS Balloon Launch
Kep Data AUG 30
Radio Astronomy
WTB: Low Output or Dead High Power Transmitting Tubes

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
```

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 28 Aug 1996 22:23:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: 'modes.dat' for 'SatTrack'

In <322252A2.167E@alive.com> Tovar <tvr@alive.com> writes:

>Can someone suggest where/how i can get a current version of 'modes.dat'
>(which contains frequencies and modes of operation), including, for
>example, JAS-2? It seems like a real waste to get the whole SatTrack
>package just to get that one file. Or, did i miss something and there's
>some easy way of getting that?

You can just edit it yourself, using a text editor.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 4 Sep 96 10:11:13 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 3 Sep 1996 18:04:54 -0400
From: w1aw@arrl.org
Subject: ARLK063 Keplerian data

SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

Date: 2 Sep 1996 20:42:50 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 2 Sep 1996 20:46:14 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 3 Sep 1996 21:47:11 GMT
From: darwin@indy.net (Darwin Teague)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

Date: 03 Sep 1996 16:32:41 GMT
From: karl_dundee@RedwoodFN.org (karl dundee)
Subject: Kep Data AUG 30

SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614

```
WO-18
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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Date: Mon, 02 Sep 1996 22:51:13 GMT
From: marty@trucom.com (Marty Albert)
Subject: Radio Astronomy

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
```

>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

Date: Mon, 2 Sep 1996 08:02:39
From: jim.b@okisemi.com (Jim Bieberich)
Subject: WTB: Low Output or Dead High Power Transmitting Tubes

I want to buy dead power transmitting tubes. Tubes must not be broken or
physically damaged. I'm interested in tubes with power dissapations 250 watts
to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

Date: (null)
From: (null)

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
```

```
1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #270
******************************
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1748. JAS-2 Digitalker?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <510ool$2vr@bbcnews.rd.bbc.co.uk>
Source record: 21613

Has anyone haerd the jas-2 digitalker? It's supposed to be on 435.91MHz
and be receiveable witha handie, but despite listening at the appropiate
time I have heard nothing.

J.

1749. Re: How does THIS sound for EME?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.GSO.3.95.960909113321.7057I-100000@qni.com>
Source record: 21614

David,
Here is the real deal :-)
1. a 9ft dish is WAY too SMALL for 435 MHZ !
I can not tell you what the gain is right now but forget the 9ft dish
unless you go way higher in frequency like 2.4 gig or so
on 440 MHZ you need to look at stacking some yagi's
to get up around 24 dbd gain on the antennas

2. Going with 9913 was a good idea BUT
at 100 ft you are sill loosing 3 db or so.
50 watts into the coax 25 watts out to the antenna..
you need shorter and better hardline if you are going to be 100' from
your antenna system.. all of them db losses really add up quick !

3 Forget FM
and nope your 25 watts to a dipole element into a 9' dish
might get ya to a local repeater or two !
...for starters Get a GOOD 2M all mode radio
...get a 10 Meter receiver
play around with working on the RS-10 Satellite
then work your station up from there.

4. If you really want to work eme then you will need at least
24 DBD antenna gain on each end and close to legal max power
anything less than that
then some of the BIG guns might be able to hear ya

5. Someone else might have a good book they might point you too.

I'm Still dreaming myself

Good Luck
Gary Watts de N0OXV
KAnsas City Mo
81 GL1100I

On 7 Sep 1996 c002@Lehigh.EDU wrote:

> Ok, here is my latest attempt to HEAR my echo at all
> 9' solid dish with a 2ele Dipole 440mhz antenna (attached to the TV feed;))
> 100ft of 9913 at 50watts FM
> yes..FM
> would this setup work for a REAL eme radio like a multi-mode one?
> if so, should i at least hear my echo break squelch at all with FM?
> ooooooor i'm I out of luck, and should forget it untill i get a multimode rig?
>
> thanks

> DAvid
>
>
> |---|
> | David Roseman | c002@lehigh.edu |
> | | The Flying HAm - BBS |
> | Utopia Telecommunications | Technomage - BBS |
> | 610.838.2989 | N3SQE/1 - HAm |
> | (Parttime system) | |
> |-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|
>
>

1750. RCS 2000 -- Camus mode radios -- where to get them?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: ljubisic@EUnet.yu
Message-ID: <511jrs$5gs@Solair3.EUnet.yu>
Source record: 21615

Hi!

I am having a little problem. I have to expand our company's radio system, and I have to purchase radios with DTMF keypad (we have also radio-phone system), but they have to be RCS 2000 - Camus mode compliant. We are using Motorola MX3000 (Stornophone7000) devices at the moment, but due to it's price and quantity we would like to buy, we are seeking for some cheaper solution. (By the way, I heard something about some new software for MX3000. Anybody has it? What are new features, if any?)

So, I was told that Alinco's DJ-130 model is Camus compatible, but local dealer couldn't confirm it. Also, I heard that DJ-182 with its Al-trunk logic board (which operates with CTCSS) could be MODIEFIED to be Camus mode compatible. Is there anybody from Alinco who could tell me if this is possible, and how?

Also, one friend told me that ICOM-H16T (#17), with Logic-A-Unit (EP701, PCB B1580H) is Camus mode compatible, and he wasn't sure, but also told me that ICOM IC-F30LT with UT-96 5 tone unit is also Camus capable. But, same thing as with Alinco, local delares couldn't confirm or deny it. Anybody knows it? Is there any e-mail contact in Icom where I could check it?

And finaly, it doesn't have to be Alinco or Icom, it could be also Yaesu, Kenwood, Standard, Harris... but I have to know is it Camus mode compatible, and how to order such option or modification from manufactorer/dealer.

If anybody knows something about it, I would like to ask him to send me a note _by mail_, since I wouldn't like to miss such importnat message by skiping it somehow in newsgroup.
Thanx for understanding!

1751. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Sep9.164707.13608@ke4zv.atl.ga.us>
Source record: 21616
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

In article <3232178B.797C@fishnet.net> Mike Snowden <Pmikes@fishnet.net> writes:
>> Does anyone know how much power the 6 meter module for a yaese 736 puts
>> out. I have one, brand new, and I can't seem to get any more that about 3
>> watts our of it. Is this correct???
>>
>> Thanks,
>> Alan Adamson
>> ps. please email to ne1h@ne1h.radio.org
>
>Hello Mary. I have a newer FT 736. On 6 it should put out 10 watts in the
> FM mode. If your not getting full pwr out, carefully check all your
>connections and the SWR. If your SWR is high, the rig automatically
>"folds" back the output pwr tp protect the rig. I found that by putting
>an SWR/PWR meter between the rig and my amp the rig would put out full
>pwr. Another trick is to trim a short piece to until you get a flat SWR
>and full pwr. Good luck..Oh Yaesu will deny any knowledge of a problem.
>After much frustration, I got the real story from the designer of "TE"
>amps, here in sthe So Cal area. 73 Mike K6YPB

Of course Yaesu will deny there's a problem. That's because there
isn't a problem with the radio. It is performing exactly as intended,
and exactly as any other competently designed radio would perform
when offered a grossly bad load.

The problem is in the amplifier. It is not presenting a good load
to the radio. If the amplifier designer were competent, there would
be a 50 ohm impedance presented by the amplifier to the radio.
Unfortunately, that doesn't appear to be the case with some
amateur amplifiers. (The input "networks" are often a bad joke.)

Using a length of 50 ohm cable as a transmission line transformer
can transform the impedance presented by the amplifier to some other
value, but it can't transform it to 50 ohms. So you can't present a
perfect load to the radio this way. You sometimes can get it "good
enough", however, since the radio doesn't start to fold back power
until the presented impedance is outside the range of 25-100 ohms.

Note that the impedance may be complex, and depending on the reactive
part of the impedance, the range over which you can deliver a "good
enough" load impedance may be smaller than the range that would apply
for a purely resistive termination.

You *can* use a transmission line transformer to transform some
presented impedance to 50 ohms, but the transmission line's
characteristic impedance has to be something other than 50 ohms,

IE 75 ohm quarterwave lines are conventionally used to transform
a 100 ohm impedance to a 50 ohm impedance for example. You can
easily figure this out using the Smith Chart.

The better course is to fix the problem with the amplifier's input
network so that it actually presents a 50 ohm load to the radio.
Then the length of the transmission line between radio and amp
won't matter (a transmission line won't act as a transformer if
there is 1:1 VSWR on it).

Now Alan doesn't say he's using an amplifier, so if he's seeing
foldback, it is because the antenna he is using isn't presenting
a good load impedance. Again, the correct solution is to fix the
problem, which in this case is at the antenna. The antenna may
be reactive because it isn't resonant on 6m. Or if it is a groundplane,
it'll have a 36 ohm base impedance anyway, unless the radials are
drooped to about a 45 degree angle below horizontal, which will
raise the base impedance up near 50 ohms. Etc. He may even have
a bad piece of coax, or an improperly installed coax connector,
causing a bad load to be presented to the radio.

Note, if he is seeing this power reduction into a known good
dummy load fed with a known good cable, then there really is a
problem in his radio.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

1752. Ham-Space Digest V96 #277

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609091734.AA140150457@relay2.geis.com>
Source record: 21617

GE Item Number: 7517703
Original Msg Id: 378807
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #277
System: MARLBORO#
Date: Mon 9-Sep-96 17:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1753. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: dave eckhardt <davee@hp5800.desk.hp.com>
Message-ID: <32349814.5988@hp5800.desk.hp.com>
Source record: 21618
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

Gary Coffman wrote:
>
> In article <3232178B.797C@fishnet.net> Mike Snowden <Pmikes@fishnet.net> writes:
> >> Does anyone know how much power the 6 meter module for a yaese 736 puts
> >> out. I have one, brand new, and I can't seem to get any more that about 3
> >> watts our of it. Is this correct???
> >>
> >> Thanks,
> >> Alan Adamson
> >> ps. please email to ne1h@ne1h.radio.org
> >
> >Hello Mary. I have a newer FT 736. On 6 it should put out 10 watts in the
> > FM mode. If your not getting full pwr out, carefully check all your
> >connections and the SWR. If your SWR is high, the rig automatically
> >"folds" back the output pwr tp protect the rig. I found that by putting
> >an SWR/PWR meter between the rig and my amp the rig would put out full
> >pwr. Another trick is to trim a short piece to until you get a flat SWR
> >and full pwr. Good luck..Oh Yaesu will deny any knowledge of a problem.
> >After much frustration, I got the real story from the designer of "TE"
> >amps, here in sthe So Cal area. 73 Mike K6YPB
>
> Of course Yaesu will deny there's a problem. That's because there
> isn't a problem with the radio. It is performing exactly as intended,
> and exactly as any other competently designed radio would perform
> when offered a grossly bad load.
>
> The problem is in the amplifier. It is not presenting a good load
> to the radio. If the amplifier designer were competent, there would
> be a 50 ohm impedance presented by the amplifier to the radio.
> Unfortunately, that doesn't appear to be the case with some
> amateur amplifiers. (The input "networks" are often a bad joke.)
>
> Using a length of 50 ohm cable as a transmission line transformer
> can transform the impedance presented by the amplifier to some other
> value, but it can't transform it to 50 ohms. So you can't present a
> perfect load to the radio this way. You sometimes can get it "good
> enough", however, since the radio doesn't start to fold back power
> until the presented impedance is outside the range of 25-100 ohms.
>
> Note that the impedance may be complex, and depending on the reactive
> part of the impedance, the range over which you can deliver a "good
> enough" load impedance may be smaller than the range that would apply
> for a purely resistive termination.

>
> You *can* use a transmission line transformer to transform some
> presented impedance to 50 ohms, but the transmission line's
> characteristic impedance has to be something other than 50 ohms,
> IE 75 ohm quarterwave lines are conventionally used to transform
> a 100 ohm impedance to a 50 ohm impedance for example. You can
> easily figure this out using the Smith Chart.
>
> The better course is to fix the problem with the amplifier's input
> network so that it actually presents a 50 ohm load to the radio.
> Then the length of the transmission line between radio and amp
> won't matter (a transmission line won't act as a transformer if
> there is 1:1 VSWR on it).
>
> Now Alan doesn't say he's using an amplifier, so if he's seeing
> foldback, it is because the antenna he is using isn't presenting
> a good load impedance. Again, the correct solution is to fix the
> problem, which in this case is at the antenna. The antenna may
> be reactive because it isn't resonant on 6m. Or if it is a groundplane,
> it'll have a 36 ohm base impedance anyway, unless the radials are
> drooped to about a 45 degree angle below horizontal, which will
> raise the base impedance up near 50 ohms. Etc. He may even have
> a bad piece of coax, or an improperly installed coax connector,
> causing a bad load to be presented to the radio.
>
> Note, if he is seeing this power reduction into a known good
> dummy load fed with a known good cable, then there really is a
> problem in his radio.
>
> Gary
> --
> Gary Coffman KE4ZV | You make it, | Due to provider problems
> Destructive Testing Systems | we break it. | with previous uucp addresses
> 534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
> Lawrenceville, GA 30244 | |

Gary:

I have a 6-meter module I have not yet installed. I believe Yaesu rates
the 6-meter output at 10 watts. Don't know what to say. It's Yaesu!

Dave - W6LEV

1754. ARLS013 UNAMSAT-B in Orbit

Newsgroup: rec.radio.amateur.space
Date: 1996-09-09 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls013.1996@arrl.org>
Source record: 21619
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS013
ARLS013 UNAMSAT-B in Orbit

ZCZC AS21
QST de W1AW
Space Bulletin 013 ARLS013
From ARRL Headquarters
Newington, CT September 9, 1996
To all radio amateurs

SB SPACE ARL ARLS013
ARLS013 UNAMSAT-B in Orbit

UNAMSAT-B, the first Mexican Amateur Radio satellite, has been launched into orbit from Plesetsk, Russia. The successful launch on September 5, 1996, follows years of postponements and disappointments, including the destruction of UNAMSAT-1. The satellite was built at the Autonomous University of Mexico under the tutelage of David Liberman, XE1TU.

UNAMSAT-B functions as a 1200-baud store-and-forward packet file server similar to OSCARs 16 and 19.

Uplinks: 145.815, 145.835, 145.855 and 145.875 MHz; downlink: 437.206 MHz.

In addition to its packet capability, UNAMSAT carries a meteor experiment. The satellite will transmit pulses on 40.997 MHz to detect the presence of meteors entering Earth's atmosphere. By analyzing the data files, which will be made available on the server, hams can get a glimpse of meteor activity over various parts of the globe at specific times.

Reports indicate the satellite is sending strong signals back to Earth. AMSAT says a first look at telemetry from UNAMSAT indicates all is working well aboard the satellite. It is tumbling, as expected, so signal strength and polarization sense are changing randomly. It should lock in on Earth's magnetic field in a few days, and that will stabilize the downlink signals. The transmitter is running at a ''safe'' power level of about 0.2 to 0.3 W.

AMSAT said that observers should expect the satellite to remain it its current mode for several days as the UNAM team returns to Mexico City and works through the checkout and test procedures. Observers are requested to collect telemetry in KISS mode and send files attached to e-mail to wd0eamsat.org for the next 48 hours.

Congratulations to the UNAMSAT team at the National Autonomous University of Mexico. For more information, see their Web page at http://serpiente.dgsca.unam.mx/unamsat/unameng.htm.
NNNN
/EX

1755. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609100907.CAA10286@UCSD.EDU>
Source record: 21528

```
From smtp Wed Sep 4 09:36 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 4 Sep 96 09:36 PDT
Received: from mail.ucsd.edu (ucsd.edu) by teale.ca.gov (5.x/SMI-SVR4)
id AA07982; Wed, 4 Sep 1996 09:26:06 -0700
Received: by mail.ucsd.edu; id EAA17795
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:56 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17781
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 04:30:53 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15570
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609041130.EAA17781@mail.ucsd.edu>
Date: Wed, 4 Sep 96 04:30:51 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #270
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 270

Today's Topics:
'modes.dat' for 'SatTrack'
(none)
ARLK063 Keplerian data
Ham-Space Digest V96 #266
Help: re pacsats (2 msgs)
Indiana repeater/ATV/Packet APRS Balloon Launch
Kep Data AUG 30
Radio Astronomy
WTB: Low Output or Dead High Power Transmitting Tubes

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
```

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 28 Aug 1996 22:23:29 GMT
From: rob@pe1chl.ampr.org (Rob Janssen)
Subject: 'modes.dat' for 'SatTrack'

In <322252A2.167E@alive.com> Tovar <tvr@alive.com> writes:

>Can someone suggest where/how i can get a current version of 'modes.dat'
>(which contains frequencies and modes of operation), including, for
>example, JAS-2? It seems like a real waste to get the whole SatTrack
>package just to get that one file. Or, did i miss something and there's
>some easy way of getting that?

You can just edit it yourself, using a text editor.

Rob
--
+-----------------------------------+---------------------------------------+
| Rob Janssen pe1chl@amsat.org | BBS: +31-302870036 (2300-0730 local) |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+---------------------------------------+

Date: 4 Sep 96 10:11:13 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 3 Sep 1996 18:04:54 -0400
From: w1aw@arrl.org
Subject: ARLK063 Keplerian data

SB KEP @ ARL $ARLK063
ARLK063 Keplerian data

ZCZC SK63
QST de W1AW
Keplerian Bulletin 63 ARLK063

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

Date: 2 Sep 1996 20:42:50 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 2 Sep 1996 20:46:14 -0400
From: kenn2sqw@aol.com (Ken N2SQW)
Subject: Help: re pacsats

I've been involved with the analog sats for over a year now, and am
thinking of trying the digital birds next. What suggestions do you have
regarding a relatively inexpensive way to get on the pacsats? I'm using a
Yaesu FT736R transceiver for the sats. I have a typical terrestrial packet
setup, so I'm familiar with packet from that point of view.
Thanks, and 73, Ken

Please reply either here, or preferably, via E-Mail.
My E-Mail address is: KenN2SQW @ AOL.COM

Date: 3 Sep 1996 21:47:11 GMT
From: darwin@indy.net (Darwin Teague)
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

In article <50gbe3$90f@gatekeeper.umassd.edu>,
h1riley@umassd.edu (Hank Riley) wrote:
> CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH
>
>
> Region: Central Indiana
>
> Date/Time: Saturday, September 7 / 7:00-8:00 AM EDT,
> 11:00-12:00 UTC
>
> Location: Greentown, Indiana (8 miles east
> of Kokomo)
>
> Other states where
> the signals will
> reach easily: Ohio, Illinois, Michigan, Kentucky
>
> Site Coordinates: approximate for initial antenna heading;
> (not for navigating to launch site)
> 40' 29" North Lat.
> 85' 58" West Long.
>
> ATV: 439.25 MHz AM NTSC from live camera
>
ease email me news of upcoming balloon launches and post-flight
>reports for distribution on the Net.
>
>Hank Riley, N1LTV
>h1riley@umassd.edu

Could you please tell me how to receive the video? Is it a TV-UHF frequency? I have an old Rabbit receiver, but don't know what frequency it's on....

Date: 03 Sep 1996 16:32:41 GMT
From: karl_dundee@RedwoodFN.org (karl dundee)
Subject: Kep Data AUG 30

SB KEP ARL ARLK062
ARLK062 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
[More]

[H[2JKEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96243.15987200 .00005643 00000-0 69649-4 0 06634
2 16609 51.6479 111.3895 0010890 113.1525 247.0619 15.61839755601567
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96243.12495366 .00000043 00000-0 31154-4 0 02702
2 18129 82.9252 93.8965 0011327 317.5344 42.4933 13.72368848460311
UO-11
1 14781U 84021B 96243.08189460 .00000052 00000-0 16619-4 0 09282
2 14781 97.8049 230.5371 0010768 212.3265 147.7278 14.69474704668501
RS-12/13
1 21089U 91007A 96243.24154866 .00000106 00000-0 96024-4 0 9146
2 21089 82.9242 134.4364 0031269 27.5358 332.7445 13.74073559279207
AO-13
1 19216U 88051B 96242.87739060 .00042317 -56196-6 32491-2 0 02629
2 19216 57.1197 95.2216 7435843 49.2705 354.8364 2.11602023031393
UO-14
[More]

[H[2J1 20437U 90005B 96243.15199014 -.00000001 00000-0 16439-4 0 02233
2 20437 98.5418 324.7746 0011391 349.5231 10.5714 14.29929318344623
RS-15
1 23439U 94085A 96243.51267932 -.00000039 00000-0 10000-3 0 1580
2 23439 64.8140 262.8843 0159849 186.0930 173.8051 11.27528259 69161
AO-16
1 20439U 90005D 96242.75714771 -.00000025 00000-0 73308-5 0 00225
2 20439 98.5563 326.7377 0011599 351.5732 8.5253 14.29982402344580
DO-17
1 20440U 90005E 96242.77209094 -.00000005 00000-0 14829-4 0 00091
2 20440 98.5574 327.4273 0011925 350.2902 9.8047 14.30124402344614

```
WO-18
1 20441U 90005F 96243.11333729 -.00000062 00000-0 -71975-5 0 00274
2 20441 98.5582 327.6941 0011997 349.4426 10.6447 14.30093448344662
LO-19
1 20442U 90005G 96243.24342908 -.00000009 00000-0 13172-4 0 58
2 20442 98.5602 328.3495 0012339 348.2503 11.8389 14.30203343344702
FO-20
1 20480U 90013C 96243.06147822 .00000005 00000-0 90788-4 0 09150
2 20480 99.0242 253.8642 0540344 317.1412 38.8714 12.83234222307360
AO-21
1 21087U 91006A 96243.11027502 .00000094 00000-0 82657-4 0 07494
[More]

[H[2J2 21087 82.9385 266.9913 0036417 1.9212 358.2076 13.74571250280160
UO-22
1 21575U 91050B 96243.13481910 .00000020 00000-0 20972-4 0 07147
2 21575 98.3459 307.3011 0008479 47.6015 312.5893 14.37033856268687
KO-23
1 22077U 92052B 96242.88123072 -.00000037 00000-0 10000-3 0 06093
2 22077 66.0815 35.1637 0014742 280.5708 79.3649 12.86297786190283
KO-25
1 22828U 93061F 96243.10813531 -.00000025 00000-0 73021-5 0 04886
2 22828 98.5727 317.5525 0010663 4.3734 355.7544 14.28149446120668
IO-26
1 22826U 93061D 96243.14450693 .00000006 00000-0 20153-4 0 05116
2 22826 98.5772 317.5261 0010159 17.7957 342.3575 14.27811246152550
AO-27
1 22825U 93061C 96243.15382119 -.00000013 00000-0 12298-4 0 05102
2 22825 98.5775 317.3542 0009540 17.0332 343.1166 14.27701931152547
PO-28
1 22829U 93061G 96243.12574615 -.00000030 00000-0 52013-5 0 04970
2 22829 98.5740 317.6347 0010695 5.5570 354.5731 14.28130912152582

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
[More]

[H[2JSeptember 3, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: Mon, 02 Sep 1996 22:51:13 GMT
From: marty@trucom.com (Marty Albert)
Subject: Radio Astronomy

rs93463@midnet.com (Stephen Reader) wrote:

>Hi uk.radio.amateur!
> Help required, does anybody have a current
>contact address for "BARAS" British Amateur Radio Astonomy Society. And can
```

>anybody help with info and advice on setting up a radio telescope to
>monitor solar emisionns. Any info , help or advice will be much apreciated.
> 73 de Steve.
>Stephen Reader RNARS 0951. RS93463

>--- OffRoad 1.9e registered to Stephen Reader

Hello, Stephen:

Take a look at my Home Page at:

http://www.trucom.com/ppages/marty

I have a Ham Radio and Amateur Astronomy area where the Astronomy area
focuses on Amateur Radio Astronomy.

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Cheap Long Distance! Just 12.9 cents per minute!
http://freedomstarr.com/?AL7837318
****

Date: Mon, 2 Sep 1996 08:02:39
From: jim.b@okisemi.com (Jim Bieberich)
Subject: WTB: Low Output or Dead High Power Transmitting Tubes

I want to buy dead power transmitting tubes. Tubes must not be broken or
physically damaged. I'm interested in tubes with power dissapations 250 watts
to 10,000 watts. Let me know what you have and I'll give you a quote.

73s

Jim Bieberich
WA6WJI
San Jose, CA

Date: (null)
From: (null)

SB KEP ARL ARLK063
ARLK063 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

Mir
1 16609U 86017A 96247.06285252 .00004159 00000-0 52866-4 0 06674
2 16609 51.6494 91.7096 0010787 126.0362 234.1633 15.61882960602172
AO-10
1 14129U 83058B 96238.89296850 .00000038 00000-0 10000-3 0 04503
2 14129 25.9885 192.7666 6032591 43.4713 350.6635 2.05881051071300
RS-10/11
1 18129U 87054A 96247.06196438 .00000060 00000-0 49589-4 0 02729
2 18129 82.9246 90.9848 0010926 305.8707 54.1432 13.72369252460852
UO-11
1 14781U 84021B 96247.03127326 .00000124 00000-0 28816-4 0 09286
2 14781 97.8054 234.3146 0011113 197.0748 163.0085 14.69476247669084
RS-12/13
1 21089U 91007A 96247.10085540 .00000037 00000-0 22921-4 0 09370
2 21089 82.9243 131.5752 0031022 17.5979 342.6249 13.74073083279734
AO-13
1 19216U 88051B 96245.71115469 .00038736 -55797-6 19259-2 0 02652
2 19216 57.1300 94.4400 7439446 49.4417 354.7313 2.11829183031458
UO-14
1 20437U 90005B 96246.79060821 -.00000027 00000-0 64442-5 0 02246
2 20437 98.5414 328.3430 0011136 339.1554 20.9173 14.29929442345149
RS-15
1 23439U 94085A 96247.06042468 -.00000039 00000-0 10000-3 0 01747
2 23439 64.8147 257.1460 0160230 185.4816 174.4371 11.27528359069569
AO-16
1 20439U 90005D 96246.74548422 -.00000007 00000-0 14192-4 0 00209
2 20439 98.5561 330.6569 0011357 339.7047 20.3689 14.29982613345157
DO-17
1 20440U 90005E 96246.76003132 -.00000007 00000-0 13971-4 0 00098
2 20440 98.5570 331.3471 0011656 339.1174 20.9532 14.30124679345184
WO-18
1 20441U 90005F 96246.75153689 -.00000024 00000-0 76105-5 0 00224
2 20441 98.5527 331.2676 0012192 338.5761 21.4910 14.30093979345188
LO-19
1 20442U 90005G 96246.74142874 .00000001 00000-0 17017-4 0 00240
2 20442 98.5600 331.7897 0012144 338.3351 21.7313 14.30203704345203
FO-20
1 20480U 90013C 96247.03761937 -.00000020 00000-0 36100-4 0 09224
2 20480 99.0244 257.0847 0540308 308.1339 47.2219 12.83234235307877
AO-21
1 21087U 91006A 96247.55050877 .00000094 00000-0 82657-4 0 7374
2 21087 82.9385 263.7046 0035786 350.4575 9.5896 13.74571302280775
UO-22
1 21575U 91050B 96247.10361440 .00000021 00000-0 21275-4 0 07130
2 21575 98.3457 311.1493 0008392 36.3005 323.8752 14.37034477269253
KO-23
```

```
1 22077U 92052B 96246.84649543 -.00000037 00000-0 10000-3 0 06101
2 22077 66.0795 26.8590 0014793 277.5012 82.4325 12.86297661190799
KO-25
1 22828U 93061F 96247.10158368 .00000050 00000-0 37373-4 0 04886
2 22828 98.5723 321.4725 0010718 352.6489 7.4547 14.28150526121236
IO-26
1 22826U 93061D 96247.13890359 -.00000006 00000-0 15303-4 0 05107
2 22826 98.5768 321.4465 0010109 6.9975 353.1347 14.27811346153122
AO-27
1 22825U 93061C 96247.07843949 .00000006 00000-0 19886-4 0 05099
2 22825 98.5744 321.2052 0009547 6.1714 353.9581 14.27702513153103
PO-28
1 22829U 93061G 96247.11924603 -.00000004 00000-0 15997-4 0 04980
2 22829 98.5739 321.5558 0010601 353.3881 6.7161 14.28131560153151
FO-29
1 24278U 96046B 96247.13884307 -.00000036 00000-0 00000-0 0 00294
2 24278 98.5784 320.9319 0351291 209.4316 148.6632 13.52624980002315

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 7, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #270
******************************
```

1756. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609100912.CAA11803@UCSD.EDU>
Source record: 21529

```
From smtp Thu Sep 5 04:02 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 5 Sep 96 04:02 PDT
Received: by mail.ucsd.edu; id WAA28614
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:36 -0700 for ham-space-list
Received: by mail.ucsd.edu; id WAA28585
sendmail 8.6.12/UCSD-2.2-sun
Wed, 4 Sep 1996 22:46:31 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32564
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199609050546.WAA28585@mail.ucsd.edu>
Date: Wed, 4 Sep 96 22:46:28 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #271
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 4 Sep 96 Volume 96 : Issue 271

Today's Topics:
Ham-Space Digest V96 #270
Indiana repeater/ATV/Packet APRS Balloon Launch
Radio Meteor Obs. Bull. August 1996: Perseids
WTB: SatTrak-IV

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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 4 Sep 96 17:28:48 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #270
```

GE Item Number: 8809857
Original Msg Id: 376893
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #270
System: MARLBORO#
Date: Wed 4-Sep-96 17:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 03 Sep 1996 21:27:43 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Indiana repeater/ATV/Packet APRS Balloon Launch

Darwin Teague wrote:

> Could you please tell me how to receive the video? Is it a TV-UHF frequency? I
> have an old Rabbit receiver, but don't know what frequency it's on....

You can receive ATV the following ways:

Using an ATV down converter (converts 439.25 to TV channel 3) and a
70cm Beam Antenna

Using an old TV or VCR with manual tuning hooked up to an outside
antenna.
You will have to tune the TV to UHF channel 14 and then try using
your
fine tuning control and tune DOWN. The ATV frequency is BELOW
UHF ch 14.

Using a newer TV or VCR that is cable-ready. Hook the TV or VCR up
to an
outside antenna and then set it for CABLE CHANNEL 60.

The first method is BY FAR the best. Down converters are around $80 and
you can
make your own beam (I did). Make sure your receiving antenna has the
same
polarity as the transmitter. Cross polorization loss on 70cm can be as
much
as 20db.

Mark
<KB9KHM>

Date: Wed, 4 Sep 1996 21:16:33 GMT
From: steyaert@vvs.innet.be (Christian Steyaert)
Subject: Radio Meteor Obs. Bull. August 1996: Perseids

Radio Meteor Observation Bulletin No. 37 September 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P. Bus
Location: Groningen, Netherlands (6 degr 33' E, 53 degr 13' N)
Frequency: 72.11 MHz
Transmitter Location: Wroclaw, Poland, 130 kW, Distance 740 km
Antenna: Yagi, 3 elements, geographical azimuth 106 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 uV
Observing method: Listening

Mean dead time corrected Sporadic Radio Meteor activity between
1996 July 13 and 1996 August 5.
Between brackets the statistical error of one sigma.

Mean Sporadic activity, starting at UT:

10h 11 12 13 14

85(5) 96(9) 90(10) 93(6) 84(8)

18h 19 20 21 22 23 0 1 2-2.5

91(9) 102(8) 112(6) 130(13) 131(11) 166(19) 178(18) 180(12) 103(11)

Mean Sporadic activity of long duration reflections > 1 sec, starting at UT:

10h 11 12 13 14 | 18 19 20 21 22 23 0 1 2-2.5
---
2 2 2 2 3 | 4 4 2 6 5 4 7 6 6

Dead time corrected counts of reflections during one hour intervals.
Between brackets the number of long duration reflections > 1 sec,
starting at UT:

August 11 August 12
18h 19 20 21 22 23 0 1 2-2.5

115(19) 127(12) 169(20) 216(24) 188(16) 271(36) 281(52) 320(70) 116(25)

August 12
10h 11 12 13 14

106(18) 180(21) 138(26) 130(16) 114(10)

. very high activity between Aug 11 23h UT and Aug 12 2h UT.

E.P. Bus

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

August 1996

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Aug	UT									
1996	20h	21	22	23	00	01	02	03	04	05	06
1- 2	23	52	71	103	136	102	113	125	62	84	41
2- 3	33	47	64	89	103	100	115	115	85	91	51
3- 4	13	54	94	%	140	105	191	96	74	112	40
15-16	%	39	9	26	49	43	51	53	52	60	38
16-17	25	33	24	34	57	44	65	64	47	58	32
17-18	11	27	41	53	65	54	65	81	58	67	64
18-19											
19-20	11	36	49	177%	206%	49	92	65	58	64	30
20-21	20	20	28	29	38	26	28	32	32	40	-
21-22	22	15	32	30	45	58	64	72	62	59	72
22-23	14	29	28	37	42	52	67	72	52	55	30
23-24	8	21	24	45	64	72	33	56	55	36	23
24-25	14	8	17	49	36	34	56	44	39	38	33
25-26	7	22	37	24	46	34	39	34	30	25	22
26-27	4	9	12	21	22	40	32	54	46	49	37
27-28	Thunderstorms										
28-29	Thunderstorms										

29-30 | 9 6 6 9 11 12 20 14 29 27 20
30-31 | 18 5 10 26 31 28 30 39 45 34 24
31-01 | 4 5 13 14 20 24 31 22 31 23 21
------+---
1996 | 20h 21 22 23 00 01 02 03 04 05 06
Aug | UT

Notes:

. local time = UT + 2 hours.
. % direct reception
. ? high count to be checked for potential sporadic E.

Maurice De Meyere

Observer: Werfried Kuneth
Location: Villach, Austria (13 53' E, 46 37' N)
Antenna: dipole with reflector
Receiver: AR-8000 at 59.2505 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter: 150 kW TV video carrier in Bucaresti,
Romania, distance 950 km, east direction.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP38 program from AF9Y) on the PC where 640 channels of 2 Hz width
are recorded and stored continuously. The sensitivity of each 2 Hz wide
channel is about -171 dBm. Every meteor reflection (in SSB mode)
produces a distinct whistle, which is recorded easily by the real time
FFT program and saved in .GIF pictures of 200 seconds each.
From the 1280 Hz wide received picture only one channel of 40 Hz width
is used for meteor identification, the other nearby "channels" are used
to monitor interference, which can be identified easily this way. If
any interference occurs, the whole 200 second recording of one
picture is not used for further processing.

The following figures show the total length of the meteor reflections
during one hour,expressed as percentage. The number here shows
10 times this value. (e.g. 100 means 10 percent).

| June 1996
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
---+---
2 | , , , , ,163,125, , , , , , , , ,
3 | 58, 80, 40,149, ,205,204,203, 85, 45,227,221, 59, 72,188,170,205
4 |115,132,148,161, ,237,208,180,207, 99,206,224, 67, 61,198,186,180
5 |137,161,226,192,134,253,265,244,175, 74,184,261, 75,179,147,259,188
6 |123,181,201,182,209,261,239,284,189,105,231,232, ,196,164,257,125
7 |114, ,188,172,228,286,301,231,314, 89,181,224, 80,176,185, ,247
8 |113, ,295,158,246,233,325,305,183,142,138,174,111,152, , ,
9 |108,132,275,196,212,242,316,258,272,163,171,147, 89,152,186, ,184
10 | 81,173,102,135,212,263,376,278,273,141,108, 79,102,159,173, ,184
11 | 86, , 97,155,101, ,457,268,195,165,101, , 82,170,157, ,108

```
12 |105, , 73,151, 57, ,468,359,257,213,148,134, 77,183,164, ,204
13 |145, ,281,241,250,277,514,399,223,231,252,268, ,183,232, ,289
14 |114,131,246,297,217,224,397,281,208,224,172,175, , ,225, ,
15 | 86, 98,234,221,178,193, ,186,167,204,145,172, ,141,156, 96,148
16 | 55,101, , , ,157, ,154,107, , 84,107, ,143,154, 50,167
17 | 51, ,156, , ,123,197,152, , 91, , , ,136,106, 54,125
18 | 50, ,107, , , 71,132,163, , 56,142, , , , , 35, 76
19 |
20 | , 65, , 75,140,106, 88,136,123, 60, 69, 24, 28, 83,204, 76,244
21 | 99, 60, 69, , 90,140,123, 85,116, 52, 76, 31, 29,109,103, 85, 15
22 | 92, 80, 93, , 64,108,158,133,105, 71, 76, 42, 27,135,169,125, 17
---+--------------------------------------------------------------
UT | 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 ,10 ,11 ,12 ,13 ,14 ,15 ,16 ,17
| June 1996

(new) Location: near Villach, Austria (13 37' E, 46 45 ' N)
(new) Antenna: 3 el Yagi
Receiver: AR-8000 at 48.2492 MHz, SSB mode,
Narrow passband filter, no preamplifier.
Transmitter (assumed): 250 kw TV video carrier near Madrid, Spain,
distance 1550 km, southwest direction.

| Aug 1996
UT | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
----+-----------------------------------------------------------------
0 | , 10, 16, 13, 9, 6, 8, 12, 15, , 53, 59, 52, 24, 32, 13, 6
1 | 4, 9, 18, 5, 9, 4, 3, , , 7, 25, 69, 65, 26, 35, 14, 15
2 | 13, 16, 12, 13, 20, 3, 16, 15, 36, 10, 43, 34, 65, 52, 24, 11, 4
3 | 16, 18, 31, 24, 14, 9, 13, 21, 11, 6, 36, 35, 59, 36, 29, 8, 9
4 | 24, 22, 31, 15, 18, 24, 13, 18, 22, 18, 40, 67, 63, 42, 38, 29, 10
5 | 17, 12, , 12, 13, 15, 22, 19, 20, 21, 28, 71, 37, 26, , 19, 11
6 | 14, 11, , 13, 43, 16, 20, 16, 10, 22, 34, 46, 39, 24, , 10, 3
7 |
8 | 31, , , , , 13, 15, 26, 11, 15, , 73, 41, 20, , 9, 13
9 | , , 4, 13, 23, 8, 32, , 10, 18, 40, 38, 18, 11, , 5, 4
10 | 42, 28, 8, 8, 2, 15, 20, 11, 7, , 29, 32, 32, 18, , 16,
11 | , 12, 7, 7, 8, 8, 10, 13, 8, , 23, 32, 57, 10, , 7, 10
12 | , 8, , 6, 9, 5, , 7, 5, , 7, , 23, 10, , 4, 4
13 | 5, 13, 3, , , 2, , 6, 11, , 13, 15, 7, 7, , 7,
14 | , , 2, 8, , , , 7, 29, , 27, 19, 2, 9, , 4,
15 | , , 3, 6, , , , , 10, , 10, 22, , 5, , 2,
16 | , , , , 6, , , , 5, , 3, 18, , , , ,
17 | , , 5, , , , , , , , 48, 20, , , , ,
18 | , , , , , , , , , , , , , , , 3,
19 | , , , , 13, , , , , 18, 7, 10, , , , ,
20 | 6, 12, , , , , 3, , , 25, 17, , 9, 4, , ,
21 | , 10, , 3, 4, 7, 5, , 6, 9, 10, 18, 15, 18, , ,
22 | 18, 8, , 5, 10, 7, 7, 21, 45, 8, 28, 24, 15, 12, 4, 5,
23 | 13, 6, 8, 24, , 22, 13, 30, 6, 18, , 30, 18, 18, , 10,
----+-----------------------------------------------------------------
| 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17
```

| Aug 1996

Notes:
. blank value means either no data available, interference,
sporadic "E", power failure, shutdown during thunderstorms or
transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).

. maximum Perseid activity during the early hours (UT) of Aug 12.

. *** Radio Meteor Gallery is open ***
I'd like to invite you all to my new Radio Meteor Gallery,
with the best spectrograph pictures out of about one million
recorded meteor reflections during last year. URL is
<http://www.net4you.co.at/user/kuneth/gallery.html>

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW , sensitivity -154 dBm min
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Long duration echoes (t>2 sec):

| August 1996
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
---+---------+---------+---------+---------+---------+-------
21 | 17 37 27 72 53 37
22 | 17 20 22 55 34 29
23 | 5 11 14 31 34 21
00 | 10 15 5 24* 15 11
01 | 4 7 4 31* 19 11
02 | 2 5 0 16* 12 9
03 | 2 5 2 10 6 11
04 | 2 1 3 4 8 9
05 | 0 2 1 4 4 1
06 | 0 2 0 0 1 0
07 | 1 0 1 0 1 2
08 | 0 2 0 0 3 1
09 | 0 1 5 0 2 4
10 | 0 4 0 0 2 2
11 | 1 1 6 0 2 3

```
12 | 1 5 4 6 4 1
13 | 0 3 4 13 13 7
14 | 1 5 14 14 11 5
15 | 8 9 11 20 13 8
16 | 13 10 15 25 14 10
17 | 9 11 30 28 16 17
18 | 20 21 48 55 24 22
19 | 24 20 49 60 27 21
20 | 28 23 55 65 35 18
---+---------+---------+---------+---------+---------+---------+-------
UT | 8/ 9 9/10 10/11 11/12 12/13 13/14
| August 1996
```

Notes:
. local time = JST = UTC + 9 hours
. the radiant was not located favorably when the Perseids maximum occurred: yet a significant relative increase (with respect to the adjacent days) is seen between 0h-2h UT on August 12.

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 degr 26' E, 53 degr 08' N)
Frequency: 66.89 MHz
Transmitter location:
Krakow, Poland, 120 kW, distance 980 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth 110 degrees (ESE), elevation 15 degrees
Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley 0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N with a bandwidth of 3 kHz
Observing method: Brown strip chart recorder, 9 or 18 inch/hour + occasional listening.

Dead time corrected counts of reflections during one hour intervals starting at:

```
| August 1996
UT | 8 9 10 11 12 13 14
-----+--------------------------------------
0 | 170 240! 154
1 | 188 354! 142
2 | 167 160 158
3 | 164 140 168
4 | 170 170 122 144
5 | 135 143 133 100
6 | 112 108 102 105
7 | 115 92 114 110
8 | 100 111 91 104 115
9 | 75 116 c 82 83
10 | 50 64 82 76 80
```

```
11 | 38 56 76 66 87
12 | * 96 63 68
13 | * 88 64 62
14 | * * 60 50
15 | 52 * 60 61
16 | 48 * 86 50
17 | 122 56 * 54 58
18 | 124 140 * 44 47
19 | 123 72 * 80 61
20 | 128 53 94 * 102 52
21 | 130 82 135
22 | 161 91 130
23 | 147 167! 118
-----+--------------------------------------
UT | 8 9 10 11 12 13 14
| August 1996
```

Remarks: * thunder-storm.
c continuous reception.
! Perseids outburst, maximum between 01 - 02 h UT.

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07'N)
Frequency: 81.4 MHz
Transmitter Locations: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were recorded on a pen-recorder chart.

```
1996 | UT
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---------------------------------------------+-----------
1 | 16 23 41 41 40 43 38 35 29 34 27 19 | 34.0 30.3
2 | 8 18 22 34 40 35 34 44 35 25 26 15 | 26.2 29.8
3 | 19 20 27 25 42 37 22 36 29 30 21 15 | 28.3 25.5
4 | 12 27 26 30 45 26 42 41 42 35 25 21 | 27.7 34.3
5 | 12 16 21 33 44 30 30 29 26 30 23 18 | 26.0 26.0
6 | 10 21 21 33 35 23 34 26 38 26 24 26 | 23.8 29.0
7 | 9 12 21 34 26 17 26 32 40 25 20 21 | 19.8 27.3
8 | 13 20 23 34 32 30 24 30 24 21 15 | 25.3 22.8
9 | 9 11 21 19 25 29 25 24 23 32 24 20 | 19.0 24.7
10 | 11 18 25 32 30 35 39 32 29 30 30 19 | 25.2 29.8
11 | 15 15 23 27 32 28 21 34 | 23.3 27.5
12 | 15 21 24 31 23 22 25 22 30 25 31 27 | 22.7 26.7
13 | 12 21 24 30 37 29 24 33 37 20 25 16 | 25.5 25.8
14 | 16 24 17 27 36 34 24 33 19 24 | 21.0 28.3
15 | 12 10 17 19 27 16 21 18 19 15 22 20 | 16.8 19.2
```

```
16 | 15 21 21 20 26 29 24 29 19 24 24 22 | 22.0 23.7
17 | 13 21 26 28 27 22 25 20 27 28 26 20 | 22.8 24.3
18 | 18 24 28 23 23 24 26 24 24 29 22 25 | 23.3 25.0
19 | 10 17 14 24 11 15 16 19 25 22 20 15 | 15.2 19.5
20 | 11 13 15 17 18 23 23 18 23 16 15 22 | 16.2 19.5
21 | 10 12 21 15 14 17 15 23 15 14 13 16 | 14.8 16.0
22 | 9 14 23 20 21 16 14 17 23 20 25 15 | 17.2 19.0
23 | 9 18 19 18 17 16 26 26 15 26 23 28 | 16.2 24.0
24 | 20 16 15 14 26 21 23 31 31 23 25 13 | 18.7 24.3
25 | 22 14 14 14 20 21 19 21 22 22 27 | 16.8 22.0
26 | 7 14 17 12 15 23 17 29 24 26 29 20 | 14.7 24.2
27 | 11 27 14 25 13 15 18 22 20 23 25 17 | 17.5 20.8
28 | 17 24 24 25 25 22 23 23 36 20 21 22 | 22.8 24.2
29 | 9 14 20 12 19 17 19 19 16 20 22 20 | 15.2 19.3
30 | 11 20 18 16 21 15 18 20 23 14 | 16.3 18.5
31 | 14 11 12 18 16 20 18 13 16 15 | 15.2 15.5
-----+-----------------------------------------------+-----------
Aug | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
1996 | UT

**(1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

Total echoes

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 27 33 30 32 35 48 41 38 - 30 - - - 19 15 9 16 7 7 13 12 19 25 38
10-11 | 39 35 27 39 29 59 47 40 42 51 45 29 21 21 8 8 14 4 12 10 20 39 49 48
11-12 | 47 62 50 67 72 76 66 46 49 47 44 27 31 20 20 11 11 18 13 8 19 27 26 29
12-13 | 31 35 41 34 34 40 55 34 34 33 17 20 20 12 8 8 3 2 7 6

Long duration echoes (>5sec):

1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-------------------------------------------------------------------------
9-10 | 3 2 3 1 2 2 3 1 - 1 - - - 0 0 0 0 0 0 0 0 0 1 3
10-11 | 0 2 2 5 2 6 5 6 4 10 4 1 3 1 0 0 0 0 0 1 1 0 3 0
11-12 | 3 6 5 8 4 8 7 2 3 2 4 1 0 0 0 0 0 0 0 0 0 0 1 3
12-13 | 5 1 0 3 1 6 5 5 3 1 0 0 1 0 0 0 1 0 2 0

- Perseids maximum took place on 1996/08/12 02h UT.
- local time = JST = UT + 9 hours

Chikara Shimoda

------------------------------------------------------------
Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
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Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
31- 1 | 51 56 53 56 56 45 45 51 44 35 33 21 34 27 24 20 12 13 13 17 33 28 35 56
1- 2 | 72 50 50 51 40 50 35 32 31 25 37 24 17 24 20 14 15 16 15 14 24 26 36 65
2- 3 | 65 48 69 66 49 41 44 51 41 36 32 25 21 26 26 20 13 12 14 25 36 48 50
3- 4 | 68 49 55 52 56 51 31@42 43 33 19@24 26 22 19 20 12 14 13 13 18 22 28 45
4- 5 | 49 32 40 42 31 29 44 42 26 28@18@18 14 19 18 12 15 12 17 14@12 @27 39
5- 6 | 41 47 48 43 45 55 65@54 35 33 32 25 25 26 23 14 17 15 13 15 27 31 @37
6- 7 | 67 53 59 68 70 68 45 47 24 @24@14@14@12@12@12 16 20 24 36 61
7- 8 | 50 48 59 75 74 55 50 56 45 39 29 32 22 24 21 14 11 12 12 25 27 42 73
8- 9 | 55 43 57 62 66 76 71 60 32 28 31 26 35 22@31 19 16 14 10 17 25 30 41 48
9-10 | 61 52 40 63 72 67 78 61 45 32 24 32 21 23 22@20@12@12 13 21 36 33 48 51
10-11 | 54 70 80 70 87 76 60@59@52 @38 33 28 18@18 17 15 17 19 24@34 38 56
11-12 | 51 61 79 93107 98@71 71 93 64 62 43 37 25 29@12 14 17 13 14 25 50 68 80
12-13 | 74 93 97116104 82102 91@50 45 49 38 40 39@15 21 21 26 15@21 29 24 42 47
13-14 | 62 68 77 78102 93 87 89 58 40 36 34 36 32@21@22 14 12 16 23 28 35 36
14-15 | 32 30 39 52 45 31 30@36 48 35 32 29 18 21@22 13 18 16 15 12 19 29 43 45
15-16 | 44 41 38 44 39 22 42@27 34 36 35 27 29 21 17 17 15 13 12 14 17 34 35 32
16-17 | 46 50 53 48 47 47 47@51 52 29 27 20 20 21 21 17 21 18 12 19 29 20 32 35
17-18 | 37 23 28 30 40 39 50 48@40 39 35 39 23 22@26@17 24 16 17 19 27 35 37 34
18-19 | 51 31 33 46 37 38 47 27@35 25 20@23 @21 31 27 37
19-20 | 37 33 48 41 44 46 37 41@48 32 27 28 18 24@22 17 15 16 14 15@25 38 28 33
20-21 | 33 30 42 51 34 30@37 33 38 29 27 21 31 23 22 20 14 12 15@16 18 31 23 37
21-22 | 43 35 41 43 47 @48 41@32 @37 27 31 24 24 18 16@14@17 24 36 36
22-23 | 42 35 35 43 44 46 51 48 44 39 37 29 35 28 17 26 23 16 17 16@21 32 39 44
23-24 | 39 35 39 38 43 37@44 52 46 44 38 36 34 28 28 25 19 18 16 14 19 30 38 34
24-25 | 26 29 39 35 35 29@30 @20 24 34 58
25-26 | 38 40 43 49 52 37 46@48@45@31 27 37 27 25 24 23 18 20 20 19 18 26 39 35
26-27 | 39 39 48 42 34 41 38 31@33@34 35 26 24 24 20 20 25 17 20 20 34 25 38 38
27-28 | 31 31 48 56 51 54 50 57 49
------+------------------------------------------------------------------------
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
1996 | UT
```

Long lasting (>20 sec.) echo rates:

```
1996 | UT
Aug | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
10-11 | 6 5 7 6 13 9 7 6 11 6 3 2 2 2 1 1 0 0 0 0 0 0 0 1 2
```

```
11-12 | 1 6 5 16 21 21@13 18 17 23 16 10 8 2 3 0 0 0 0 0 2 2 5 5
12-13 | 6 18 17 27 12 9 21 18@10 9 9 5 2 0 0 0 0 0 0 1 0 0 4 6
13-14 | 5 6 6 14 16 20 21 15 10 5 2 2 2 1 0 0 0 0 0 0 0 0 0 0 0
14-15 | 0 1 2 3 5 5 2 @2 4 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 0
15-16 | 2 2 1 2 0 0 2 0 0 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0
16-17 | 0 1 3 1 4 2 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
17-18 | 1 1 0 0 0 0 1 2 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
18-19 | 0 1 0 0 3 2 0 0 @0 0 0 @0 0 0 0 0
19-20 | 0 0 0 0 0 0 0 0 @1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
20-21 | 1 0 0 1 0 5 1 0 1 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0
------+------------------------------------------------------------------------
UT | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
```

Notes:

- @nn =corrected hourly rates (observed for less than 60 min).

- local time = JST = UT + 9 hours.

Kazuhiro Suzuki

```
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)
```

Counts in one hour intervals starting at:

delta Aquarids 1996

```
| July 1996
UT | 27 28 29 30
----+-----------------------------------
0 | 409 409 559 584
1 | 433 426 544 433
2 | 472 398 598 421
3 | 502 428 353 393
4 | 484 394 534 366
5 | 291 350 409 316
6 | 270 309 290 359
7 | 362 216 247 405
8 | 568 238 291 333
9 | 329 143 328 309
```

```
10 | 235 167 211 258
11 | 183 134 246 221
12 | 168 204 251 219
13 | 186 207 165 220
14 | 192 180 117 154
15 | 203 177 97 150
16 | 154 136 124 144
17 | 121 124 131 150
18 | 128 79 163 133
19 | 176 95 115 177
20 | 147 112 139 213
21 | 156 174 248 250
22 | 275 358 364 348
23 | 321 514 462 450
----+---------------------------------
UT | 27 28 29 30
| July 1996

Perseids 1996

| August 1996
UT | 11 12 13 14
----+---------------------------------
0 | 457 1415 547 380
1 | 509 1179 662 728
2 | 417 1085 759 416
3 | 424 760 628 422
4 | 430 595 552 545
5 | 396 732 654 300
6 | 457 914 536 372
7 | 641 1018 658 488
8 | 449 767 540 436
9 | 394 847 585 348
10 | 312 584 551 291
11 | 415 542 606 381
12 | 231 708 530 286
13 | 270 518 286 188
14 | 214 265 325 134
15 | 187 199 198 127
16 | 176 278 156 129
17 | 221 191 117 81
18 | 158 243 164 99
19 | 377 200 149 136
20 | 329 277 134 127
21 | 419 321 507 218
22 | 487 633 355 354
23 | 717 453 296 279
----+---------------------------------
UT | 11 12 13 14
| August 1996
```

. strong Perseids activity between Aug 12, 0h-2h UT, and Aug 12, 6h-8h UT.

Ilkka Yrjola / via M. De Meyere

Observer: W.T. Zanstra
Location: Appingedam, Netherlands (6 degr 51' E, 53 degr 19' N)
Frequency: 72.11 MHz
Transmitter location: Wroclaw, Poland, 130 kW, distance 735 km
(16 degr 43' E, 50 degr 52' N)
Antenna: Yagi, 5 elements, geographical azimuth 110 degr (ESE),
elevation 12 degrees
Receiver: Bearcat UBC 177 XLT Scanning Radio, sensitivity 0.3 uV
Observing method: Listening

Dead time corrected counts of reflections during one hour intervals
starting at:

Date: Wed, 4 Sep 1996 15:23:25 GMT
From: "Stacey E. Mills, M.D." <sem2r@virginia.edu>
Subject: WTB: SatTrak-IV

If anyone has one of Ron Long's (Kiron Corp) SatTrak-IV satellite tracker/tuner
units for sale, please let me know. I'd be interested in either a completed unit,
or an unassembled kit.

you can E-mail me direct at:
sem2r@virginia.edu

Thanks.

End of Ham-Space Digest V96 #271
****

1757. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199609100915.CAA11851@UCSD.EDU>
Source record: 21530

```
From smtp Sat Sep 7 07:52 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Sat, 7 Sep 96 07:52 PDT
Received: by mail.ucsd.edu; id EAA09426
sendmail 8.6.12/UCSD-2.2-sun
Sat, 7 Sep 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA09412
sendmail 8.6.12/UCSD-2.2-sun
Sat, 7 Sep 1996 04:30:35 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2609
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609071130.EAA09412@mail.ucsd.edu>
Date: Sat, 7 Sep 96 04:30:34 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #274
To: Ham-Space@UCSD.EDU

Ham-Space Digest Sat, 7 Sep 96 Volume 96 : Issue 274

Today's Topics:
(none)
Ham-Space Digest V96 #266

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 7 Sep 96 10:15:36 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

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```

Date: Sat, 31 Aug 96 04:30:52 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #266

Ham-Space Digest Sat, 31 Aug 96 Volume 96 : Issue 266

Today's Topics:
wx satellites frqs?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 27 Aug 1996 11:57:38 GMT
From: Tfugate@service1.uky.edu (Terry Fugate)
Subject: wx satellites frqs?

In article <4volfs$mcm@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi Folks
>
>Can someone tell me some wx satellites freqs so i can monitor their
>trasmissions..
>
>luis
>Luis A Velis
>Hamradio operator
>n3tuk@idsonline.com
>
Try 137.5MHz and 137.620MHz. The wxsats "broadcast" in FM and the
bw is about 50KHz. A NFM scanner will allow to listen, but not
to receive and display an image. When a wxsat is at a higher elevation
you can hear them on a handheld scanner with the rubber duckie antenna.
Serious recpetion is a bit tougher.

End of Ham-Space Digest V96 #266
****

End of Ham-Space Digest V96 #274
****

1758. Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: Bruce Sawtelle <71763.3467@CompuServe.COM>
Message-ID: <5145enmki1@mhafn.production.compuserve.com>
Source record: 21531

I've recently gotten my TV-502 tranverter working on the TS-850 and have tried to make some contacts thru RS-10. I have not been successful yet and wanted to make sure I'm "in-sync" with the satellite and effects of doppler. I'm using "PC-Track" that shows ~ 3Khz doppler effect when the RS-10 satellite is coming over the horizon. Therefore, I've been listening ~ 3KHz higher on 10M. For example, I'll transmit on 145.865 and listen on 29.368 +/-. I start closing the gap as the satellite goes overhead and open it up again as it goes towards the horizon. Am I missing something? Haven't gotten a contact yet. BTW, I'm running ~ 7 W to a J-pole (I know, not the perfect satellite antenna, but I thought RS-10 was pretty sensitive). I don't have a 2nd HF radio to hook up to listen to my downlink at this time. Maybe I'll ahve to resort to that path. Are my assumptions above correct?

THanks

Bruce W3NJ

1759. Ham-Space Digest V96 #278

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609102134.AA106921289@relay2.geis.com>
Source record: 21532

GE Item Number: 5087814
Original Msg Id: 379196
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #278
System: MARLBORO#
Date: Tue 10-Sep-96 21:50

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1760. ARLK065 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk065.1996@arrl.org>
Source record: 21533
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK065
ARLK065 Keplerian data

ZCZC SK65
QST de W1AW
Keplerian Bulletin 65 ARLK065
From ARRL Headquarters
Newington, CT September 10, 1996
To all radio amateurs

SB KEP ARL ARLK065
ARLK065 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 99979U 96260.40049134 .00761039 23875-5 14435-3 0 33
2 99979 51.6455 25.1127 0105029 4.7223 184.2512 16.17457022 13
Mir
1 16609U 86017A 96254.10092197 .00006032 00000-0 73870-4 0 06648
2 16609 51.6513 56.2255 0010456 150.5540 209.5881 15.61900280603279
AO-10
1 14129U 83058B 96253.94881417 .00000129 00000-0 10000-3 0 4528
2 14129 25.9479 190.2318 6037987 47.6079 349.6261 2.05880202 71615
RS-10/11
1 18129U 87054A 96254.06109801 .00000014 00000-0 -13220-5 0 02640
2 18129 82.9240 85.8088 0010425 284.1055 75.8941 13.72368872461813
UO-11
1 14781U 84021B 96253.97672601 .00000111 00000-0 26614-4 0 09197
2 14781 97.8059 240.9557 0011323 174.0577 186.0761 14.69478338670100
RS-12/13
1 21089U 91007A 96254.09129693 .00000013 00000-0 -25186-5 0 09242
2 21089 82.9240 126.3925 0030371 359.6844 0.4294 13.74072626280690
AO-13
1 19216U 88051B 96253.72636047 .00040639 13880-5 14341-2 0 02727
2 19216 57.1337 92.6826 7438814 50.0444 354.7098 2.12404424031623
UO-14
1 20437U 90005B 96253.78794776 .00000015 00000-0 22843-4 0 02172
2 20437 98.5412 335.2071 0010962 318.1802 41.8542 14.29930553346142
```

```
RS-15
1 23439U 94085A 96253.97852696 -.00000039 00000-0 10000-3 0 01667
2 23439 64.8145 245.9601 0159796 184.2607 175.6962 11.27528725070343
AO-16
1 20439U 90005D 96253.81253309 -.00000032 00000-0 43934-5 0 00139
2 20439 98.5559 337.6021 0011283 319.1325 40.8982 14.29983298346168
DO-17
1 20440U 90005E 96254.31612709 -.00000026 00000-0 67562-5 0 80
2 20440 98.5577 338.7779 0011248 316.2813 43.7470 14.30125057346261
WO-18
1 20441U 90005F 96253.74807057 -.00000006 00000-0 14620-4 0 00173
2 20441 98.5562 338.1491 0011940 318.2174 41.8090 14.30094669346184
LO-19
1 20442U 90005G 96253.80738561 -.00000044 00000-0 -29504-6 0 00143
2 20442 98.5602 338.7388 0012337 317.5262 42.4943 14.30204197346219
FO-20
1 20480U 90013C 96254.05439629 -.00000018 00000-0 39755-4 0 09129
2 20480 99.0241 262.7655 0540024 292.2214 62.2456 12.83234412308771
AO-21
1 21087U 91006A 96254.53841862 .00000093 00000-0 82657-4 0 7393
2 21087 82.9384 258.5322 0035780 331.3481 28.5707 13.74571532281735
UO-22
1 21575U 91050B 96253.71827000 -.00000004 00000-0 12798-4 0 07281
2 21575 98.3440 317.5585 0008194 17.2301 342.9163 14.37035179270209
KO-23
1 22077U 92052B 96253.68852172 -.00000037 00000-0 10000-3 0 06284
2 22077 66.0795 12.5330 0015042 277.3558 82.5748 12.86297940191672
KO-25
1 22828U 93061F 96253.68726824 .00000020 00000-0 25649-4 0 04772
2 22828 98.5728 327.9391 0010631 333.8652 26.1988 14.28151191122178
IO-26
1 22826U 93061D 96254.14661218 .00000022 00000-0 26466-4 0 05026
2 22826 98.5738 328.3179 0009522 348.0406 12.0542 14.27812538154126
AO-27
1 22825U 93061C 96254.08668436 .00000001 00000-0 17982-4 0 05016
2 22825 98.5745 328.0823 0009153 347.5226 12.5732 14.27703043154104
PO-28
1 22829U 93061G 96254.26550748 -.00000000 00000-0 17395-4 0 4923
2 22829 98.5733 328.5701 0010078 332.9315 27.1338 14.28132410154176
FO-29
1 24278U 96046B 96253.72237207 .00003481 00000-0 35898-2 0 00311
2 24278 98.5784 326.6446 0351538 192.3705 166.8586 13.52628610003208

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 14, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1761. CORRECTION!: Contacts via RS-10

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: Bruce Sawtelle <71763.3467@CompuServe.COM>
Message-ID: <514uar$4f1$1@mhade.production.compuserve.com>
Source record: 21534

Already I mis-spoke. I have been starting out ~ 3KHz LOWER in
frequency to compensate for the beginning of the pass since the
Doppler effect is INCREASING my frequency as received by RS-10.
To correct my example, I'm transmitting on 145.862 and listening
on 29.365, decreasing the gap until the satellite is overhead, then
increasing the gap until it hits the horizon (i.e. I'll be
transmitting on 145.868 to receive on 29.365). I've tried tuning
around and still no success... Not as simple as RS-12 ;-)
73
Bruce W3NJ

1762. Ham-Space Digest V96 #279

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609102234.AA240624858@relay2.geis.com>
Source record: 21535

GE Item Number: 4963694
Original Msg Id: 379412
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #279
System: MARLBORO#
Date: Tue 10-Sep-96 22:33

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1763. Superior Announces Space Auction

Newsgroup: rec.radio.amateur.space
Date: 1996-09-10 00:00:00 UTC
From: cbush@primenet.com
Message-ID: <515l5q$ra0@nnrp1.news.primenet.com>
Source record: 21536

BEVERLY HILLS--(September 11, 1996)--Space related memorabilia from the personal collections of many pioneering astronauts are among the featured highlights of Superior Stamp & Coin's Fall 1996 Space Memorabilia auction, scheduled for October 26.

More than 1800 lots will be available, including material from the memorabilia collections of astronauts Buzz Aldrin, Pete Conrad, Gordon Cooper, Walter Cunningham, Dick Goron, Gus Grissom, Deke Slayton and others.

This sale, which also features part one of The Igor Sikorsky Collection of Aviation Memorabilia, includes major sections devoted to autographs, prototype and commercial models, and memorabilia of all kinds related to man's exploration of space.

According to Michael Orenstein, director of Superior's Stamp & Space Memorabilia Department, the sale promises to be one of the company's best ever.

"There something for every space buff," he says.

The sale, Superior's tenth since 1992, runs the gamut of space exploration--from early balloon and aviation flights, through the High Altitude, Mercury, Gemini, Apollo, Skylab, ASTP, and Shuttle programs. Also featured is space-related material from the Soviet/Russian space program, including many paintings and sketches by Russian "space artists."

"We have a lot of qualtiy material in this sale," says Orenstein. "Of particular interest is the MK-II full pressure suit, the material being offered by the astronauts, the autograph section, and the models."

Orenstein is excited about the models section, which he says is loaded with original prototype models and rare commercial pieces. Noted prototypes include a Saturn 1B, a Nike-Zeus Missile, and a fabulous Gemini-B MOL model.

"Of course, the U.S. space program is where the strength lies," he continues. "The Buzz Alrin collection in particular should do well."

Many pieces are flown artifacts and mementos astronauts included in their historic flights, with memorabilia from Apollo 11 being the most popular.

Other material--such as charts, manuals and reports--played important roles before, during and after the astronaut flights, according to Orenstein.

"Many of these reports contain handwritten notes and comments the astronauts used on board or in preparation for their flights," he says. "(The reports) are fascinating in themselves, but a note scribbled down by Neil Armmstrong or Gus Grissom along the margins of a chart or flight summary provides perspective and meaning that few in public circles will ever know. They are truly historic documents in

that sense."

Fully illustrated auction catalogues containing descriptions of each lot are currently available for $20 ($40 outside the U.S.) from Superior Stamp & Coin, An A-Mark Company, 9478 W. Olympic Blvd., Beverly Hills, CA 90212. Telephone: (310) 203-9855. Toll Free: (800) 421-0754.

For questions or for information on consigning material to a future Space Memorabilia auction, contact Michael Orenstein or Alan Lipkin.

Fax: (310) 203-8037
E-mail: mark@superiorsc.com
Internet: http://www.superiorsc.com/superior/

1764. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DxJoGz.42L@cix.compulink.co.uk>
Source record: 21537

mine is 10watt too...

I wish there was a HF module for the 736 like there was for a 726.

Shame really...

Steve

1765. Re: CORRECTION!: Contacts via RS-10

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <515frf$llj@sjx-ixn5.ix.netcom.com>
Source record: 21538

Bruce:

One other thing. You shouldn't need that second HF receiver to hear your downlink. That's what makes me think you are either listening too far away from the actual frequency, or perhaps your transmitter and antenna just isn't cutting it. You may want to have a friend (on earth of course! - if you have non-terrestial friends, I WANT to meet you) listen for your uplink signal and see if you are really getting any RF out.
Good luck. 73's de Bernie, KF0QS
hamdan@ix.netcom.com

1766. Ham-Space Digest V96 #280

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609110332.AA103382725@relay2.geis.com>
Source record: 21539

GE Item Number: 2742657
Original Msg Id: 379882
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #280
System: MARLBORO#
Date: Wed 11-Sep-96 3:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1767. Re: Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <515fkc$llj@sjx-ixn5.ix.netcom.com>
Source record: 21540

Dear Bruce: It sounds like people could be hearing you and you are not hearing them! Can you hear yourself on the downlink? If you can, contacts should not be a problem. It seems that you are listening somewhere far away from wherever your downlink signal would be. Before you try and contact someone, just try and find yourself on the downlink. Then, when you call CQ, listen right around your downlink for a response. Or, call someone calling CQ by sending a series of dots and synchronizing your signal with their's on the downlink.
As for doppler compensation, I don't think it's that difficult on RS-10. A good way to guess where your signal would show up on the downlink is to take the transmit frequency (e.g., 145.870 MHZ) and subtract 116.5 to arrive at your receive frequency (i.e., 29.370 MHZ) (see the "Satellite Experimenter's Handbook" for more info on this method of figuring your downlink frequency). When I first got on RS-10, I made myself a little chart so that I wouldn't have to figure it out during a pass. Then it finally occurred to me that the last two digits of the uplink and downlink frequencies always generally match (OK, so I'm not the quickest study around!). Anyway, you'll probably have to tune a few KHZ either way, but using this formula is a good way to get close.
Let me know if you need more info. And I'm sure others will have good suggestions for you.
Take care and 73's de Bernie, KF0QS
hamdan@ix.netcom.com

1768. Quadrifilar Helix Antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: evnool@nmaa.ORG
Message-ID: <2.2.32.19960911110025.002e9800@luckier.nmaa.org>
Source record: 21541

I have been experimenting with two construction techniques for the quadrifilar helix antenna. The most recent construction article was featured in the August 1996 edition of QST magazine. An earlier construction suggestion was found in the March/April 1994 issue of AMSAT Journal. So far, I have built versions of each construction and have arrived at what may be considered less than optimal results. With both construction techniques, I get a resulting antenna that has better SWR below or above the design frequency. Has anyone successfully constructed one of these antennas and can point out the construction details to pay particular attention to or any flaws found in the articles? Thanks.

Ed Nowicki

1769. Re: Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Message-ID: <516m3q$pua@niven.ksc.nasa.gov>
Source record: 21542

Bruce:
Just a couple of suggestions, as I am certainly no expert ;^).
1.Try transmitting a series of CW dits to find your signal, and tune
your 10 meter recever till you find it.Then switch to SSB when you find
it. Make sure you are in USB mode for voice QSO 's on RS-10.
2.Use headphones to listen for your downlink...makes all the
difference in the world.
3.Only 7 watts into a J-Pole sounds a little weak to me (I run 25
watts into a homebrew 5/8 Groundplane for RS-10). See if you can increase
your EIRP to the bird, either via more power or by using a directional
antenna like a good quad or yagi.
4. Try to make your first QSO's when the bird is making a fairly high
pass, say above 40 degrees elevation or so.(same effect as number 3).

Good Luck !

73 de Roger, KD4ITU
(Two confirmed RS-10 Contacts
and counting...)

1770. Ham-Space Digest V96 #281

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609111832.AA073096759@relay2.geis.com>
Source record: 21543

GE Item Number: 8027482
Original Msg Id: 380197
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #281
System: MARLBORO#
Date: Wed 11-Sep-96 18:36

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1771. Re: Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: Gary Watts <gwatts@qni.com>
Message-ID: <Pine.GSO.3.95.960911144904.17648E-100000@qni.com>
Source record: 21544

Bruce,

Let me say IMHO
You really need another HF 10 Meter receiver.
You NEED to listen to your downlink signal!
How else would you know to change for doppler shifts/changes?
The standard practice is
Select a REC frequency
Tune your transmitter until you hear yourself on the downlink side
Change only your uplink frequency to stay on your selected downlink
frequency.
And have fun
You will notice that you will being constantly changing your transmit
frequency even while you are talking just to stay on that downlink
frequency.

Hummmm seven watts into a j-pole that might be a little on the weak side

I did work RS-10 from a hotel room with 25 watts while I was working in
the Denver CO area
using a kenwood 751 all mode 2M mobile
5/8 wave mag mount antenna stuck to the railing
a Icom 735 hf receiver with about 50' longwire thrown over the hotel roof
:-)

Good luck on your future attempts !

Gary Watts de N0OXV
KAnsas City Mo
81 GL1100I

On 10 Sep 1996, Bruce Sawtelle wrote:

> I've recently gotten my TV-502 tranverter working on the TS-850 and have
> tried to make some contacts thru RS-10. I have not been successful yet and
> wanted to make sure I'm "in-sync" with the satellite and effects of
> doppler. I'm using "PC-Track" that shows ~ 3Khz doppler effect when the
> RS-10 satellite is coming over the horizon. Therefore, I've been listening
> ~ 3KHz higher on 10M. For example, I'll transmit on 145.865 and listen on
> 29.368 +/-. I start closing the gap as the satellite goes overhead and open
> it up again as it goes towards the horizon. Am I missing something? Haven't
> gotten a contact yet. BTW, I'm running ~ 7 W to a J-pole (I know, not the
> perfect satellite antenna, but I thought RS-10 was pretty sensitive). I
> don't have a 2nd HF radio to hook up to listen to my downlink at this time.
> Maybe I'll ahve to resort to that path. Are my assumptions above correct?
>

> THanks
>
> Bruce W3NJ
>
>

1772. Re: Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <5178li$k6k@news.jf.intel.com>
Source record: 21545

In article <515fkc$llj@sjx-ixn5.ix.netcom.com>,
Bernard A. Poskus and Cheryl A. Blehm-Poskus <hamdan@ix.netcom.com> wrote:
>Dear Bruce: It sounds like people could be hearing you and you are not
>hearing them! Can you hear yourself on the downlink? If you can,
>contacts should not be a problem. It seems that you are listening
>somewhere far away from wherever your downlink signal would be. Before
>you try and contact someone, just try and find yourself on the downlink.

The problem, as I read the posting, is that he is not listening at all
since he has to use the HF radio for the uplink transverter. Instead,
he was attempting to calculate the doppler shift according to his computer
program. There are probably too many variables to be able to do this
accurately, such as computer clock, updated Kepler elements, program
accuracy (varies wildly in my experience), equipment dial calibration,
antenna pointing, etc.

RS-10 is probably the easiest bird to work but you have to hear yourself.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1773. Liste de discussion

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: etiennj@mail.interpac.be
Message-ID: <517gsj$s51@pluto.interpac.be>
Source record: 21546

Bonjour a tous !

La redaction de Space News InNet, dans le souci de conserver sa reputation de magazine novateur, est particulierement fiere aujourd'hui de vous annoncer la naissance de Sat-Forum-Espace, premiere liste de discussion francophone entierement consacree a l'Espace, l'Astronomie, l'Astronautique, les satellites ainsi que les sciences connexes.

Vous pourrez desormais utiliser ce service pour adresser vos questions ou faire part de vos impressions, de votre experience, a l'ensemble des membres de la liste, et recevoir les messages emis par tous les abonnes dans votre propre boite electronique sur l'Internet.

COMMENT FAIRE ?

Tout d'abord, vous inscrire sur la liste. Si vous ne l'avez pas ete d'office, c'est tout simplement en pensant a tous ceux qui, pour des raisons personnelles, desireraient recevoir Space News InNet et Forum-Espace a des adresses differentes.

Pour vous inscrire, transmettez un mail a :

majordomo@tags1.dn.net (*)

en laissant le "subject" vide et comportant dans le corps du texte: subscribe sat-forum-espace suivi de votre adresse Internet.

Vous recevrez apres quelques minutes un message de confirmation et ferez partie desormais du groupe de discussion de Space News InNet. A partir de ce moment, vous recevrez automatiquement les messages emanant des abonnes a la liste.

Pour envoyer un message, vous devez l'adresser a :

sat-forum-espace@tags1.dn.net (*)

(*) Le caractere suivant 'tags' est un 1 (un) et non l (L).

FONCTIONNEMENT

La liste de discussion est moderee. Tous les messages y sont admis, du moment qu'ils soient en rapport avec le sujet. Ne sont pas autorises les messages injurieux, grossiers, diffamatoires, ou dont le texte se revele contraire a la morale ou aux bonnes moeurs. Les attaques personnelles ne sont pas non plus admises.

Chacun peut adresser a la liste autant de messages qu'il le desire. Toutes les questions sont les bienvenues, et si vous connaissez la

reponse a l'une d'entre elles, repondez ! Je ne doute pas qu'avec un sujet aussi vaste, elles seront particulierement nombreuses !

QUI PEUT S'ABONNER ?

Tous ! L'abonnement a Space News InNet n'est pas obligatoire pour participer au forum, mais il est conseille, puisqu'il s'articule autour du periodique et permet a tous de le commenter.

Bienvenue a tous sur Sat-Forum-Espace, n'hesitez surtout pas a vous annoncer sur la liste des que vous y serez inscrit, et pourquoi pas a vous presenter en decrivant vos centres d'interet en astronomie !

Jean Etienne
etiennj@interpac.be

1774. Ham-Space Digest V96 #282

Newsgroup: rec.radio.amateur.space
Date: 1996-09-11 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609112334.AA167074867@relay2.geis.com>
Source record: 21547

GE Item Number: 964346
Original Msg Id: 380355
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #282
System: MARLBORO#
Date: Wed 11-Sep-96 23:35

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1775. Re: JAS-2 Digitalker?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: w.bell@psyc.canterbury.ac.nz
Message-ID: <517ump$6n6@cantuc.canterbury.ac.nz>
Source record: 21548

In article
<510ool$2vr@bbcnews.rd.bbc.co.uk>,
boyer@rd.bbc.co.uk says...
>
>Has anyone haerd the jas-2 digitalker? It's
supposed to be on 435.91MHz
>and be receiveable witha handie.
>J.
Hello J.
Well the frequency is OK. I believe it was
heard over Iowa, USA at around 1629 day of
launch. The Japanese Antarctic Research
station are pushing up the Apogee of JAS-2
as high as it will go. After launch date the
control station suggested one month to
run-up the satellite system,and do testing.
73, best Wishes from Winton, ZL3AO
Christchurch,N.Z.

1776. Re: tsr-80 for packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <518u6f$do4@service3.uky.edu>
Source record: 21549
Cross-posted to: rec.radio.amateur.space,rec.ha.radio.packet

In article <50d15v$4n1@news2.cais.com>, n3tuk@idsonline.com (Luis Velis) says:
>
>Hi
>i just picked up at a flea market a used tsr-80 computer without manual
>and i just wondering if I can use it for packet..?
>Any info will be welcome!!
>
>luis/n3tuk
>
It has been years since I owned or used a TRS-80. There are several
different models. If you have the Model I, the earlist units, which
can be recognized by the unified keyboard/cpu units(on the left rear
(while looking at the rear)there are 3 din connectors(power/
monitor/tape)). If you have the model I it does not come with an
RS232 I/O port. (they came out with an "expansion" interface that
added 48K of ram, RS232 I/O, and a disk controller(up to 4 180K 5 1/4"
[though there was a disk doubler by percom]. Next you could have a
TRS-80 Model III (I was never "lucky" enough to own a model 2).
It is a larger unit with a keyboard and monitor in one case.
These typicaly had a RS232 I/O port. Then there was a Model 4 (and a
model 4P{a "portable by virtue of the attached handle}-these where
perhaps the "best" 2 5 1/4" 360k disks. Then there was the little TRS80
model 100(and a bunch of clones by Kyrotronics, NEC etc). The 100 is a
nice unit because it came with a built in communication program.
My first packet QSO was with a TRS-80 (16K ram with the level 2 basic)
and a perf-board add on and a piece of software for "Ridgecraft(or at
least that is what I think the name was). The perf-board had a cmos
pll (4049?) for rcv and a cmos hex inverter for the tx. It worked
fairly well, I do not recall it ever locking up. I only used it for a
about a month. Then I got a TRS80 Model 100 and a GLB PK1 (this was an
early tnc that did all the "work" with software..the PK1 used a Z80A
@ 3.58 and could support up to 16K of cmos ram.)
The whole point of this is that any of the TRS80 family can do packet
as long as your unit has a com port and you can write/beg or steal
a com program(and you have a TNC). If you have a model I or III and
canfind the Rigdgecraft software, you would not even need a terminal
program or com port.
I hope that this gets you pointed in the right direction. Good luck.

1777. WinOrbit tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: "Brian E. Oakley" <boakley@imagin.net>
Message-ID: <32384145.1859@imagin.net>
Source record: 21550

I just downloaded winorbit and am having problems with the "next predicted pass" projections. They dont seem to be jiving with some online prediction programs Ive used. The tracking seems to be ok tho. Anyone using this program? Is it a good program? Im kinda new and trying to learn, would like to start working the hf birds. Thanks. WB5KXW

1778. ground tracking station

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: rm111@usc.edu
Message-ID: <rm111-1209961451540001@thasian.usc.edu>
Source record: 21551

Would like to see if anyone out there in the field could give us some info
on setting up a ground tracking station that will be used in a small
satellite project. We would like to be able to receive signals from a
satellite that
will be placed in a LEO. This project is just starting out, so any info.
would be greatly appreciated.

Stephen Vargo
email: vargo@spock.usc.edu

1779. Western CT Hamfest this Sunday, Sep 15

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <3238C46A.4682@ix.netcom.com>
Source record: 21552
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.space,rec.radio.amateur.digital.misc

THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Just 14 miles from the NY/CT State line!

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim

1780. Ham-Space Digest V96 #283

Newsgroup: rec.radio.amateur.space
Date: 1996-09-12 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609121734.AA253909681@relay2.geis.com>
Source record: 21553

GE Item Number: 4280865
Original Msg Id: 380772
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #283
System: MARLBORO#
Date: Thu 12-Sep-96 17:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1781. Transmitters Circuit Wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-09-13 00:00:00 UTC
From: Andy <sonic@legend.co.uk>
Message-ID: <32393B0A.3B2B@legend.co.uk>
Source record: 21554

Hello Ham radio user

I am not a ham radio opoator, but cannot find on the net the information I require. I am a CB user who is having problems with another Adult CB user. Myself and another 4 people regularly take to each over on the CB, the other person, searches for what channel we are on and starts to sware stuff like that, the thing is one of the CB`ers have children.

Is there a circuit I can build which will make it so all the is getting a constant carrier, n an area of 2 house, from 27-28mhz so stopping hime for finding out what channel we are on. Once the battry of the circuit dies down we will retreave the circuit then, hopefully this will teach him a lesson
if anyone does have a circuit, can you draw the circut using an art packet age EMAIL it to :- sonci@legend.co.uk

Thanks for reading my message, hope anyone can help

Andy

1782. Ham-Space Digest V96 #284

Newsgroup: rec.radio.amateur.space
Date: 1996-09-13 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609131634.AA180472440@relay2.geis.com>
Source record: 21555

GE Item Number: 5655812
Original Msg Id: 381640
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #284
System: MARLBORO#
Date: Fri 13-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1783. Re: WinOrbit tracking program

Newsgroup: rec.radio.amateur.space
Date: 1996-09-13 00:00:00 UTC
From: Carl Gregory <cgregory@uiuc.edu>
Message-ID: <3239C539.46E8@uiuc.edu>
Source record: 21556

>> Brian E. Oakley wrote:
>> >
>> > I just downloaded winorbit and am having problems with the "next
>> > predicted pass" projections. They dont seem to be jiving with some
>> > online prediction programs Ive used. The tracking seems to be ok tho.
>> > Anyone using this program? Is it a good program? Im kinda new and trying
>> > to learn, would like to start working the hf birds. Thanks. WB5KXW
>>
>> Brian -
>>
>> I'd like to help you out, but I need a bit more detail:
>> * which version of WinOrbit
>> * which satellite
>> * are you talking about the real-time AOS display at the bottom of
>> the map window, or the report produced by "show next pass" ?
>
>Hi Carl,
> The version is 2.4. Maybe I need to get a newer version. The
>times I were talking about where those in the "show next pass". The
>version I have only shows as, el, lat, lon, range, doppler, and
>altitude. I see nothing about aos times there. There is the "block" that
>has a lot of options on it, such as map selection etc, but its at the
>top of the page unless I minimize it. The utc thing sounds very
>possible. But the actual track it shows of the birds looks right as far
>as I can tell. Do you know where I might find the latest and greatest
>version? Any help is appreciated. 73 de WB5KXW

That's the bug. In that version, the next pass was calculated from the computer clock time. If you live in the USA, that's about 4-6 hours BEFORE UTC, so what it shows you is often the previous pass (or even 2-3 passes previous) . You can set your computer to UTC, or download a current version (2.9) from :

http://www.sat-net.com/winorbit
http://www.amsat.org/amsat/ftpsoft.html#win
or
ftp://oak.oakland.edu/pub3/hamradio/dos/satellite/winorb29.zip
ftp://ftp.seds.org/pub/software/pc/sat/winorb29.zip

The above sites have lots of other good software and info, too.

73!
Carl (K8CG)

1784. ****QUICK AND EASY CASH****

Newsgroup: rec.radio.amateur.space
Date: 1996-09-13 00:00:00 UTC
From: elrata@dtdsi.com
Message-ID: <5cd_9609131456@dtdsi.com>
Source record: 21557

* Copied from: ALT.ROCK-N-ROLL.METAL
Subject: ****QUICK AND EASY CASH****

I was scanning thru a NEWSGROUP and saw an article stating to GET CASH FAST!! I thought..."Here on the Internet?? Well, I'll just have to see what schemes could possibly be on the internet." The article described a way to MAIL A ONE DOLLAR BILL TO ONLY FIVE PEOPLE AND MAKE $50,000 IN CASH WITHIN 4 WEEKS! Well, the more I thought about it, the more I became very curious. Why? Because of the way it worked AND BECAUSE IT WOULD ONLY COST ME FIVE DOLLARS (AND FIVE STAMPS), THAT'S ALL I EVER PAY....EVER!!

Ok, so the $50,000 in cash was maybe an tough amount to reach, but it was possible. I knew that I could at least get a return of $1,000 or so. So I did it!! As per the instructions in the article, I mailed out ('snail mail' for you e-mail fanatics) a single dollar bill to each of the five people on the list that was contained in the article. I included a small note, with the dollar, that stated "Please Add Me To Your List." I then removed the first position name of the five names listed and moved everyone up one position, and I put my name in position five of the list. This is how the money starts rolling in! I then took this revised article now with my name on the list and REPOSTED IT ON AS MANY NEWSGROUPS AND LOCAL BULLETIN BOARD MESSAGE AREAS THAT I KNEW. I then waited to watch the money come in...prepared to maybe receive about $1000 to $1500 in cash or so.... But what a welcome surprise when those envelopes kept coming in!!! I knew what they were as soon as I saw the return addresses from people all over the world-Most from the U.S., but some from Canada, even some from Australia! I tell you, THAT WAS EXCITING!! So how much did I get in total return? $1000? $5000? Not even!!! I received a total of $23,343!!! I couldn't believe it!!

I now have a brand new black Acura Integra to speak for, due to this!! Now after almost 8 months, I am ready to do it again!!! So maybe it was possible to get $50,000 in cash, I don't know, but IT COMPLETELY DEPENDS ON YOU, THE INDIVIDUAL! You must follow through and repost this article everywhere you can think of! The more postings you achieve will determine how much cash will arrive in your very own mailbox!! It's just too easy to pass up!!!

Let's review the reasons why you should do this: The only cost factors are for the five stamps, the 5 envelopes and the 5 one dollar bills that you send out to the listed names by snail mail (US Postal Service Mail). Then just simply repost the article (WITH YOUR NAME ADDED) to all the newsgroups you can. Then sit back

and, (ironically), enjoy walking (you can run if you like! :o) down your driveway to your mailbox and scoop up your rewards!! We all have five dollars to put into such an easy effortless investment with SPECTACULAR REALISTIC RETURNS OF $15,000 to $25,000 in about 3-5 weeks! So HOLD OFF ON THOSE LOTTERY NUMBERS FOR TODAY,EAT AT HOME TONIGHT INSTEAD OF TAKEOUT FROM McDONALDS AND INVEST FIVE DOLLARS IN THIS AMAZING MONEY MAKING SYSTEM NOW!!! YOU CAN'T LOSE!!

So how do you do it exactly, you ask? I have carefully provided the mostdetailed, yet straightforward instructions on how to easily get this underway and get your cash on its way. SO, ARE YOU READY TO MAKE SOME CASH!!!?? HERE WE GO!!!

OK, Read this carefully. Get a printout of this information, if you like, so you can easily refer to it as often as needed.

STEP 1. Write your name and address on 5 separate pieces of paper with the words "PLEASE ADD ME TO YOUR MAILING LIST". For a neat little twist, also write what slot their name was in: "You were in slot 3", Just to add a little fun! This is all about having fun and making money at the same time! Fold a $1 note or money order or bank draft in each of the pieces of paper and mail them to the following five addresses:

```
**********************************************************
* 1. Michael W. Graham
* 7342 146th St. SW Apt. C
* Tacoma, WA 98439
*
* 2. Dave Alexus
* 918 Sunridge Dr.
* Sarasota, FL 34234
*
* 3. Greg Farries
* 119 Mount Crandell Crescent West
* Lethbridge, Alberta
* Canada T1K 6L7
*
* 4. John Wise
* 2130 Cameron Cir.
* Birmingham, AL 35242-6411
*
* 5. Alejandro Pelaez
* Rafaela 5171 Dto. B
* (1407) - Capital Federal
* Argentina
**********************************************************************
```

STEP 2. Now remove the 1st name on the list, move the other 4 names up (5 becomes 4, 4 becomes 3 etc) and put your name and address as number 5 on the list. You can do this by re-typing this article or simply editing and re-posting it in this or another newsgroup.

STEP 3. Post your amended article to at least 200 new groups (there are 17 000 of them).

You are now in the Mail Order Investment Business and you will start receiving $1 returns by mail within a week or two. The more newsgroups you post to, the bigger your return will be.

HOW THE SYSTEM WORKS

Of every 200 postings I made, I received an average of 5 replies, YES - ONLY 5, each with a $1 bill enclosed. You make $5 for every 200 postings WITH YOUR NAME AT NUMBER 5.

Each person who sent you $1, now also makes let's say, only 200 additional postings WITH YOUR NAME AT NUMBER 4, i.e. 1000 postings. On average therefore, 25 people will send you $1 with your name at number 4. You make $25.

Your 25 new agents make 200 posting each WITH YOUR NAME AT NUMBER 3 or 5 000 postings - average return 125 at $1 each is $125. They make 200 postings each WITH YOUR NAME AT NUMBER 2 = 25 000 postings = 625 returns at $1 each = $625.

Finally, 625 people make 200 postings each WITH YOUR NAME AT NUMBER 1 and you get a return of $3125 (for every 200 postings) before you name drops off the list. Total income in one cycle = $3905. AND THAT'S IF EVERYONE DOWN THE LINE ONLY MAKES 200 POSTINGS!

From time to time, when your name is no longer on the list, you take the latest posting that is appearing in the newsgroups, SEND OUT ANOTHER $5 TO THE NAMES THAT ARE ON THE LIST, PUT YOUR NAME IN AT NUMBER 5 AND START POSTING AGAIN. Remember, 200 postings is only a guideline. The more you post, the greater the return.

Let's review the reasons why you should do this

THE ONLY COST FACTORS ARE

5 STAMPS
5 ENVELOPES
5 $1 BILLS

Anyone can afford five dollars to put into such an effortless investment with SPECTACULAR RETURNS.

Some people have said to me "What happens if the scheme is 'played out' and no one sends me any money"? Big deal! So you lose $5 - but what are the chances of that happening?

Do you realise how many Internet Users there are? Do you realise how many times this scheme can be utilised over and over again - with COMPLETELY NEW people participating?

Remember, read the instructions carefully and play FAIRLY...that's the only way this will work. Get a printout so you can refer back to this article easily.

Try to keep a list of everyone that sends you money and always keep
an eye on the newsgroup postings to make sure everyone is playing
fairly. You know where your name should be.

REMEMBER - HONESTY IS THE BEST POLICY.

ENJOY!

--
|Fidonet: Alejandro Pelaez 4:900/309.9
|Internet: elrata@dtdsi.com
|Don Tequendama, Capital Federal, ARGENTINA (+54-1-821-5855) las 24 horas.

1785. Re: Contacts via RS-10...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: jimeagle@execpc.com
Message-ID: <51d064$tf@newsops.execpc.com>
Source record: 21558

In article <516m3q$pua@niven.ksc.nasa.gov>, "Roger E. Koss" <kossr@edl1.ksc.nasa.gov> says:
>
>Bruce:
> Just a couple of suggestions, as I am certainly no expert ;^).
> 1.Try transmitting a series of CW dits to find your signal, and tune
>your 10 meter recever till you find it.Then switch to SSB when you find
>it. Make sure you are in USB mode for voice QSO 's on RS-10.

This is a bit hard to do with a 502 transverter (not duplex capable)

> 2.Use headphones to listen for your downlink...makes all the
>difference in the world.

If he was able to duplex, this is an excellent suggestion to reduce
the echo, background noise, and feedback potential when listening while
talking.

> 3.Only 7 watts into a J-Pole sounds a little weak to me (I run 25
>watts into a homebrew 5/8 Groundplane for RS-10). See if you can increase
>your EIRP to the bird, either via more power or by using a directional
>antenna like a good quad or yagi.

A ground plane has more radiation at higher elevations than a J-pole.
The point of a J-pole is to keep the signal on the horizon rather than
at higher radiation angles.

> 4. Try to make your first QSO's when the bird is making a fairly high
>pass, say above 40 degrees elevation or so.(same effect as number 3).
>Good Luck ! 73 de Roger, KD4ITU

Sneak a look in the satellite handbook at your local ham store to get some
ideas concerning antennas which work with Low Earth Orbit (LEO) "birds".
Heck, if you get the bug, go buy one!!

Jim WB6JNN/9, Wisconsin

1786. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: jimeagle@execpc.com
Message-ID: <51cvor$tf@newsops.execpc.com>
Source record: 21559

In article <414.281.39@anjo.com>, amcleod@anjo.com (Angus John Mcleod) says:
>
> RE: Re: Indiana repeater/ATV/Packet APRS Balloon Launch
> BY: kb9khm@expert.cc.purdue.edu to ALL on Sun Sep 08 1996 13:50:16
>
> > From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
> >
> > > Too bad you guys are illegal....144.3 cannot be used for a rptr input...an
> > > sure the guys on 52.525 OUT of your area would have liked to have known
> > > beforehand about it....(I may hear it down here in TX if conditions
> > permit...)
> >
> > 144.5 may be the lowest repeater input frequency according to a band
> > plan, but as long as they are not causing harmful interference, there
> > is no LEAGAL requirement why they can't use 144.300 as a repeater input.
> >
> > Mark
> > <KB9KHM>
>
>That attitude exemplifies all that is wrong with Amateur Radio.
>
>73, de Gus 8P6SM
>Barbados - The easternmost isle

Which attitude? Pointing out use of an inappropriate frequency use,
or using an inappropriate frequency without consideratin for other
users of the band?

Jim WB6JNN/9, Wisconsin, USA

1787. Re: How does THIS sound for EME?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: "John B. Stephensen" <john.stephensen@isocor.com>
Message-ID: <323A2586.762B@isocor.com>
Source record: 21560

c002@Lehigh.EDU wrote:
>
> Ok, here is my latest attempt to HEAR my echo at all
> 9' solid dish with a 2ele Dipole 440mhz antenna (attached to the TV feed;))
> 100ft of 9913 at 50watts FM
> yes..FM
> would this setup work for a REAL eme radio like a multi-mode one?
> if so, should i at least hear my echo break squelch at all with FM?
> ooooooor i'm I out of luck, and should forget it untill i get a multimode rig?

For EME you'll need to operate CW with as as big an antenna and as much
power as you can get. A 9 foot dish is too small at 440 MHz. It provides
only 18dBi of gain -- about as much as a long yagi. I haven't tried EME
yet, only satellites. However, I did the link budget calculations to see
what was possible with a TVRO dish and minimum configurations to hear
your own echos are:

432 MHZ: 1KW and 4 long (20 foot boom) yagis
1296 MHZ: 250W and a 12 foot dish
10 GHz: 10W and a 12 foot dish or 50W and an 8 foot dish

In all cases you need a receive with a very low noise preamp at the
antenna and effective radiated powers of 200KW to 1GW.

There are some people working on low power EME with lots of digital
signal processing. See AF9Y's home page at http://www.webcom.com/af9y/.

73,

John, KD6OZH

1788. Western Connecticut Hamfest this Sunday!

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <323A24DC.60C7@ix.netcom.com>
Source record: 21561
Cross-posted to: rec.radio.amateur.misc,rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.digital.misc,rec.radio.amateur.space

```
THE WESTERN CONNECTICUT HAMFEST
Sponsored by the Candlewood Amateur Radio Association

Just 14 miles from the NY/CT State line!

Sunday, Sept. 15, 1996 0900-1400
Edmond Town Hall Route 6, Newtown, CT
Tables inside Tailgating outside
ARRL Sanctioned Handicapped Access
Door Prizes Ample Parking
Gourmet Fare Rain or shine

Talk-in 147.12/.72 PL 141.3

General admission $4.00 at the door (what a deal!)

Tailgating $6.00, inside table reservations $10.00 each, (both
include 1 admission), mail to:
Candlewood Amateur Radio Association, PO BOX 3441, Danbury CT 06813

For more info, phone (203) 790 7041 or (203) 438 6782.

Hope to see you all there.
73 de KD1YV
Jim
```

1789. Mir & packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: doslover@juno.COM
Message-ID: <19960914.072636.6991.0.doslover@juno.com>
Source record: 21562

Is Mir currently running packet on their 2 m frequency? (145.55)?
It seems after a few weeks of hearing nothing, I am starting to hear
packet signals when the bird is passing
over. Does anyone know?

Jason Baack N1RWY
FN54kd

1790. Re: Mir & packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: ACE <aceflock@erinet.com>
Message-ID: <323AB9CE.3304@erinet.com>
Source record: 21563

Mir is presently running packet. The last couple of days I have heard Shannon and the Russian cosmonauts in voice contact with Houston. Sometimes they will work a few amateur stations once they start losing Houston.

After two passes they have been placing the packet station on the frequency.

I attemped to make contact on voice, but wasn't able to. I did manage to get connected to the packet station, but wasn't able to list or leave a message. I'll keep trying though.

Ace, N8QNP

1791. Shuttle Air/Ground Retransmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: kg5u@hal-pc.org
Message-ID: <51eign$970@news.hal-pc.org>
Source record: 21564

At this risk of offending because this may have been posted before--I have not found anything to indicate such--I would like to ask if anyone has compiled a list of locations and frequencies on which the shuttle air/ground is being retransmitted in the U.S. and worldwide.

If there is such an animal, please send me email with the address or URL.

If there is not, I will consider creating one from information provided (city, state, country, frequency, callsign, coverage area). I will post it here and post it on the Johnson Space Center Home Page

http://www.phoenix.net/~mbordel/jscarc/shuttle/

or on my home page

http://www.hal-pc.org/~kg5u

73,

Dale L. Martin
Houston, TX
kg5u@hal-pc.org
my homepage: http://www.hal-pc.org/~kg5u

1792. Re: Shuttle Air/Ground Retransmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: kg5u@hal-pc.org
Message-ID: <51eijd$970@news.hal-pc.org>
Source record: 21565

kg5u@hal-pc.org (Dale L. Martin) wrote:

>If there is not, I will consider creating one from information
>provided (city, state, country, frequency, callsign, coverage area).
>I will post it here and post it on the Johnson Space Center Home Page

Make that "Johnson Space Center Amateur Radio Club Home Page"

>http://www.phoenix.net/~mbordel/jscarc/shuttle/

>or on my home page

>http://www.hal-pc.org/~kg5u

>73,

>Dale L. Martin
>Houston, TX
>kg5u@hal-pc.org
>my homepage: http://www.hal-pc.org/~kg5u

Dale L. Martin
Houston, TX
kg5u@hal-pc.org
my homepage: http://www.hal-pc.org/~kg5u

1793. Wanted: DSP-12's

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: "Richard M. Hambly" <rick@cnssys.com>
Message-ID: <323AD29A.5268@cnssys.com>
Source record: 21566

Wanted: DSP-12's

I need some DSP-12's. Let me know bu e-mail if you have one or more you want to sell. Any condition including dead units are of interest.

Rick Hambly
WB2TNL
(410) 987-7835
rick@cnssys.com

1794. Re: Mir & packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <51fdj0$mrm@news.mhv.net>
Source record: 21567

In article <19960914.072636.6991.0.doslover@juno.com>, doslover@juno.COM (Jason K Baack) wrote:
>Is Mir currently running packet on their 2 m frequency? (145.55)?
>It seems after a few weeks of hearing nothing, I am starting to hear
>packet signals when the bird is passing
>over. Does anyone know?
>
>Jason Baack N1RWY
>FN54kd

Mir was working voice and packet today. Lots of voice contacts. I heard packet too so tried a keyboard connect and made it. Apparently the tnc is working again.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1795. FO-29 Keps?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-14 00:00:00 UTC
From: John Harmon <jharmon@newwave.net>
Message-ID: <01bba229$4c488300$54ac63ce@johnharm>
Source record: 21568

Hello,
Does anyone have a set of keps for FO-29 that work?
Thanks de John - N4OKL
--
jharmon@newwave.net

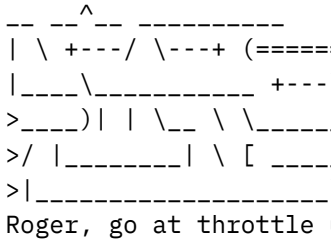
1796. Re: Shuttle Air/Ground Retransmissions

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <51g7pt$gkj@paperboy.ids.net>
Source record: 21470

In article <51eign$970@news.hal-pc.org> Dale L. Martin, kg5u@hal-pc.org
writes:
>At this risk of offending because this may have been posted before--I
>have not found anything to indicate such--I would like to ask if
>anyone has compiled a list of locations and frequencies on which the
>shuttle air/ground is being retransmitted in the U.S. and worldwide.
>
>If there is such an animal, please send me email with the address or URL.

Yup Dale - there is. Check out the AMSAT WWW page. I forget the exact
URL, but Bill Bard is the compiler of the list.

http://www.amsat.org/ will start you on your way.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

1797. Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: marty@trucom.com
Message-ID: <51hb1a$hj2@thepit.trucom.com>
Source record: 21471
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Hello, Folks:

I have just put up my new home page and invite all to drop in for a look. Included at the site are the following areas:

Ham Radio -- Mostly packet, mostly high speed

Pipe Smokers -- Very, very much still under construction

Astronomy -- Mostly Amateur Radio Astronomy (good 2nd interest for Hams!)

Mapping -- Mostly about elevation maps

Heartland Internet Services -- Lots of Web Presence information

The URL to use is:

http://www.trucom.com/ppages/marty

Thanks!

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Virtual Servers and More!
http://www.trucom.com/ppages/marty
****

1798. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.327.39@anjo.com>
Source record: 21472

RE: Re: Indiana repeater/ATV/Packet APRS Balloon Launch
BY: Jim Eagleson to ALL on Sat Sep 14 1996 00:54:51

> > > 144.5 may be the lowest repeater input frequency according to a band
> > > plan, but as long as they are not causing harmful interference, there
> > > is no LEAGAL requirement why they can't use 144.300 as a repeater input.
> > >
> > > Mark
> > > <KB9KHM>
> >
> >That attitude exemplifies all that is wrong with Amateur Radio.
> >
> >73, de Gus 8P6SM
> >Barbados - The easternmost isle
>
> Which attitude? Pointing out use of an inappropriate frequency use,
> or using an inappropriate frequency without consideratin for other
> users of the band?
>
> Jim WB6JNN/9, Wisconsin, USA

The latter.

For example: My amateur ticket allows me - and all 8P - to run AM,
SSB, etc, in fact all legal modes, on the 30-meter band. This would
obviously be an extremly inconsiderate thing to do, but it would be
perfectly legal.

Personally, I wouldn't be caught _dead_ running SSB on 30, because I
have some consideration for the other users of that band. But the
amateur radio fraternity is entirely too full of people who would
relish the opportunity to do just that, and the rest of the world be
damned!

QRO AMTOR on the QRP frequencies, Packet/QRM machines on full-auto in
the RTTY portion, DX nets on the SSTV freqs, SSB in the CW sub-bands,
FM on 20, local simplex chattering in the weak-signal satellite downlink
segments and any suggstion that this isn't advisable is met with talk
of "the right to free speech" and other such twaddle, plus threats of
legal action.

Well, in 25 years (some say 10 - they may be right) it'll all be over
anyhow, with the closure of the amateur bands. And I have a pretty
good idea who will be to blame, since I'd say 90% of this short-sighted
behaviour I have observed comes from a single quarter. But then, perhaps
I am getting a false picture, since geography obviously affects who I hear

most and may be distorting the picture.

73, de Gus 8P6SM
Barbados - The easternmost isle

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

1799. Re: Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: James Lee Tabor <ku5s@wtrt.net>
Message-ID: <323C77C8.6C29@wtrt.net>
Source record: 21473
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Marty Albert wrote:
>
> Hello, Folks:
>
> I have just put up my new home page and invite all to drop in for a
> look.

Howdy Folks,

Your welcome at mine also.

73,
Jim
--
CAPMan HF Propagation Prediction & System Analysis Software
http://ourworld.compuserve.com/homepages/KU5S

1800. Re: AEA DSP 232 at 9600

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: David Kelly <dkelly@hiwaay.net>
Message-ID: <323C62AC.2781E494@hiwaay.net>
Source record: 21474
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space,rec,radio.amateur.equipment

Charlie Rubenstein wrote:
>
> I have a new AEA DSP-232 TNC and cannot make it run on 9600 baud.
> The manual says to use Modem 16, but the TNC shows 9600 packet as
> Modem 18 when you do the DIR command. Doesn't matter, neither one
> works for 9600. On Modem 18 (like the TNC shows) tuning bar goes off
> and nothing happens. Anyone have theirs working?

Use modem 18, the one the TNC knows as 9600.

BTW: what firmware do you have? I've heard of a new version but
haven't heard from AEA. I have 1.00. And it will NOT work KISS
on the 9600 modem... its a known bug.

--
David Kelly N4HHE, dkelly@tomcat1.tbe.com (wk), dkelly@hiwaay.net (hm)
==========
The human mind ordinarily operates at only ten percent of its
capacity -- the rest is overhead for the operating system.

1801. AEA DSP 232 at 9600

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <323C56DD.12C4@iglou.com>
Source record: 21475
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space,rec,radio.amateur.equipment

I have a new AEA DSP-232 TNC and cannot make it run on 9600 baud.
The manual says to use Modem 16, but the TNC shows 9600 packet as
Modem 18 when you do the DIR command. Doesn't matter, neither one
works for 9600. On Modem 18 (like the TNC shows) tuning bar goes off
and nothing happens. Anyone have theirs working?

BTW, it all worked when I had my DSP2232 (shouldnt have sold it?)

CHarlie

1802. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-15 00:00:00 UTC
From: billn@PEAK.ORG
Message-ID: <51g4k2$lc0@bashir.peak.org>
Source record: 21569
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

Mike Snowden (Pmikes@fishnet.net) wrote:
: Hello Mary. I have a newer FT 736. On 6 it should put out 10 watts in the
: FM mode. If your not getting full pwr out, carefully check all your
: connections and the SWR. If your SWR is high, the rig automatically
: "folds" back the output pwr tp protect the rig. I found that by putting
: an SWR/PWR meter between the rig and my amp the rig would put out full
: pwr. Another trick is to trim a short piece to until you get a flat SWR
: and full pwr. Good luck..Oh Yaesu will deny any knowledge of a problem.

Trimming the coax will NOT affect the actual VSWR, although it may "fool"
the rig into thinking that it is operating into a matched load. This is
because the input impedance of the coax varies with coax length.

The reason it does not affect the VSWR is that the match between the
coax and the antenna are the only factors. You cannot do anything at
the input end of the coax that will affect the VSWR.

Bill

1803. FLSATCOM - UFO Satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: Paul Britton <paulbr@woodslane.com.au>
Message-ID: <01bba384$d8da0d00$7fa09384@132.147.160.127.robo.woodslane.com.au>
Source record: 21476
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.space,rec.radio.scanner

Does anyone have any information on what frequencies the new series of FLSATCOM satellites now called UFO (UHF Follow On) operate on. I am still get transmissions on the 261MHZ band but I would like an updated list of frequencies - band plans, or can anyone suggest some good reading material, all help appreciated

Paul
curator@ozemail.com.au

1804. Re: Mir & packet?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <51jgan$1gd@faatcrl.faa.gov>
Source record: 21477

Mir has been up on packet from September 6 to present. read my message number 23. When it first came up I had time to post, read my post, and change it on the same pass ! Yesterday I posted message number 103. two orbits later it was up to message 105. Yet there were 5 or 6 stations trying to connect at the same time. Also throw voice in on the same freq. I made 3 or 4 voice contacts too. Good luck on any contacts you try to make.

73 Jeff KB2WQM, kb2wqm@kb2hjc.#snj.nj.usa.noam

1805. Re: Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: "Will, KN6DV" <kn6dv@qnet.com>
Message-ID: <01bba3de$7fac8320$22229bcf@kn6dv.qnet.com>
Source record: 21478
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Well OK while you are at it you might as well take a look at mine also.

http//:www.av.qnet.com/~kn6dv
73 Will

James Lee Tabor <ku5s@wtrt.net> wrote in article
<323C77C8.6C29@wtrt.net>...
> Marty Albert wrote:
> >
> > Hello, Folks:
> >
> > I have just put up my new home page and invite all to drop in for a
> > look.
>
> Howdy Folks,
>
> Your welcome at mine also.
>
> 73,
> Jim
> --
> CAPMan HF Propagation Prediction & System Analysis Software
> http://ourworld.compuserve.com/homepages/KU5S
>

1806. Communication with Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: enw3737@acs.tamu.edu
Message-ID: <51juo7$jbm@news.tamu.edu>
Source record: 21479

Howdy,

I am a mechanical engineering student at Texas A&M University, and I need to know if there are any current satellite systems, or earth based systems currently set up to facillitate communication with the moon on a constant basis. I have already examined the TDRS system, as well as the Deep Space Network, and neither system, from the literature I read, was capable, or willing, to do it. This is for my senior design, which involves collecting solar energy on the moon, and transmitting it back to earth.

Please, if you have any info, either post it here, or e-mail me directly at

ENW3737@ACS.TAMU.EDU

Thank you very much,

Edward Williams

Mechanical Engineering
TEXAS A&M University

1807. Re: AEA DSP 232 at 9600

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: chrisl@SEDS.LPL.Arizona.EDU
Message-ID: <51k06c$evo@news.ccit.arizona.edu>
Source record: 21480
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space,rec,radio.amateur.equipment

David Kelly (dkelly@hiwaay.net) wrote:
: Charlie Rubenstein wrote:
: >
: > I have a new AEA DSP-232 TNC and cannot make it run on 9600 baud.
: > The manual says to use Modem 16, but the TNC shows 9600 packet as
: > Modem 18 when you do the DIR command. Doesn't matter, neither one
: > works for 9600. On Modem 18 (like the TNC shows) tuning bar goes off
: > and nothing happens. Anyone have theirs working?

: Use modem 18, the one the TNC knows as 9600.

Hi,
Can either of you make any comments as to which (the 232 or the 2232)
is "better" for satellite work? Money really isn't an issue, and I like the
capability of being able to do two channels on the latter.
Also, someone told me that I should be looking for "G3RUH" compatibility
so that I would be able to do a modification allowing the modem to do 56Kb/s
on 23cm. Is any familiar with this, and will these modems do this?

Thanks.
--

Christopher A. Lewicki KC7NYV 520.621.4662 Maintainer of SEDS.LPL.Arizona.EDU
Chair, Students for the Exploration and Development of Space (SEDS-USA)
"Space is like the new ocean, and we've been treating it like a lake." -JFK

1808. Re: Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: "Will, KN6DV" <kn6dv@qnet.com>
Message-ID: <01bba3df$2b7bf8c0$22229bcf@kn6dv.qnet.com>
Source record: 21481
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Will, KN6DV <kn6dv@qnet.com> wrote in article
<01bba3de$7fac8320$22229bcf@kn6dv.qnet.com>...
> Well OK while you are at it you might as well take a look at mine also.
>
> http://www.av.qnet.com/~kn6dv
> 73 Will
>
>
> James Lee Tabor <ku5s@wtrt.net> wrote in article
> <323C77C8.6C29@wtrt.net>...
> > Marty Albert wrote:
> > >
> > > Hello, Folks:
> > >
> > > I have just put up my new home page and invite all to drop in for a
> > > look.
> >
> > Howdy Folks,
> >
> > Your welcome at mine also.
> >
> > 73,
> > Jim
> > --
> > CAPMan HF Propagation Prediction & System Analysis Software
> > http://ourworld.compuserve.com/homepages/KU5S
> >
>

1809. Re: Communication with Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <51kacn$ofo@news.onramp.net>
Source record: 21482

>This is for my senior design, which involves
>collecting solar energy on the moon, and transmitting it back to earth.

Transmitting the power back to earth or Data back to earth ??

Is there any spot on the moon that doesm't have a 2 week night time ?

If you wanted a 50% duty cycle put the solar collector in the back
yard. :-)

What happended to the Aggie project about going to the SUN,
the landing was to be at night ??

73

Bob Class of 71

1810. Re: Communication with Moon

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: bass@cais.cais.com
Message-ID: <51kbou$kon@news2.cais.com>
Source record: 21483

Ed,

You don't really need satellite systems to talk to the
moon 24 hours a day; just a system of earth stations that
that track the moon, three would be a good minimum number.
There are issues related to noise when the moon is near
the horizon of Earth as well as other issues, but
the problem is somewhat trivial.

Your senior project is interesting, however I would
think, off hand, that it is easier to set up solar field
at various locations around the earth and collect
solar energy. In your system, the idea, (guessing) is
to efficiently collect solar energy on the moon and
transmit the energy to earth, saving the attenuation
loss due to atmospheric effects during solar collection.

However, my 'system engineering guess' is that transfering
the energy from the moon to the Earth is just as inefficient
and much more dangerous and ecologically controversial,
an issue that we engineers have to content with.

Have Fun!

Tim

Ed Williams (enw3737@acs.tamu.edu) enlightened us with:
: Howdy,

: I am a mechanical engineering student at Texas A&M University, and I need
: to know if there are any current satellite systems, or earth based systems
: currently set up to facillitate communication with the moon on a constant
: basis. I have already examined the TDRS system, as well as the Deep
: Space Network, and neither system, from the literature I read, was capable,
: or willing, to do it. This is for my senior design, which involves
: collecting solar energy on the moon, and transmitting it back to earth.

: Please, if you have any info, either post it here, or e-mail me
: directly at

: ENW3737@ACS.TAMU.EDU

: Thank you very much,

: ---

: Edward Williams

: Mechanical Engineering
: TEXAS A&M University
:

--
We're just two lost souls
swimming in a fish bowl,
year after year,

Running over the same old ground.
What have we found?
The same old fears.

Wish you were here.
-Roger Waters

1811. WinOrbit woes...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: "Brian E. Oakley" <boakley@imagin.net>
Message-ID: <323D97F7.58A1@imagin.net>
Source record: 21484

I must be a complete idiot. I just cannot seem to get winorbit configured correctly or something. Im just trying something simple first, just trying to track do-17 and listen for it on the downlink. For some reason the program isnt working like I would hope. I tried changing the keps (as best as I could determine from the latest 2 line kep file I downloaded) but it still isnt right. I dont understand how to actually load a new kep file into the program and get it to work. The documentation, to me, seems a bit lacking, or maybe Im just overlooking something. Is there anyone that would care to spend a few minutes a day for a bit via email and help me out? 73 de WB5KXW

1812. Ham-Space Digest V96 #286

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609162140.AA130150006@relay2.geis.com>
Source record: 21485

GE Item Number: 6540681
Original Msg Id: 382074
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #286
System: MARLBORO#
Date: Mon 16-Sep-96 21:02

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1813. Re: Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: James Lee Tabor <ku5s@wtrt.net>
Message-ID: <323DA2D8.2E37@wtrt.net>
Source record: 21486
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Howdy,

and a fine start you have. You need lots more antennas on that
car?

73,
Jim

Will, KN6DV wrote:
>
> Will, KN6DV <kn6dv@qnet.com> wrote in article
> <01bba3de$7fac8320$22229bcf@kn6dv.qnet.com>...
> > Well OK while you are at it you might as well take a look at mine also.
> >
> > http://www.av.qnet.com/~kn6dv
> > 73 Will
> >
> >
> > James Lee Tabor <ku5s@wtrt.net> wrote in article
> > <323C77C8.6C29@wtrt.net>...
> > > Marty Albert wrote:
> > > >
> > > > Hello, Folks:
> > > >
> > > > I have just put up my new home page and invite all to drop in for a
> > > > look.
> > >
> > > Howdy Folks,
> > >
> > > Your welcome at mine also.
> > >
> > > 73,
> > > Jim
> > > --
> > > CAPMan HF Propagation Prediction & System Analysis Software
> > > http://ourworld.compuserve.com/homepages/KU5S
> > >
> >

--
CAPMan HF Propagation Prediction & System Analysis Software
http://ourworld.compuserve.com/homepages/KU5S

1814. STS-79 KEP @ 11:45 am EDT 9-16-96

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: michaelr@michaelr.com
Message-ID: <51jupt$d9c@ionews.ionet.net>
Source record: 21487

STS-79 Element Set (96260.616)

STS-79
1 24324U 96057A 96260.61671697 .00000261 11379-4 59816-5 0 21
2 24324 51.6516 24.0091 0036685 348.2597 11.7555 16.02019641 52

Received from: ftp://garc.gsfc.nasa.gov/pub/sts.tle
Date updated: Mon Sep 16 08:45:17 PDT 1996 (96-09-16 15:45:17 UTC)

This page is automatically updated frequently, use your RELOAD button to
make sure you have the latest data.

Previously Shuttle elements are available in the archives.

STS-79 Elements / 96-09-16 / Gary Morris / garym@cts.com

1815. STS-79 KEP at 2:45 p.m. Eastern 9-16-96

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: michaelr@michaelr.com
Message-ID: <51kbv2$gm7@ionews.ionet.net>
Source record: 21488

STS-79 Element Set (96261.053)

STS-79
1 24324U 96057A 96261.05338109 .00049835 00000-0 85830-4 0 9059
2 24324 51.6525 21.6810 0036235 341.4239 18.5613 16.00646818 121

Received from:
http://shuttle.nasa.gov/current/orbit/orbiter/sighting/shuttle.html
Date updated: Mon Sep 16 11:45:40 PDT 1996 (96-09-16 18:45:40 UTC)

This page is automatically updated frequently, use your RELOAD button to
make sure you have the latest data.

Previously Shuttle elements are available in the archives.

STS-79 Elements / 96-09-16 / Gary Morris / garym@cts.com

1816. Ham-Space Digest V96 #287

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609162233.AA252613229@relay2.geis.com>
Source record: 21489

GE Item Number: 1022398
Original Msg Id: 382459
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #287
System: MARLBORO#
Date: Mon 16-Sep-96 22:29

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1817. Ham-Space Digest V96 #285

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609162137.AA124469855@relay2.geis.com>
Source record: 21490

GE Item Number: 7869129
Original Msg Id: 381981
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #285
System: MARLBORO#
Date: Mon 16-Sep-96 21:05

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1818. Re: Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: "T.J. Alessi" <Tom@Alessi.Com>
Message-ID: <323DFEFE.4872@Alessi.Com>
Source record: 21491
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Will, KN6DV wrote:
>
> Well OK while you are at it you might as well take a look at mine also.
>
> http//:www.av.qnet.com/~kn6dv
> 73 Will

They would if you correct the typo... I think it should look like this:

http://www.av.qnet.com/~kn6dv

Tom
--

T.J. Alessi, WB1L E-Mail: Tom@Alessi.Com
147 Joffre Avenue http://www.netcom.com/~alessi
Stamford, Connecticut 06905-2933 Voice: 203.977.5200

1819. Re: WinOrbit woes...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: bpaul@qualcomm.com
Message-ID: <51ldbg$5od@qualcomm.com>
Source record: 21492

In article <323D97F7.58A1@imagin.net>,
"Brian E. Oakley" <boakley@imagin.net> wrote:
>I must be a complete idiot. I just cannot seem to get winorbit
>configured correctly or something. Im just trying something simple
>first, just trying to track do-17 and listen for it on the downlink. For
>some reason the program isnt working like I would hope. I tried changing
>the keps (as best as I could determine from the latest 2 line kep file I
>downloaded) but it still isnt right. I dont understand how to actually
>load a new kep file into the program and get it to work. The
>documentation, to me, seems a bit lacking, or maybe Im just overlooking
>something. Is there anyone that would care to spend a few minutes a day
>for a bit via email and help me out? 73 de WB5KXW

Hey, that's what the internet is for!

The way I get new info into Winorbit (which may not be the author recommended way) is I find the latest post in this group from W1AW with the 2 line number sets. I copy just the data part, leaving out the headers and all, and paste that into Windows Notepad. Then I save that as 9-16-96.2li (or whatever the date of the data is from) and launch Winorbit. In the tracking window, Select "satellite". In the new window, select "file", then "open 2 line" and select the file just created in notepad. Now all the updated info is in the list of satellites and I could select do-17 and then click "OK".

I haven't mastered all the different formats the program seems to handle as far as impoting data goes, but the 2 line format file seems to get the job done for me.

Don't forget to set your clock on your PC as accurate as possible.

Good luck
-BP

Bill Paul KF6BBL San Diego, CA
The above post is the unique opinion of
Bill Paul, not of Qualcomm Inc.

1820. STS-79 SAREX Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: michaelr@michaelr.com
Message-ID: <51juua$d9c@ionews.ionet.net>
Source record: 21493

STS 79 FM Voice Downlink: 145.84 MHz
FM Voice Uplink: 144.45, 144.47 MHz
Call signs N5QWL, KC5TIE, KC5TZQ

michael r. W0KIE

1821. FS: 2 meter Preamp

Newsgroup: rec.radio.amateur.space
Date: 1996-09-16 00:00:00 UTC
From: kn4hh@avana.net
Message-ID: <51jak5$akp@home.electricpages.com>
Source record: 21494

Thanks for reading this. I have for sale a Landwehr 2 meter preamp. it was used for AO-10 and AO-13 downlink reception. It is in mint condition never mast mounted and never used outdoors. It provides 20 db gaon with a 0.7db noise figure. It will automatically switch out of the line if RF is sensed up to 150 watts. I will ship this unit for $90 (new retail at Henry Radio is $179).

If interested please Email me at kn4hh@avana.net

73's, Bob Watson KN4HH

1822. Re: How does THIS sound for EME?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: Phil Karn <karn@unix.ka9q.ampr.org>
Message-ID: <323E6ED4.41C67EA6@unix.ka9q.ampr.org>
Source record: 21495

John B. Stephensen wrote:

> There are some people working on low power EME with lots of digital
> signal processing. See AF9Y's home page at http://www.webcom.com/af9y/.

See also the paper that W3IWI and I presented at the Central States
VHF Society meeting a few months ago:

http://www.qualcomm.com/people/pkarn/papers/index.html

--Phil

1823. Shuttle in Connectitut

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: Keith@unix.asb.com
Message-ID: <Dxvs5J.FAx@news2.new-york.net>
Source record: 21496

Is there a ATV Station retransmitting the Nasa Select SHUTTLE in
Connectitut ? I see some faint video on 427.25 Mhz (Ch 58 CATV)

Keith

|===|
| • Keith@unix.asb.com == SLIP-PPP Internet Address • |
| • Keith@asb.com == BBS Internet Address • |
| • Http://www.asb.com/usr/keith == WWW Page URL Address • |
| • N2NJS@KC2FD.NY.USA.NA == Ham Radio AX25 Packet Address • |
| • 70302,2701 == CompuServe Address • |
| • Knipper@worldnet.att.net == ATT WorldNet Internet Address • |
| • Fknipsch@suffolk.lib.ny.us == My Free Internet Shell Account • |
|=== |

1824. Is SAREX on STS-79??

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <323eae71.11507115@news.cyberhighway.net>
Source record: 21497

Just curious..

73's

John KB7VZL

1825. NORAD Two-Line Orbital Element Set: Space Shuttle (96260.75499830)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <51mn72$14l@blackbird.afit.af.mil>
Source record: 21498

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96260.75499830 .00002713 00000-0 36544-4 0 6673
2 16609 51.6525 22.6745 0009839 176.4320 183.6726 15.61931920604275
STS 79
1 24324U 96057A 96261.25000000 -.00000112 11334-4 58738-5 0 58
2 24324 51.6510 20.6324 0038336 341.1186 72.5360 16.00451417 146
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1826. Need Info

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: p000655b@pbfreenet.seflin.lib.fl.us
Message-ID: <51mh9o$a10@nntp.seflin.lib.fl.us>
Source record: 21499

I will like to get the address of the landwere pre-amp. for Satellite
operations, I am not sure if thats spelled correctly.

--

Richard Bascom
p000655b@pbfreenet.seflin.lib.fl.us

1827. NORAD Two-Line Orbital Element Sets (TLE867)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <51mngc$1a0@blackbird.afit.af.mil>
Source record: 21500

The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #867 -
Alouette 1
1 00424U 62049A 96259.48237932 -.00000016 00000-0 -29500-4 0 2284
2 00424 80.4596 194.6455 0022093 158.6441 201.5635 13.67874754694680
ATS 1
1 02608U 66110A 96250.60747912 -.00000247 00000-0 10000-3 0 9794
2 02608 14.6092 351.9549 0008833 100.9744 259.1708 1.00307859 25689
ATS 3
1 03029U 67111A 96260.23202851 -.00000113 00000-0 10000-3 0 5431
2 03029 14.9150 358.8161 0008966 262.0863 72.7940 1.00273038105676
Starlette
1 07646U 75010A 96261.08191268 -.00000143 00000-0 -56228-6 0 9983
2 07646 49.8280 146.0751 0206246 174.0135 186.3295 13.82190990 91670
LAGEOS
1 08820U 76039A 96258.95735528 .00000022 00000-0 00000+0 0 2241
2 08820 109.8469 56.7581 0043897 109.2391 251.2877 6.38664394219569
ETS-2
1 09852U 77014A 96260.27515825 -.00000282 00000-0 10000-3 0 753
2 09852 13.3493 31.8689 0005895 120.5112 239.6026 1.00007534 18550
GOES 2
1 10061U 77048A 96254.75072917 .00000061 00000-0 10000-3 0 7290
2 10061 12.4762 36.1080 0012468 122.6452 288.3333 1.00250951 15305
IUE
1 10637U 78012A 96260.24339870 -.00000223 00000-0 10000-3 0 2786
2 10637 35.9205 81.6812 1376615 59.3592 245.7168 1.00210817 20848
GOES 3
1 10953U 78062A 96260.23716135 -.00000127 00000-0 10000-3 0 7085
2 10953 11.4853 38.9658 0004374 92.1269 207.9501 1.00267646 19969

```
SeaSat 1
1 10967U 78064A 96258.32986867 -.00000054 00000-0 26553-4 0 5156
2 10967 107.9924 359.1913 0002686 255.5790 104.5053 14.38121190954267
Nimbus 7
1 11080U 78098A 96258.58051806 -.00000021 00000-0 18274-4 0 6149
2 11080 98.9327 116.4202 0009710 86.4835 273.7445 13.83690076903532
GOES 5
1 12472U 81049A 96258.54388710 .00000093 00000-0 10000-3 0 9495
2 12472 8.3340 49.2724 0008165 58.6363 301.5815 1.00251951 13994
Cosmos 1383
1 13301U 82066A 96257.01645475 .00000086 00000-0 83399-4 0 5289
2 13301 82.9251 69.3975 0028309 0.8591 359.2604 13.68077035709387
LandSat 4
1 13367U 82072A 96258.57010622 .00000021 00000-0 14496-4 0 9948
2 13367 98.0657 306.7306 0006066 217.5672 142.5104 14.57184538753558
DMSP B5D2-1
1 13736U 82118A 96261.15711574 .00000051 00000-0 39730-4 0 808
2 13736 98.6252 88.0638 0009114 115.1715 245.0410 14.25802129714173
IRAS
1 13777U 83004A 96260.53078872 .00000205 00000-0 17137-3 0 4335
2 13777 98.9677 84.0933 0011588 201.3608 158.7071 13.99266297366146
Cosmos 1447
1 13916U 83021A 96261.16942601 .00000064 00000-0 51573-4 0 6203
2 13916 82.9453 123.0204 0036474 256.2460 103.4634 13.74344506676371
TDRS 1
1 13969U 83026B 96260.26507379 -.00000295 00000-0 10000-3 0 6289
2 13969 9.1098 42.7796 0002313 128.5725 230.6857 1.00272251 22297
GOES 6
1 14050U 83041A 96261.15916685 -.00000199 00000-0 10000-3 0 5407
2 14050 7.1718 52.7532 0004176 71.7361 201.1214 1.00227643107119
OSCAR 10
1 14129U 83058B 96258.80553099 -.00000072 00000-0 10000-3 0 4540
2 14129 25.9409 189.4400 6039998 48.9314 349.2917 2.05882584 71710
LandSat 5
1 14780U 84021A 96260.21056334 .00000011 00000-0 12735-4 0 5464
2 14780 98.3208 317.9848 0003088 25.9400 334.1953 14.57054170667215
UoSat 2
1 14781U 84021B 96260.99026430 .00000020 00000-0 11202-4 0 9130
2 14781 97.8069 247.6633 0011949 151.2359 208.9508 14.69479219671135
Cosmos 1574
1 15055U 84062A 96260.22967542 .00000027 00000-0 12694-4 0 8204
2 15055 82.9583 178.7959 0029207 87.0440 273.4062 13.73638814613482
Cosmos 1602
1 15331U 84105A 96261.24386446 .00000178 00000-0 18000-4 0 5032
2 15331 82.5325 26.7745 0021226 8.5431 351.6151 14.84783494646634
ERBS
1 15354U 84108B 96259.80320761 -.00000208 00000-0 27640-5 0 2164
2 15354 56.9946 16.1345 0007452 71.2790 288.9051 14.94975531650397
NOAA 9
1 15427U 84123A 96260.78652743 .00000083 00000-0 67197-4 0 8435
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2 15427 98.9386 325.7264 0016056 55.2415 305.0262 14.13804154606576
Mir
1 16609U 86017A 96260.75499830 .00002713 00000-0 36544-4 0 6673
2 16609 51.6525 22.6745 0009839 176.4320 183.6726 15.61931920604275
SPOT 1
1 16613U 86019A 96260.25511013 -.00000045 00000-0 00000+0 0 9856
2 16613 98.8270 328.1092 0001262 50.0291 310.0995 14.19984743233236
Cosmos 1766
1 16881U 86055A 96259.01877945 .00000127 00000-0 12405-4 0 4171
2 16881 82.5174 86.5598 0020598 43.1138 317.1688 14.83759243547161
EGP
1 16908U 86061A 96258.07969630 -.00000083 00000-0 10000-3 0 1162
2 16908 50.0085 83.7094 0011360 239.7206 120.2504 12.44414982127479
NOAA 10
1 16969U 86073A 96260.90165918 .00000030 00000-0 30823-4 0 7752
2 16969 98.5287 255.3613 0014256 85.0737 275.2068 14.25002301519660
MOS-1
1 17527U 87018A 96259.67837878 -.00000043 00000-0 00000+0 0 4612
2 17527 98.9340 319.6410 0018997 80.9054 279.4266 14.00439781487654
GOES 7
1 17561U 87022A 96260.29054977 -.00000161 00000-0 10000-3 0 540
2 17561 3.2399 68.8072 0004001 300.7040 355.5571 1.00264637 18210
Kvant-1
1 17845U 87030A 96261.01086743 -.00001796 00000-0 -14104-4 0 7511
2 17845 51.6527 21.3852 0009826 177.1628 182.6367 15.61927580538464
DMSP B5D2-3
1 18123U 87053A 96260.77772148 .00000050 00000-0 47901-4 0 5945
2 18123 98.7704 89.5695 0014746 357.6266 2.4840 14.15453565477455
RS-10/11
1 18129U 87054A 96257.56066499 .00000014 00000-0 -13220-5 0 2609
2 18129 82.9237 83.2201 0010335 273.3950 86.6024 13.72368957462291
Meteor 2-16
1 18312U 87068A 96257.58737114 .00000029 00000-0 12915-4 0 5088
2 18312 82.5549 281.9654 0012240 339.9811 20.0867 13.84084217458400
Meteor 2-17
1 18820U 88005A 96260.29992888 .00000062 00000-0 41363-4 0 448
2 18820 82.5431 334.6262 0018005 34.6524 325.5805 13.84761682436139
DMSP B5D2-4
1 18822U 88006A 96260.08905647 -.00000002 00000-0 17210-4 0 3447
2 18822 98.3820 87.8128 0006965 94.4236 265.7739 14.23200184447505
Glonass 34
1 19163U 88043A 96259.62459815 .00000039 00000-0 10000-3 0 1150
2 19163 65.2942 82.7933 0006508 150.2386 209.9360 2.13102346 64164
Glonass 36
1 19165U 88043C 96258.74302804 .00000039 00000-0 10000-3 0 5175
2 19165 65.2730 82.7790 0002070 9.1506 350.9037 2.13102123 64765
METEOSAT 3
1 19215U 88051A 96260.33253604 -.00000125 00000-0 10000-3 0 2782
2 19215 3.4489 67.2595 0004457 108.6011 251.8371 0.96948240 18063
AO-13
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```
1 19216U 88051B 96260.77661358 .00050837 00000-0 56338-2 0 2765
2 19216 57.2071 91.2120 7419188 51.6922 354.3882 2.13070733 31778
OKEAN 1
1 19274U 88056A 96261.25146629 .00000284 00000-0 32349-4 0 1181
2 19274 82.5203 185.4170 0018955 176.5647 183.5727 14.82520296443019
Meteor 3-2
1 19336U 88064A 96257.13832051 .00000051 00000-0 10000-3 0 5110
2 19336 82.5402 104.2058 0016849 18.2149 341.9573 13.16978916391059
Glonass 39
1 19503U 88085C 96254.54994940 -.00000030 00000-0 10000-3 0 4013
2 19503 65.5486 321.8364 0006171 161.4580 198.6368 2.13101761 62169
NOAA 11
1 19531U 88089A 96260.78461904 .00000014 00000-0 32473-4 0 6584
2 19531 99.1856 281.2750 0012034 349.8774 10.2152 14.13103672411382
TDRS 2
1 19548U 88091B 96250.83778582 -.00000207 00000-0 10000-3 0 2316
2 19548 2.6592 71.6186 0002599 61.2301 239.7058 1.00270848 16348
Glonass 40
1 19749U 89001A 96260.68776125 .00000040 00000-0 10000-3 0 6213
2 19749 65.2542 82.2785 0004933 257.4030 102.5878 2.13101526 59802
Glonass 41
1 19750U 89001B 96257.45785231 .00000041 00000-0 10000-3 0 5281
2 19750 65.2620 82.4520 0006036 247.1443 112.8421 2.13101818 59756
GPS BII-01
1 19802U 89013A 96257.89019795 .00000031 00000-0 00000+0 0 2848
2 19802 55.3726 107.1046 0022045 152.8188 207.3290 2.00553352 55496
Akebono
1 19822U 89016A 96259.55024089 .00007351 00000-0 35350-3 0 7780
2 19822 75.0633 71.4287 3743544 37.9869 343.3464 7.93373641173853
Meteor 2-18
1 19851U 89018A 96258.89915146 .00000024 00000-0 81262-5 0 5067
2 19851 82.5195 209.5375 0016020 83.1158 277.1824 13.84416218381249
MOP-1
1 19876U 89020B 96258.04401281 -.00000050 00000-0 10000-3 0 2139
2 19876 2.1678 71.1432 0017309 290.1830 70.3239 0.97108860 7480
TDRS 3
1 19883U 89021B 96257.19988693 -.00000277 00000-0 00000+0 0 2541
2 19883 0.0501 105.9661 0005223 98.8893 178.6002 1.00270214 27473
GPS BII-02
1 20061U 89044A 96260.22710001 .00000006 00000-0 10000-3 0 2678
2 20061 54.1448 282.6463 0161144 221.6542 137.1760 2.00562552 53287
Nadezhda 1
1 20103U 89050A 96260.90215551 .00000107 00000-0 97810-4 0 9020
2 20103 82.9573 41.0305 0037245 155.6549 204.6376 13.73870898361272
GPS BII-03
1 20185U 89064A 96260.04619730 .00000026 00000-0 10000-3 0 3183
2 20185 55.1566 107.4693 0027605 309.2938 50.5472 2.00811198 51852
GMS 4
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2 20217 1.9737 74.6010 0001038 229.3735 239.8429 1.00276850 26310
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1 20261U 89080A 96257.87692881 .00000032 00000-0 53877-5 0 5271
2 20261 82.5944 214.0595 1241640 199.9158 154.9090 12.47347145316962
GPS BII-04
1 20302U 89085A 96260.09819393 .00000026 00000-0 10000-3 0 2874
2 20302 53.2270 222.4213 0051936 202.4940 157.2748 2.00568450 50659
Meteor 3-3
1 20305U 89086A 96260.94063021 .00000044 00000-0 10000-3 0 6448
2 20305 82.5452 61.1528 0007936 81.1163 279.0821 13.04435961330164
COBE
1 20322U 89089A 96259.56222286 -.00000273 00000-0 -14621-3 0 2430
2 20322 98.9442 273.2907 0009123 138.6823 221.5038 14.03454551349608
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1 20335U 89093A 96261.01086743 -.00001796 00000-0 -14104-4 0 6902
2 20335 51.6527 21.3852 0009826 177.1628 182.6367 15.61927580387475
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2 20361 56.0803 49.8123 0089044 135.5577 225.1802 2.00565360 40068
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2 20391 4.0171 62.8636 0004690 97.8925 188.7813 1.00274484 24912
SPOT 2
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2 20436 98.6922 331.0147 0001594 56.0491 304.0837 14.20044366344574
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2 20439 98.5553 344.8896 0010820 295.8543 64.1535 14.29983869347225
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1 20440U 90005E 96258.79381296 -.00000006 00000-0 14578-4 0 97
2 20440 98.5575 343.1802 0010985 301.7914 58.2199 14.30125618346907
WO-18
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2 20441 98.5565 341.5890 0011660 307.6400 52.3722 14.30094512346682
LO-19
1 20442U 90005G 96261.22314338 .00000010 00000-0 20493-4 0 91
2 20442 98.5593 346.0345 0011841 294.8646 65.1321 14.30205051347274
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1 20452U 90008A 96260.00670530 .00000017 00000-0 10000-3 0 2179
2 20452 54.0602 163.0511 0059331 89.3089 271.4436 2.00575570 48636
MOS-1B
1 20478U 90013A 96260.21546293 .00000088 00000-0 10000-3 0 9753
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2 20480 99.0179 268.4459 0539960 276.2930 77.6959 12.83234738309679
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2 20491 99.0733 334.1474 0470683 85.8427 279.6316 13.02983730313464
LACE
1 20496U 90015A 96260.54104222 .00000962 00000-0 35144-4 0 6871
2 20496 43.1026 41.7915 0011948 289.4218 70.5340 15.35877993367870
Nadezhda 2
1 20508U 90017A 96260.83996927 -.00000008 00000-0 -25041-4 0 9028
2 20508 82.9574 175.5731 0045509 108.9624 251.6470 13.73511424328474
OKEAN 2
1 20510U 90018A 96260.19622467 .00000176 00000-0 20889-4 0 5267
2 20510 82.5255 141.2659 0020058 23.7734 336.4385 14.78627103353121
GPS BII-07
1 20533U 90025A 96259.40500701 .00000005 00000-0 00000+0 0 2589
2 20533 54.5139 283.4342 0048151 74.7074 285.8772 2.00664946 47395
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HST
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2 20580 28.4673 5.8738 0006473 27.8685 332.2255 14.91094736151894
MACSAT 2
1 20608U 90043B 96258.22071458 .00000191 00000-0 29600-4 0 2109
2 20608 89.9309 172.6362 0107859 103.7446 257.5817 14.64940626339325
Glonass 44
1 20619U 90045A 96257.30117029 -.00000017 00000-0 10000-3 0 3243
2 20619 65.1614 320.9469 0025190 206.1442 153.8070 2.13102679 49189
Glonass 45
1 20620U 90045B 96259.29690411 -.00000016 00000-0 10000-3 0 3087
2 20620 65.1438 320.8609 0008573 62.9659 297.2037 2.13102740 49268
Glonass 46
1 20621U 90045C 96259.36450982 -.00000016 00000-0 10000-3 0 9225
2 20621 65.1608 320.9211 0010243 186.0921 173.9754 2.13102474 49265
Kristall
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Meteor 2-19
1 20670U 90057A 96261.14457473 .00000035 00000-0 18217-4 0 795
2 20670 82.5445 274.8309 0016611 2.6428 357.4816 13.84128305314462
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GPS BII-08
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Meteor 2-20
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2 20826 82.5246 211.2854 0011781 265.3285 94.6529 13.83635971301532
GPS BII-09
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2 20830 56.0005 47.7313 0069367 96.0047 264.7967 2.00566836 43850
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RS-12/13
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2 21089 82.9235 121.4788 0029644 341.8586 18.1509 13.74073418281601
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Nadezhda 3
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2 21218 64.8747 320.3254 0010292 336.4300 23.6038 2.13102632 42451
GRO
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NOAA 12
1 21263U 91032A 96260.92147348 .00000082 00000-0 55550-4 0 816
2 21263 98.5517 277.3866 0013682 12.2899 347.8611 14.22656235277508
OKEAN 3
1 21397U 91039A 96257.89141061 .00000139 00000-0 16524-4 0 2160
2 21397 82.5225 57.9323 0024121 103.2832 257.1075 14.76502625284454
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1 21552U 91047A 96257.47547948 -.00000035 00000-0 10000-6 0 170
2 21552 56.2797 45.5582 0072248 247.7249 111.5163 2.00559719 38041
ERS-1
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2 21574 98.5502 332.9757 0001192 77.7960 282.3359 14.32246592270475
UO-22
1 21575U 91050B 96259.70627126 .00000010 00000-0 17567-4 0 7154
2 21575 98.3435 323.3630 0008074 0.4186 359.6997 14.37035796271061
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2 21576 98.3392 321.7236 0004409 14.3217 345.8062 14.36451498271021
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SARA
1 21578U 91050E 96257.25536796 .00000166 00000-0 67272-4 0 9104
2 21578 98.3741 328.1628 0005404 9.6404 350.4886 14.39237996271000
TDRS 4
1 21639U 91054B 96257.45090648 .00000072 00000-0 00000+0 0 882
2 21639 0.0470 296.1377 0002280 268.0193 136.5095 1.00272049 18744
Meteor 3-5
1 21655U 91056A 96257.87504627 .00000051 00000-0 10000-3 0 9178
2 21655 82.5513 257.8175 0013055 314.6025 45.4035 13.16848861244349
UARS
1 21701U 91063B 96259.05978233 -.00000180 00000-0 53836-5 0 7907
2 21701 56.9847 109.8063 0005618 99.3846 260.7823 14.96537664273818
DMSP B5D2-6
1 21798U 91082A 96260.88163280 .00000080 00000-0 65531-4 0 4342
2 21798 98.9443 278.2430 0012713 334.3632 25.6933 14.13992992247886
Glonass 53
1 21853U 92005A 96258.86144939 .00000038 00000-0 10000-4 0 1201
2 21853 65.1760 81.3285 0006612 202.5795 157.4438 2.13102356 36035
Glonass 54
1 21854U 92005B 96260.08576645 .00000038 00000-0 00000+0 0 3400
2 21854 65.1776 81.2772 0015590 24.3234 335.7977 2.13104804 36046
Glonass 55
1 21855U 92005C 96259.21555815 .00000038 00000-0 00000+0 0 3309
2 21855 65.1774 81.3158 0007315 192.0127 168.0210 2.13102182 36015
JERS-1
1 21867U 92007A 96260.20470820 .00000054 00000-0 93496-5 0 9713
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2 21867 97.6809 336.1739 0001244 49.1919 310.9412 14.98646289251499
GPS BIIA-12
1 21890U 92009A 96259.42913018 .00000022 00000-0 00000+0 0 8564
2 21890 53.7601 222.9032 0036079 217.2222 142.4790 2.00568987 33454
GPS BIIA-13
1 21930U 92019A 96256.59321164 -.00000071 00000-0 10000-3 0 7907
2 21930 55.6803 345.1326 0026007 185.2096 174.8183 2.00549022 32320
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1 21987U 92031A 96260.42827861 .00000909 00000-0 31870-4 0 5710
2 21987 28.4307 289.4686 0009183 332.1039 27.9057 15.19898730237573
SAMPEX
1 22012U 92038A 96257.87986714 .00000488 00000-0 40477-4 0 7453
2 22012 81.6717 25.6097 0116151 241.6467 117.2999 14.91719720228453
GPS BIIA-14
1 22014U 92039A 96259.67770533 .00000018 00000-0 00000+0 0 7717
2 22014 54.8469 164.9704 0093938 327.2038 32.2665 2.00572383 24229
Glonass 56
1 22056U 92047A 96260.05174554 -.00000016 00000-0 00000+0 0 2575
2 22056 64.7374 320.3878 0006025 256.9395 103.0781 2.13103654 32124
Glonass 57
1 22057U 92047B 96257.53287503 -.00000017 00000-0 00000+0 0 2238
2 22057 64.7389 320.4960 0007262 308.1300 51.8876 2.13102931 32047
Glonass 58
1 22058U 92047C 96259.34930909 -.00000016 00000-0 10000-3 0 1351
2 22058 64.7293 320.4218 0007256 270.3998 89.6104 2.13102981 32132
TOPEX
1 22076U 92052A 96256.89971816 -.00000038 00000-0 10000-3 0 9910
2 22076 66.0365 30.4835 0007423 263.4099 96.6071 12.80930944191355
KO-23
1 22077U 92052B 96259.36429355 -.00000037 00000-0 10000-3 0 6053
2 22077 66.0788 0.6482 0015107 275.8009 84.1283 12.86297941192401
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1 22078U 92052C 96257.48124608 -.00000037 00000-0 10000-3 0 6025
2 22078 66.0770 2.9975 0016727 275.6318 84.2770 12.86581801192251
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1 22108U 92058A 96259.14452524 .00000020 00000-0 10000-3 0 7832
2 22108 53.9959 223.8166 0119718 164.3756 195.9725 2.00566897 29396
FREJA
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LAGEOS II
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GPS BIIA-17
1 22275U 92089A 96258.95143202 .00000016 00000-0 00000+0 0 7952
2 22275 54.6358 163.6220 0042715 249.6287 109.9848 2.00586124 27374
TDRS 5
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GPS BIIA-18
1 22446U 93007A 96260.04695122 .00000005 00000-0 10000-3 0 7794
2 22446 54.1457 283.4920 0091303 2.9205 357.2426 2.00578539 26385
Glonass 59
1 22512U 93010A 96258.39417642 .00000038 00000-0 10000-3 0 8221
2 22512 65.1929 81.2007 0009040 188.5713 171.4678 2.13102178 27592
Glonass 60
1 22513U 93010B 96259.27082217 .00000038 00000-0 00000+0 0 9693
2 22513 65.1877 81.1838 0007325 183.5698 176.4739 2.13102886 27800
Glonass 61
1 22514U 93010C 96260.03404945 .00000038 00000-0 00000+0 0 9641
2 22514 65.2091 81.1521 0010833 180.1774 179.8704 2.13102306 27823
ASTRO-D
1 22521U 93011A 96259.20057130 .00001120 00000-0 72123-4 0 5231
2 22521 31.1044 211.1202 0055716 340.2961 19.5553 15.03037676196029
UFO F1
1 22563U 93015A 96253.00000000 -.00000270 00000-0 00000+0 0 5266
2 22563 25.1648 287.3038 0009886 259.9478 308.5493 0.99254545 16903
GPS BIIA-19
1 22581U 93017A 96258.69214180 -.00000062 00000-0 10000-3 0 5808
2 22581 55.1859 344.4072 0065384 39.1229 321.3977 2.00553976 25410
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2 22654 3.3188 70.9675 2866970 244.1330 84.0014 1.42203444 12771
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2 22657 55.2184 344.2162 0079746 240.5164 118.8088 2.00568248 20771
RADCAL
1 22698U 93041A 96260.54526468 .00000046 00000-0 14620-4 0 5181
2 22698 89.5358 266.6366 0093360 29.7458 330.9000 14.21379366167403
GPS BIIA-21
1 22700U 93042A 96259.28761013 .00000022 00000-0 10000-3 0 5891
2 22700 54.1703 224.6449 0051754 359.4918 0.4730 2.00560518 23551
NOAA 13
1 22739U 93050A 96259.89866928 -.00000009 00000-0 20327-4 0 1537
2 22739 99.0514 215.7809 0009524 333.8873 26.1806 14.10971313159840
GPS BIIA-22
1 22779U 93054A 96259.36956824 .00000004 00000-0 10000-3 0 6548
2 22779 54.3134 283.5996 0016824 265.2027 94.6573 2.00580832 22316
Meteor 2-21
1 22782U 93055A 96260.57336500 .00000032 00000-0 15923-4 0 5125
2 22782 82.5460 274.7113 0023968 81.3485 279.0389 13.83060077153765
UFO F2
1 22787U 93056A 96259.68946815 -.00000068 00000-0 00000+0 0 6763
2 22787 4.0373 327.5042 0002971 212.4831 134.3009 1.00273631 9730
SPOT 3
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2 22823 98.7574 331.6029 0001407 83.1731 276.9606 14.20012463154030
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AO-27
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IO-26
1 22826U 93061D 96257.72054604 -.00000040 00000-0 15677-5 0 4997
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PO-28
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KO-25
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2 22830 98.4620 323.0760 0010874 283.3365 76.6602 14.28113851155166
GPS BIIA-23
1 22877U 93068A 96260.42092153 -.00000024 00000-0 10000-3 0 4751
2 22877 55.7142 45.5184 0045939 301.9129 57.6400 2.00570284 21221
METEOSAT 6
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2 22912 0.1626 44.7643 0002731 165.8802 260.4877 1.00274453 8776
HST Array
1 22920U 90037C 96261.09511266 .00004932 00000-0 32387-3 0 5145
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Meteor 3-6
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2 22969 82.5618 198.1168 0016818 18.9482 341.2263 13.16738278126680
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2 22970 82.5565 197.7836 0017279 18.4652 341.7079 13.16827739126733
GPS BIIA-24
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Glonass 62
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Glonass 63
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Glonass 64
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GOES 8
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2 23051 0.2090 91.1213 0004466 98.9378 177.4221 1.00280238 16291
MSTI 2
1 23101U 94028A 96261.09247273 .00004398 00000-0 67584-4 0 3541
2 23101 97.0797 93.5654 0011353 349.4367 10.6647 15.54717553133575
STRV-1A
1 23125U 94034B 96260.01897621 .00004017 00000-0 11380-2 0 3306
2 23125 7.0427 198.2839 7244221 140.0671 305.6152 2.32710632 18238
STRV-1B
1 23126U 94034C 96243.78029953 .00000030 00000-0 10000-3 0 2834
2 23126 6.8576 206.5905 7229746 124.3546 322.8232 2.32635963 17882
Nadezhda 4
1 23179U 94041A 96260.24671530 .00000032 00000-0 18024-4 0 2190
2 23179 82.9474 169.1119 0034704 228.9664 130.8493 13.75684203109312
Glonass 65
1 23203U 94050A 96259.37006123 .00000031 00000-0 00000+0 0 3404
2 23203 64.7684 201.0845 0006723 157.9128 202.1098 2.13102262 16321
Glonass 66
1 23204U 94050B 96260.07293095 .00000036 00000-0 00000+0 0 3551
2 23204 64.7536 201.0878 0015222 344.3882 15.5622 2.13102424 16337
Glonass 67
1 23205U 94050C 96260.42469783 .00000037 00000-0 00000+0 0 3393
2 23205 64.7619 201.0693 0002751 286.1804 73.7924 2.13102941 16341
DMSP B5D2-7
1 23233U 94057A 96260.72751039 .00000042 00000-0 46275-4 0 9225
2 23233 98.8206 318.1283 0011682 284.8351 75.1523 14.12734715105759
OKEAN 1-7
1 23317U 94066A 96259.25126718 .00000146 00000-0 18641-4 0 1834
2 23317 82.5456 336.1753 0026511 144.2471 216.0520 14.74040839103802
ELEKTRO
1 23327U 94069A 96260.85796892 -.00000109 00000-0 00000+0 0 1983
2 23327 0.2154 113.0885 0004370 20.0424 247.8818 1.00273993 6922
RESURS 1-3
1 23342U 94074A 96259.95937822 .00000039 00000-0 14453-4 0 5746
2 23342 97.9577 314.8164 0001832 70.1120 290.0284 14.69860842100141
Glonass 68
1 23396U 94076A 96257.92234358 .00000038 00000-0 00000+0 0 3189
2 23396 65.1221 81.2691 0029369 187.6936 172.3177 2.13102759 14135
Glonass 69
1 23397U 94076B 96260.91408938 .00000040 00000-0 00000+0 0 3015
2 23397 65.1131 81.1768 0011023 322.7697 37.1986 2.13102153 14194
Glonass 70
1 23398U 94076C 96257.04374592 .00000040 00000-0 00000+0 0 3250
2 23398 65.0980 81.2828 0001601 282.7787 77.2655 2.13102024 14128
LUCH (Altair-2)
1 23426U 94082A 96257.57556131 -.00000288 00000-0 00000+0 0 3893
2 23426 1.2642 266.9117 0001679 289.1326 99.3921 1.00275673 6392
RS-15
1 23439U 94085A 96260.98532376 -.00000039 00000-0 10000-3 0 1622
2 23439 64.8137 234.6263 0159522 183.0041 176.9928 11.27528822 71131
NOAA 14
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2 23511 64.6279 321.0114 0008002 216.5805 143.4460 2.13103884 11900
Glonass 72
1 23512U 95009B 96258.52966227 -.00000017 00000-0 00000+0 0 2457
2 23512 64.6246 321.0624 0005987 303.2495 56.7747 2.13101905 11871
Glonass 73
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2 23513 64.6254 321.0022 0014949 204.8458 155.1608 2.13103100 11921
GMS 5
1 23522U 95011B 96258.55133088 -.00000296 00000-0 10000-3 0 1571
2 23522 0.4016 7.4454 0000672 191.0418 133.6155 1.00261580 5349
DMSP B5D2-8
1 23533U 95015A 96260.86946316 .00000027 00000-0 38468-4 0 6687
2 23533 98.8441 262.1659 0007386 147.4380 212.7245 14.12753301 76579
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1 23545U 95017A 96257.26363782 -.00000044 00000-0 45944-5 0 1630
2 23545 69.9731 325.7885 0011073 55.5585 304.6581 14.45393866 76389
OSC 2
1 23546U 95017B 96260.27400016 .00002013 00000-0 58834-3 0 1938
2 23546 69.9713 318.9309 0010548 39.2917 320.8986 14.45389734 76826
Microlab 1
1 23547U 95017C 96261.26036226 .00000148 00000-0 58992-4 0 1356
2 23547 69.9794 316.3932 0010731 42.9155 317.2812 14.45578848 76979
OFEQ 3
1 23549U 95018A 96259.89888484 .00019768 00000-0 48940-3 0 3212
2 23549 143.3659 61.6842 0217906 183.2318 176.6999 15.17387971 80121
GFZ-1
1 23558U 86017JE 96257.48408210 .00003043 00000-0 39146-4 0 1563
2 23558 51.6498 27.7727 0005883 189.4311 170.6575 15.62682955603819
ERS-2
1 23560U 95021A 96261.21669412 .00000001 00000-0 16723-4 0 2782
2 23560 98.5490 333.9602 0001100 56.9626 303.1664 14.32247836 73749
Spektr
1 23579U 95024A 96261.01086743 -.00001796 00000-0 -14104-4 0 4421
2 23579 51.6527 21.3852 0009826 177.1628 182.6367 15.61927580 75786
GOES 9
1 23581U 95025A 96261.08226561 .00000078 00000-0 10000-3 0 2479
2 23581 0.2224 268.0272 0002106 298.6124 43.9984 1.00268089 4846
Helios 1A
1 23605U 95033A 96261.01303546 .00000089 00000-0 25974-4 0 3130
2 23605 98.1253 195.4184 0001507 54.5606 305.5739 14.63834654 63990
UPM SAT 1
1 23606U 95033B 96260.22109001 .00000111 00000-0 28338-4 0 2124
2 23606 98.1066 195.9868 0006356 263.4741 96.5741 14.67280320 64063
CERISE
1 23607U 95033C 96258.25901674 .00000049 00000-0 17459-4 0 1177
2 23607 98.1081 193.8834 0005467 270.2182 89.8398 14.66961479 63790
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TDRS 6
1 23613U 95035B 96256.39130891 .00000086 00000-0 00000+0 0 2153
2 23613 0.8593 82.4877 0002494 146.7195 92.3463 1.00263370 4250
Glonass 74
1 23620U 95037A 96258.13589907 .00000020 00000-0 00000+0 0 1813
2 23620 64.8247 200.9994 0018343 171.5023 188.5156 2.13102998 8903
Glonass 75
1 23621U 95037B 96258.31340526 .00000022 00000-0 00000+0 0 1908
2 23621 64.8321 200.9926 0018140 182.4465 177.5316 2.13102224 8906
Glonass 76
1 23622U 95037C 96260.71786653 .00000039 00000-0 00000+0 0 1943
2 23622 64.8290 200.9135 0036543 166.8023 193.2948 2.13102568 8959
Prognoz-M2
1 23632U 95039A 96264.24015710 -.00000205 00000-0 00000+0 0 807
2 23632 69.7780 249.7070 8072720 323.1570 35.8290 0.26365500 1107
SICH-1
1 23657U 95046A 96258.70185869 .00000105 00000-0 12597-4 0 1087
2 23657 82.5315 118.1787 0029275 116.9401 243.4804 14.73493593 56014
RADARSAT
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2 23710 98.5816 263.5581 0000841 59.8601 300.2663 14.29972428 44954
Glonass 79
1 23734U 95068A 96258.02012494 .00000019 00000-0 00000+0 0 1642
2 23734 64.8186 200.9265 0018994 319.8162 40.0303 2.13102152 5865
Glonass 78
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2 23735 64.8254 200.9049 0008223 217.1485 142.7827 2.13125267 5867
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2 23736 64.8113 200.9302 0008032 205.9389 154.0059 2.13102361 5852
XTE
1 23757U 95074A 96257.45866985 .00000538 00000-0 16069-4 0 857
2 23757 22.9839 170.8787 0013595 37.1174 323.0262 14.97689274 38717
Soyuz TM-23
1 23798U 96011A 96245.27132169 .00005247 00000-0 65112-4 0 1666
2 23798 51.6489 100.7445 0011164 121.0253 239.1434 15.61872319 30082
Polar
1 23802U 96013A 96257.58238195 .00000125 00000-0 00000+0 0 521
2 23802 86.1925 25.1119 6554239 282.1460 16.1625 1.36677982 2769
1996010E
1 23824U 96010E 96258.32155973 .00008316 00000-0 87475-2 0 1049
2 23824 47.6534 228.8567 7297167 49.2727 354.1268 2.22219486 4591
GPS BIIA-25
1 23833U 96019A 96261.13600753 -.00000060 00000-0 00000+0 0 811
2 23833 54.6725 344.2951 0035026 152.4745 207.7655 2.00564605 3522
Priroda
1 23848U 96023A 96259.79528356 .00040051 00000-0 45351-3 0 1309
2 23848 51.6525 27.5137 0010130 173.1626 186.9297 15.61946480 22681
MSX
1 23851U 96024A 96260.95235118 -.00000047 00000-0 00000+0 0 955
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2 23851 99.3893 242.1705 0006511 249.8259 110.2175 13.97592704 20315
MSTI 3
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2 23868 97.1218 88.9016 0011417 195.5775 164.5097 15.46268805 18851
TOMS-EP
1 23940U 96037A 96259.21996260 .00001928 00000-0 89248-4 0 401
2 23940 97.4308 163.5621 0014664 31.5272 328.6842 15.21244754 11321
GPS BIIA-26
1 23953U 96041A 96260.55298532 .00000025 00000-0 00000+0 0 463
2 23953 55.0610 104.6304 0020118 341.1858 18.8160 2.00570089 1300
Progress M-32
1 24071U 96043A 96261.01086743 -.00001796 00000-0 -14104-4 0 539
2 24071 51.6527 21.3852 0009826 177.1628 182.6367 15.61927580 7396
ADEOS
1 24277U 96046A 96260.84974767 .00000033 00000-0 31195-4 0 701
2 24277 98.6245 336.4112 0000766 123.0913 237.0339 14.27636213 4282
JAS 2
1 24278U 96046B 96259.41825145 .00000114 00000-0 15147-3 0 155
2 24278 98.5782 331.5867 0351658 177.6154 182.6846 13.52626296 3972
Soyuz TM-24
1 24280U 96047A 96261.01086743 -.00001796 00000-0 -14104-4 0 355
2 24280 51.6527 21.3852 0009826 177.1628 182.6367 15.61927580 4777
Zhongxing 7
1 24282U 96048A 96260.72579053 .00014193 00000-0 39375-3 0 311
2 24282 27.2900 93.2260 5634265 223.4627 74.9831 4.69136980 1389
1996048B
1 24283U 96048B 96260.84548650 .00021215 00000-0 70934-3 0 391
2 24283 27.2801 93.3093 5640227 223.4158 74.9356 4.67475546 1383
FAST
1 24285U 96049A 96259.25722493 .00001484 00000-0 14416-3 0 126
2 24285 83.0049 166.8190 2207513 117.9637 266.2021 10.81735390 2695
1996049B
1 24286U 96049B 96259.26434958 .00001194 00000-0 11504-3 0 206
2 24286 82.9914 166.8020 2209022 118.0269 266.1482 10.81420360 2684
Microsat
1 24291U 96050A 96260.25109052 .00034212 60767-5 22129-3 0 202
2 24291 62.7960 310.7422 0652806 110.4408 256.7979 14.58610585 2633
Interbol-2
1 24292U 96050B 96243.24482888 -.00000033 00000-0 10000-3 0 56
2 24292 62.8038 7.8992 5620887 288.2420 20.4463 4.14434750 39
Magion 5
1 24293U 96050C 96258.43966611 -.00000110 00000-0 -12570-2 0 112
2 24293 62.7889 2.2592 5633132 288.5772 20.2720 4.14601656 707
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1 24294U 96050D 96260.25248846 .00053238 65230-5 31777-3 0 196
2 24294 62.7622 309.8069 0605184 109.4535 257.2894 14.70055620 2654
1996050E
1 24295U 96050E 96260.24573330 .00140182 59956-5 44190-3 0 247
2 24295 62.8122 310.1921 0658566 110.5792 256.7160 14.66497881 2646
1996050F
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Cosmos 2333
1 24297U 96051A 96260.55036219 -.00000047 00000-0 00000+0 0 81
2 24297 71.0125 140.1866 0002201 22.4009 337.7208 14.12571186 1726
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1 24298U 96051B 96258.21458295 -.00000047 00000-0 00000+0 0 130
2 24298 71.0174 145.0990 0011809 13.1436 346.9992 14.12402789 1395
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1 24299U 96051C 96258.56629427 -.00000042 00000-0 00000+0 0 52
2 24299 71.0376 146.0202 0191071 57.8141 304.1335 13.73492137 1394
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1 24300U 96051D 96261.12829260 -.00000041 00000-0 00000+0 0 57
2 24300 71.0334 140.9947 0198304 79.3365 282.9995 13.72075563 1746
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1 24301U 96051E 96258.88576602 -.00000041 00000-0 00000+0 0 56
2 24301 70.9996 145.0080 0211296 55.2839 306.7974 13.69808782 1439
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2 24302 70.9945 146.3459 0210752 78.3582 284.1094 13.68884568 1331
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1 24303U 96051G 96257.75096294 -.00000046 00000-0 00000+0 0 41
2 24303 71.1094 146.3604 0072680 320.0003 39.5788 14.07173547 1326
Cosmos 2334
1 24304U 96052A 96258.33767707 .00000244 00000-0 24809-3 0 183
2 24304 82.9351 198.4265 0028333 249.7056 110.1051 13.72896755 1159
UNAMSat
1 24305U 96052B 96259.35669413 .00000203 00000-0 20364-3 0 235
2 24305 82.9380 197.6694 0029430 250.8825 108.9142 13.73083023 1349
1996052C
1 24306U 96052C 96261.24225057 .00006555 00000-0 69300-2 0 181
2 24306 82.9341 196.2635 0022262 247.6767 112.2008 13.74224017 1612
Inmarsat III F2
1 24307U 96053A 96261.00393662 .00000131 00000-0 10000-3 0 82
2 24307 2.7042 287.9053 0002135 192.9391 264.9103 1.00215080 105
1996053B
1 24308U 96053B 96260.61263131 .22409944 12771-4 13612-3 0 494
2 24308 51.5889 204.9437 0007273 264.2999 95.9881 16.53719997 1619
GE-1
1 24315U 96054A 96258.06459224 -.00000169 00000-0 00000+0 0 101
2 24315 8.3259 139.0932 5527856 180.1127 179.8884 1.06697485 55
1996054B
1 24316U 96054B 96253.31661231 .00297423 29289-5 44849-1 0 47
2 24316 25.0264 140.6817 8101038 178.2945 189.4921 1.34968515 18
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1 24317U 96049C 96261.21030521 .00010479 00000-0 99661-3 0 56
2 24317 82.9901 165.9024 2214715 114.6611 270.0443 10.81236263 773
1996049D
1 24318U 96049D 96260.75089672 .00012147 00000-0 11483-2 0 55
2 24318 82.9951 166.1058 2216298 115.2426 269.3719 10.81040321 728
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1 24319U 96049E 96260.17790847 .00032042 00000-0 30954-2 0 44
2 24319 82.9979 166.3751 2206284 116.3791 268.0007 10.82697460 608
1996056A
1 24320U 96056A 96259.06176199 .00000003 00000-0 00000+0 0 114
2 24320 54.7704 284.9590 0045193 187.2375 242.4834 2.02532401 109
1996056C
1 24321U 96056C 96259.18221884 .00054890 -32278-6 99449-3 0 100
2 24321 35.0581 276.1892 6047640 195.4841 131.7412 4.06090240 127
1996056B
1 24323U 96056B 96260.90986417 -.00000039 00000-0 90896-6 0 34
2 24323 35.5400 227.3763 0099630 160.1783 200.2847 15.08618923 305
STS 79
1 24324U 96057A 96261.25000000 -.00000112 11334-4 58738-5 0 58
2 24324 51.6510 20.6324 0038336 341.1186 72.5360 16.00451417 146
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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1828. Ham-Space Digest V96 #288

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609172034.AA018792451@relay2.geis.com>
Source record: 21501

GE Item Number: 5778243
Original Msg Id: 383101
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #288
System: MARLBORO#
Date: Tue 17-Sep-96 20:11

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1829. ARLK067 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk067.1996@arrl.org>
Source record: 21502
Cross-posted to: rec.radio.info,rec.radio.amateur.space

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SB KEP @ ARL $ARLK067
ARLK067 Keplerian data

ZCZC SK67
QST de W1AW
Keplerian Bulletin 67 ARLK067
From ARRL Headquarters
Newington, CT September 17, 1996
To all radio amateurs

SB KEP ARL ARLK067
ARLK067 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96260.52521014 .00000261 11379-4 59816-5 0 28
2 24324 51.6516 24.4988 0036686 347.8951 204.0114 16.02018936 22
Mir
1 16609U 86017A 96260.43509537 .00003135 00000-0 41286-4 0 6661
2 16609 51.6519 24.2881 0009842 175.0169 185.0929 15.61931398604222
AO-10
1 14129U 83058B 96258.80553099 -.00000072 00000-0 10000-3 0 04573
2 14129 25.9409 189.4400 6039998 48.9314 349.2917 2.05882584071710
RS-10/11
1 18129U 87054A 96260.03952562 .00000014 00000-0 -13220-5 0 02789
2 18129 82.9234 81.3862 0010223 266.0703 93.9284 13.72368996462631
UO-11
1 14781U 84021B 96259.96887535 .00000049 00000-0 16176-4 0 09334
2 14781 97.8068 246.6870 0011860 154.3166 205.8631 14.69479292670984
RS-12/13
1 21089U 91007A 96260.06229665 .00000067 00000-0 54976-4 0 09365
2 21089 82.9235 121.9647 0029663 343.6744 16.3460 13.74073364281513
AO-13
1 19216U 88051B 96259.83784456 .00053408 -92220-6 30000-2 0 02751
2 19216 57.1452 91.4208 7428458 51.2301 354.4733 2.12996291031755
UO-14
1 20437U 90005B 96260.08555297 -.00000007 00000-0 14071-4 0 02273
2 20437 98.5412 341.3851 0010535 298.4832 61.5275 14.29930959347047
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RS-15
1 23439U 94085A 96260.00969335 -.00000039 00000-0 10000-3 0 01770
2 23439 64.8142 236.2043 0159700 183.1730 176.8182 11.27528829071021
AO-16
1 20439U 90005D 96259.83002168 -.00000022 00000-0 82485-5 0 00247
2 20439 98.5554 343.5143 0010819 299.9589 60.0513 14.29983599347029
DO-17
1 20440U 90005E 96259.84327041 -.00000009 00000-0 13245-4 0 00141
2 20440 98.5574 344.2118 0010908 298.1918 61.8148 14.30125669347053
WO-18
1 20441U 90005F 96259.76509138 -.00000000 00000-0 16761-4 0 00262
2 20441 98.5569 344.0658 0011498 300.0227 59.9813 14.30094909347044
LO-19
1 20442U 90005G 96259.82394357 -.00000005 00000-0 14724-4 0 00245
2 20442 98.5592 344.6581 0011869 299.1042 60.8939 14.30204790347071
FO-20
1 20480U 90013C 96260.05770931 -.00000016 00000-0 46131-4 0 09236
2 20480 99.0185 267.6253 0539979 278.5922 75.4382 12.83234572309543
AO-21
1 21087U 91006A 96260.07051492 .00000093 00000-0 82657-4 0 07559
2 21087 82.9399 254.4392 0034555 315.0484 44.7875 13.74571715282497
UO-22
1 21575U 91050B 96260.12403887 .00000012 00000-0 18384-4 0 07169
2 21575 98.3435 323.7681 0008080 359.1356 0.9818 14.37035864271122
KO-23
1 22077U 92052B 96259.75304520 -.00000037 00000-0 10000-3 0 06096
2 22077 66.0789 359.8347 0015180 276.0310 83.8977 12.86297949192459
KO-25
1 22828U 93061F 96260.13283372 .00000045 00000-0 35371-4 0 04923
2 22828 98.5731 334.2683 0011236 315.1155 44.9175 14.28151597123098
IO-26
1 22826U 93061D 96260.10316626 .00000004 00000-0 18984-4 0 05104
2 22826 98.5726 334.1684 0009909 331.2335 28.8317 14.27812395154972
AO-27
1 22825U 93061C 96260.11377446 -.00000000 00000-0 17466-4 0 05102
2 22825 98.5737 333.9951 0008994 331.4107 28.6597 14.27703450154967

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 21, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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1830. Indiana Repeater/ATV/Packet APRS Balloon Launch II

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: h1riley@umassd.edu
Message-ID: <51n587$7pi@gatekeeper.umassd.edu>
Source record: 21503

This is a repeat performance of the very successful launch which
took place Sept. 7 near Kokomo, IN.

CENTRAL INDIANA REPEATER/ATV/GPS PACKET BALLOON LAUNCH

Region: Central Indiana

Date/Time: Saturday, September 21 / 7:00-8:00 AM
Eastern Standard Time (Indiana local time),
8:00-9:00 AM EDT, 12:00-13:00 UTC

Location: New Augusta, Indiana (Indianapolis suburb
about 7 miles northwest of downtown)

Other states the
signals will
easily reach: Ohio, Illinois, Michigan, Kentucky

Site Coordinates: approximate for initial antenna heading;
(not for navigating to launch site)
39' 53" North Lat.
86' 14" West Long.

ATV: 439.25 MHz AM NTSC from live camera;
VERTICAL polarization.

VHF/UHF Repeater: Input - 144.30 MHz FM
Dual Output - 444.85 MHz FM
- 52.525 MHz FM

Telemetry: 446.00 MHz FM AX.25 1200 baud packet
GPS/APRS position data

HF Net: 3.869 - 3.871 Mhz SSB

Local repeater
talk-in: not yet determined

Other notes: all antennas vertically polarized

---
launch data courtesy of Malcolm Mallette, WA9BVS
malletem@trader.com

Please email me news of upcoming balloon launches and post-flight
reports for distribution on the Net.

Hank Riley, N1LTV
h1riley@umassd.edu

1831. Re: FLSATCOM - UFO Satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: paul@termcon.demon.co.uk
Message-ID: <323f1db7.2573839@news.demon.co.uk>
Source record: 21504
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.space,rec.radio.scanner

On 16 Sep 1996 04:02:46 GMT, "Paul Britton" <paulbr@woodslane.com.au>
wrote:

>
>Does anyone have any information on what frequencies the new series of
>FLSATCOM satellites now called UFO (UHF Follow On) operate on. I am still
>get transmissions on the 261MHZ band but I would like an updated list of
>frequencies - band plans, or can anyone suggest some good reading material,
>all help appreciated
>
>Paul
>curator@ozemail.com.au

Hi Paul, this was recently posted the the UK scanner listserver

For those interested in UHF-SATCOM and the more technical issues I
suggest pointing your browser to http://bbs.itsi.disa.mil:5580/T3564.
There are some interesting MIL-STD documents available here. There is
complete UHF SATCOM freq-list in Appendix C of m188-183.zip This
document is about DAMA networks on SATCOM, all very
interesting if you are in to this sort of thing.

Cheers PaulJ

--
Paul Jones Email:paul@termcon.demon.co.uk | paul@termcon.powernet.co.uk
Home:WWW:http://www.termcon.demon.co.uk/
Work:WWW:http://www.british-airways.com/
UK Radio Scanner Listserver listserv@termcon.demon.co.uk subject:SUB SCANNER

1832. ARLS014 Shuttle carries three hams

Newsgroup: rec.radio.amateur.space
Date: 1996-09-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls014.1996@arrl.org>
Source record: 21505
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS014
ARLS014 Shuttle carries three hams

ZCZC AS22
QST de W1AW
Space Bulletin 014 ARLS014
From ARRL Headquarters
Newington, CT September 17, 1996
To all radio amateurs

SB SPACE ARL ARLS014
ARLS014 Shuttle carries three hams

Three hams are aboard space shuttle Atlantis, which was launched at 0854 UTC Monday morning. Astronauts aboard include Jay Apt, N5QWL; Carl Walz, KC5TIE; and John Blaha, KC5TZQ. Blaha will spend 120 days as a resident on the space station Mir, replacing Shannon Lucid, who has been living on Mir for the last six months. The shuttle will dock with the station on September 19 at 0317 UTC.

STS-79 is carrying the Shuttle Amateur Radio Experiment (SAREX) payload in Configuration M. Configuration M is voice-only operations on a downlink frequency of 145.840 MHz FM. Voice uplinks are on 144.45 and 144.47 MHz. Packet radio is not on Atlantis this mission. SAREX equipment was to be set up early in the flight. The crew has three prearranged contacts with schools: Andover Middle School in Andover, Kansas; Immaculate Conception Elementary School in Celina, Ohio; and the Royal School For Girls in Haslemere, Surrey, England. The students have been preparing for their contact for several months. These contacts will occur after the shuttle has docked with Mir. Random contacts will also be made with the ''ham'' community.

Amateurs should check W1AW bulletins and AMSAT SAREX bulletins for Keplerian elements and information about possible random contact opportunities. SAREX operating frequencies and additional information can be found on the ARRLWeb SAREX page, http://www.arrl.org/sarex/.
NNNN
/EX

1833. Re: Is SAREX on STS-79??

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <51nh9j$l65@paperboy.ids.net>
Source record: 21506

John Jordan, rb@cyberhighway.net (KB7VZL) asked -
>Is SAREX on STS-79??

Not only yes, but heck yess. Dr. Jay Apt N5QWL is one of the *MOST*
enthusiastic ham astronauts.

Do remember that the radio is a dual-purpose piece of hardware, and the
priority is for shuttle-to-Mir communications. It's the SAREX-M
configuration which is voice only.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET
```
__ __^__ __________
| \ +---/ \---+ (=========
|____\___________ +---\_____/---+ //
>____)| | \__ \ \______//___
>/ |________| \ [ _____\
>|____________________\ \_______/
```
Roger, go at throttle up CHR$(32) the final frontier

1834. Re: FLSATCOM - UFO Satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: unclebob@ripco.com
Message-ID: <Dxwt73.EnK@rci.ripco.com>
Source record: 21507
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.space,rec.radio.scanner

Paul Britton (paulbr@woodslane.com.au) wrote:

: Does anyone have any information on what frequencies the new series of
: FLSATCOM satellites now called UFO (UHF Follow On) operate on. I am still
: get transmissions on the 261MHZ band but I would like an updated list of
: frequencies - band plans, or can anyone suggest some good reading material,
: all help appreciated

: Paul
: curator@ozemail.com.au

September '96 PopComm lists 261-263Mhz and 269-270mhz. Commercial
satellites leased to supplement these are Lesat, Gapsat and Marisat using
240-399Mhz.

--
* *

Uncle Bob.............unclebob@ripco.com

1835. GET AN ANONYMOUS EMAIL BOX!!!!!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: ben there <bull@bbbn.com>
Message-ID: <01bba542$9c98ba20$37a5b9ce@rwwatkin.cswnet.com>
Source record: 21508

FINALLY YOU CAN HAVE A TOTALLY ANONYMOUS IDENTITY ON THE INTERNET. As we all know one of the best providers of this, anon@anon.penet.fi, just discontinued its anonymous e-mail service. Many have done this recently. The ones left are often so hard to use and set up, it takes a rocket scientist to figure it out. Penet was not exactly easy. Well that's where we come in. We offer an advanced anonymous mailing service, The way it works is so secret that "I could tell you, but then I'd have to kill you". I can tell you this much about it. Once we set you up with an account you can send and receive e-mail all you want with the knowledge that your mail never even goes onto your web server at all. You will have an off site e-mail box that handles your messages. The site where your email is handled does not even know who you are. we don't want to know who you are. Not even when setting up your box. Not only that. When logging on to this web site, you will have already gone through channels that strip your identity away before logging on to the site. After all, how can anyone know who you are when there are no trails back to you.

This has nothing to do with your present email provider. Your mail you receive on this account, never goes too your present email site. You do not even use your present email software to retrieve your mail. You will simply use your present web browser (like Netscape or Microsoft Internet Explorer) to connect to a web site based email site. You will then do your email send and receiving , right there on the site. You will have of course, already gone through an undisclosed path to the site.

Here is the beauty of our service. We provide you with easy. Did I say easy!!!!!!! Yes an easy anonymous web presence that until now has been a nightmare. Have you ever tried setting up your own anonymous email before. I've been ready to trough my computer trough the wall several times. It is certainly not easy for most people to get it right. All the work will be done for you. When we set you up you will be sent a link that will take you through the whole complicated trail. You can simply double click on a desktop icon or put the path in your bookmarks or favorites. You connect right to the site, where you are asked for your nickname and password. Then you are in. You compose and send email right there on a very easy to use web page.

Now I am going to say something that is said to often, but it definitely applies in this case. This is so easy to use that a 5 year old can do it. I know because I showed my little boy how. Within 10 minutes he could log on a nickname and password and could have composed his on mail, if he had known how to read and right. It is really that simple. No more "enon-x " this, and "enon-send" that. I never could get all that crap right.

The best is that you can rest freely in the knowledge that some busy body is not tracing your activities back to your server, where it is very easy to identify your identity. Unfortunately most people do not realize just how easy it is to identify you, with the present system of anonymizers. If you send and receive email on your service providers system, then you can be traced. Unfortunately some extreme examples of this have occurred in China, where people have actually lost there life in a struggle to gain a democracy there. They thought they were safe using the anonymous sites out there. That cannot happen with this service, because no one can just walk in and seize the records of the users names on the system. There are no real ones the way i will set it up for you. This happened at anon.penet.fi at least twice, as I understand it.

You might wonder if this Email service supports file transfer. You bet it does. If your Web browser supports the attachment of documents and files (e.g. Netscape Navigator 2.0 and later or Mirosoft Internet Explorer), you can send them. Due to limitations of bandwidth requirement to send and receive documents, only one attachment can be sent with each Email message. You may also receive attachments sent to your account. They show up as downloadable hotlinks which can be downloaded to your personal computer by clicking on them. Gif images are automatically deciphered by the system and displayed in the browser window.

So what are you waiting for. All the cost to you is our processing fee of $29.95. That is it. All the free email you want to send from then on. It is possible to do this do to the fact that the web site is advertiser supported, as are others popular sites, you see on the Web. Just send a money order or cashiers check made out to:

Richard Watkins
300 Rustic Hills
Royal, AR. 71968

Let me know by Email as soon as you decide, so I can be processing your account. This is not needed, but we can have you up and running sooner. We can then Email you with your Email address and password. Note you can change the password once you log on. We need to know what NICKNAME you would like. Please give us several choices, as many are already taken. We might have to add a number to the end. Such as: foxygirl22 Your nickname may be up to a total of 12 letters and numbers.

email it to : rwwatkin@cswnet.com

Please label subject line of email to us as: new email cust

Please make note that I am also trying to put together an anonymous snail mail service, for those that wish to send letters and packages. I aready have it about worked out. If you would be interested in this, please email me for more information as it comes to be.

1836. Shuttle on sarex

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <51ojhs$jev@news.monad.net>
Source record: 21509

Hi all Talked to John Blaha aboard the shuttle this morning at 6:34 EDT on the 144.45 uplink the signals were poor till he passed by then got
better but never got real good..
He was real nice and talked to me for several minutes.. hope youi all make your sarex contacts... 73 DAVE N1PPP

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

1837. DO-17

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <51p0j3$p7d@faatcrl.faa.gov>
Source record: 21510

Hello, I'm trying to collect telemetry data from DOVE. I get several messages each pass, but the data looks to be corrupted, it can't be read by several different programs, it's not ascii, and I can't decode it from a hex listing using a table from the ARRL sat book. Could it be possible there is a problem with the satellite? Anybody have a clue what the problem might be, let me know. Thanks for reading this post.

73 Jeff KB2WQM

1838. Re: Need Info

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <51p06b$p7d@faatcrl.faa.gov>
Source record: 21511

Richard, try HRO they sell them so they should have an address
and phone number for you.

73 Jeff KB2WQM

1839. ATV shuttle rebroadcast in Connectitut

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: Keith@unix.asb.com
Message-ID: <DxxvrC.G6L@news2.new-york.net>
Source record: 21512

```
Is there an AMATEUR Television Shuttle Rebroadcast in
the State on Connectitut ?

Keith
```


|===|
| • Keith@unix.asb.com == SLIP-PPP Internet Address • |
| • Keith@asb.com == BBS Internet Address • |
| • Http://www.asb.com/usr/keith == WWW Page URL Address • |
| • N2NJS@KC2FD.NY.USA.NA == Ham Radio AX25 Packet Address • |
| • 70302,2701 == CompuServe Address • |
| • Knipper@worldnet.att.net == ATT WorldNet Internet Address • |
| • Fknipsch@suffolk.lib.ny.us == My Free Internet Shell Account • |
|=== |

1840. RS-12 Robot Freqs????

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: Steve Kubisch <kub@pacificorp.com>
Message-ID: <3240654B.486C@pacificorp.com>
Source record: 21513

Does anyone know the current uplink and downlink freqs
for the robot on RS-12.

73,
Steve -WW7Y-
kub@pacificorp.com

1841. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <DxyC3E.G8r@cix.compulink.co.uk>
Source record: 21514

You have a problem, it should be 10 watts.....

1842. Re: Need Info

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <3240CB6B.793@wco.com>
Source record: 21515

Richard Bascom wrote:
>
> I will like to get the address of the landwere pre-amp. for Satellite
> operations, I am not sure if thats spelled correctly.
>
> --
>
> Richard Bascom
> p000655b@pbfreenet.seflin.lib.fl.us

richard,it's landwehr and they are sold by henry radio in l.a.
73 steve

1843. Ham-Space Digest V96 #289

Newsgroup: rec.radio.amateur.space
Date: 1996-09-18 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609181948.AA153976109@relay2.geis.com>
Source record: 21516

GE Item Number: 1770364
Original Msg Id: 383898
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #289
System: MARLBORO#
Date: Wed 18-Sep-96 19:27

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1844. Re: FS: 2 meter Preamp

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <51rlgd$sdd@faatcrl.faa.gov>
Source record: 21420

Bob, I'm interested in purchasing your preamp. I tryed to
contact you via email, but the address you posted was invalid.
Please email me back with your phone number so we can make
arrangements. I agree with your terms of sale.

73 Jeff KB2WQM

1845. Re: Ham-Space Digest V96 #290

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: macmike@netnitco.NET
Message-ID: <9609192131.AA14907@aegis.nitco.com>
Source record: 21421

I am interested in getting a Macorbit calculator anything out there?

-.. . .-- ..-. ..... .--. .-.. --- .-- . .-.. .-.. .. -.
Mike Hughes - ETL List Manager - WF5P 211 Woodland Drive
Preacher Lowell, IN 46356.
E-mail: macmike@netnitco.net (219) 696-2436 or 696-3637 H
. -- .--. --- .-. - .- -. - .. -. ..-. --- .-. -- .- - .. --- -.

To Receive the latest most upto date list of churches looking write to:
etl-churchlook@genesis.acu.edu
To Receive list of Preachers looking write:
etl-preacherlook@genesis.acu.edu
Lists are updated as we receive new listings. Do your part to help!

... .- -- - . ... - --. .. ...- . -. .. -. --.- ..- .. .-. . ...-.
.
EOF

1846. HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: rivero@accessone.com
Message-ID: <51sk9n$ho@pulm1.accessone.com>
Source record: 21422
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

I can't believe it! There doesn't seem to be a relay for the shuttle audio anywhere in the Northwest. The AMSAT list shows no entries for the states of Washington, Oregon, Idaho, or Montana.

Major bummers!

Does anyone know of a shuttle repeater, either shortwave or VHF operating in the vicinity of Boeing Field?

Please email and post.

Thanks

--
PIXELODEON PRODUCTIONS | Special Effects / Documentary Films
Mike & Claire - The Rancho Runnamukka http://www.accessone.com/~rivero
None of the polls predicted the huge republican sweep in 1994!!!!!!

1847. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: Rusty Countryman <byronc@pacifier.com>
Message-ID: <32421569.2082@pacifier.com>
Source record: 21423
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

Michael Rivero wrote:
>
> I can't believe it! There doesn't seem to be a relay for the shuttle
> audio anywhere in the Northwest. The AMSAT list shows no entries for
> the states of Washington, Oregon, Idaho, or Montana.
>
> Major bummers!
>
> Does anyone know of a shuttle repeater, either shortwave or VHF
> operating in the vicinity of Boeing Field?
>
> Please email and post.
>
> Thanks
>
>
> --
> PIXELODEON PRODUCTIONS | Special Effects / Documentary Films
> Mike & Claire - The Rancho Runnamukka http://www.accessone.com/~rivero
> None of the polls predicted the huge republican sweep in 1994!!!!!!Try the Houston
Chronicle at
http://www.chron.com/content/interactive/space/
They always have RealAudio of the Shuttle flights.

1848. GET AN ANONYMOUS EMAIL BOX!!!!!!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.366.39@anjo.com>
Source record: 21424

RE: GET AN ANONYMOUS EMAIL BOX!!!!!!!!!!!!!!!!!!!!!!
BY: ben there to ALL on Wed Sep 18 1996 09:20:17

> From: "ben there" <bull@bbbn.com>
> Newsgroups: rec.radio.amateur.space
> Organization: CSW Net, Inc.
> Message-ID: <01bba542$9c98ba20$37a5b9ce@rwwatkin.cswnet.com>
>
> FINALLY YOU CAN HAVE A TOTALLY ANONYMOUS IDENTITY ON THE INTERNET....

Tell me again why I would possibly want one of these? I don't spam 3000 NG's at a time, I don't send off Get-Rich-Quick pyramid-postings, and I when I decide to say something I'm not ashamed to let my real identity be known.

So how would I benefit from a yellow-belly@cowardly.custard.com address?

I thought not...

73, de Gus 8P6SM
Barbados - The easternmost isle.
September 19!

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

1849. WA3NAN SHUTTLE RE-BROADCASTS ?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: ve7ehp@mail.netshop.net
Message-ID: <51qqb9$r46@noc.van.hookup.net>
Source record: 21517

ARE THEY RE-BROADCASTING THE SHUTTLE TRANSMISSIONS ON THE AMATEUR
BANDS FOR THE STS-79 FLIGHT.
Please reply to:
Don McConnell or
Barb Hetherington at,
ve7ehp@mail.netshop.net

1850. NORAD Two-Line Orbital Element Set: Space Shuttle (96261.39480309)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <51q99d$9c3@blackbird.afit.af.mil>
Source record: 21518

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96261.39480309 .00002806 00000-0 37580-4 0 6691
2 16609 51.6523 19.4478 0009736 179.6485 180.4557 15.61936602604373
STS 79
1 24324U 96057A 96262.25000000 -.00000303 11318-4 58513-5 0 76
2 24324 51.6513 15.2957 0035055 343.7333 75.0886 15.99779086 309
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1851. Ham-Space Digest V96 #290

Newsgroup: rec.radio.amateur.space
Date: 1996-09-19 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609191646.AA079551569@relay2.geis.com>
Source record: 21519

GE Item Number: 308698
Original Msg Id: 384770
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #290
System: MARLBORO#
Date: Thu 19-Sep-96 16:35

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1852. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: jimeagle@execpc.com
Message-ID: <51st42$25s@newsops.execpc.com>
Source record: 21425

In article <414.327.39@anjo.com>, amcleod@anjo.com (Angus John Mcleod) says:
>
> RE: Re: Indiana repeater/ATV/Packet APRS Balloon Launch
> BY: Jim Eagleson to ALL on Sat Sep 14 1996 00:54:51
>
> > > > 144.5 may be the lowest repeater input frequency according to a band
> > > > plan, but as long as they are not causing harmful interference, there
> > > > is no LEGAL requirement why they can't use 144.300 as a repeater input.
> > > >
> > > > Mark
> > > > <KB9KHM>
> > >
> > >That attitude exemplifies all that is wrong with Amateur Radio.
> > >
> > >73, de Gus 8P6SM
> > >Barbados - The easternmost isle
> >

My comment...

> > Which attitude? Pointing out use of an inappropriate frequency use,
> > or using an inappropriate frequency without consideration for other
> > users of the band?
> >
> > Jim WB6JNN/9, Wisconsin, USA
>
Gus responded to my comment...

>The latter.
>
>For example: My amateur ticket allows me - and all 8P - to run AM,
>SSB, etc, in fact all legal modes, on the 30-meter band. This would
>obviously be an extremly inconsiderate thing to do, but it would be
>perfectly legal.
(snip)
>But the amateur radio fraternity is entirely too full of people who would
>relish the opportunity to do just that, and the rest of the world be
>damned!
>
>QRO AMTOR on the QRP frequencies, Packet/QRM machines (snip etc. etc.)
> and any suggstion that this isn't advisable is met with talk of
>"the right to free speech" and other such twaddle, plus threats of
>legal action.

Yes, we in the States have adopted some pretty irrational ideas about "free speech". One used to have to try to be civil, at least!

>Well, in 25 years (some say 10 - they may be right) it'll all be over
>anyhow, with the closure of the amateur bands. And I have a pretty
>good idea who will be to blame, since I'd say 90% of this short-sighted
>behaviour I have observed comes from a single quarter. But then, perhaps
>I am getting a false picture, since geography obviously affects who I
>hear most and may be distorting the picture.
>
>73, de Gus 8P6SM
>Barbados - The easternmost isle

My response to Gus's latest response...

I assume you are refering to some folks just north of you (i.e. in the USA). From my persepective, however, I seem to hear some really strong signals from South America at times when KW stations from the states are coming in pretty weakly. Someone's running more power than they ought.

Of course there are also the maritime mobiles who got licenses in certain central American countries without benefit of anything more than the appropriate "fee".

There was also the issue on OSCAR 10 and 13 when they were visible to Europe after which most QRP stations just didn't bother to try anymore. AGC on the bird depressed the gain so low due to high power operators that stations with only 10-50W had no chance!

No, I don't think U.S. hams are the only problem users of the ham bands!

We need to be a "we" not an "us" and "them" or we will degenerate into chaos. This was (I intended, at least) the point of my posting... co-operation, not finger pointing. I felt the original post came much closer to "finger pointing" than to a constructive suggestion that something different could have been done with regard to frequency choice.

As to loss of ham bands, it will be governments like my own who insist on selling spectrum to the highest bidder who push that one on us, not poor operators. We already have international companies who hold no allegiance to any country who control most of our essential services such as communications. Buying control of the airwaves used to be unthinkable, but now it has become a national passion.

I still maintain, however, that BOTH attitudes in the original postings were inappropriate. If not in content, then in spirit. In a short posting I took a chance that my point might not come across. Perhaps it didn't.

Jim WB6JNN/9 jimeagle@execpc.com

1853. NORAD Two-Line Orbital Element Set: Space Shuttle (96263.05828237)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <51st1n$e2a@blackbird.afit.af.mil>
Source record: 21426

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96263.05828237 .00003253 00000-0 42555-4 0 6721
2 16609 51.6552 11.0632 0009620 184.0847 176.0032 15.61963704604629
STS 79
1 24324U 96057A 96263.16666667 -.00000273 00000-0 30055-5 0 129
2 24324 51.6554 10.5173 0009511 185.1720 64.7738 15.61950613 440
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1854. Re: FLSATCOM - UFO Satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <51u4gd$g2f@newsbf02.news.aol.com>
Source record: 21427
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.space,rec.radio.scanner

Hi everybody !

Any UHF-Milsats recepcion reports from people in Europe ?

I wonder if FLTSATCOM 8 is still acitve and receivable here
in Europe (or in the eastern USA).

Would like to hear from people who received or still receiving
signals on that band. Especially I am interested in observed
types of modulation (as far as I know most of the comms are
in FM, but what about SSB which might be more efficient ?)
and the types of receivers and antennas used....

Unfortunately my RX is a little bit "deaf" in that frequency range ! :-)

Best 73 and good monitoring.....

Oscar, DJ0MY

1855. Re: Indiana repeater/ATV/Packet APRS Balloon Launch

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Message-ID: <32429469.4402@expert.cc.purdue.edu>
Source record: 21428

Jim Eagleson wrote:

> I still maintain, however, that BOTH attitudes in the original postings
> were inappropriate. If not in content, then in spirit. In a short
> posting I took a chance that my point might not come across. Perhaps it
> didn't.
>
> Jim WB6JNN/9 jimeagle@execpc.com

Ok, lets look at it this way:

In the original message, the person who posted it complained that
the INPUT frequency should not be used for the balloon since it
did not fall within the band plan for repeater inputs on 2 meters.
However, using a standard repeater input on a balloon that potentially
covers an 8 to 10 state area would be insane! The balloon would be
constantly jammed by all the local repeaters who's opperators would
have no idea that there was a balloon operating on that frequency,
rendering the cross band repeater useless. The balloon would have to
put up with this jamming since the local repeaters are coordinated
and the balloon is not. Having the INPUT in a part of the 2 meter
band not set aside for repeater inputs would cause interference to
no one. Individual operators would have to make sure that 144.300
is not in use in their area before contacting the balloon (it is
up to these people not to cause interference).

So back to the origional post --- what's the big deal about using
144.300 for an input frequency?

Which brings me back to my post. I was not trying to display an
'attitude', mearly trying to address the facts as they apply to
this case. I live 5 miles from the launch site of the first
balloon and have heard no one in this area rase any complaints
about the selected input frequency.

Mark
<KB9KHM>

1856. Current Shuttle/MIR Sarex Freq's ???

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: kleite@gtec3.ndhm.gtegsc.com
Message-ID: <51ue1v$690@europa.chnt.gtegsc.com>
Source record: 21429

Hi,

I am just curious to know what the current uplink/downlink freqs are for the current shuttle/mir ????

Thanx in advance for the info ...

Keith

==========
Statements here are mine and do not reflect the opinions of my employer
==========

Keith J. Leite, AA1JF Email:kleite@gtec3.ndhm.gtegsc.com
GTE Government Systems
Communications Systems Division
Information Technology Network Operations
400 John Quincy Adams Rd.
Taunton, MA 02780 USA
==========

"THROUGH THE GATEWAY; OFF THE REPEATER; OVER THE T-1 BACKBONE...NOTHING BUT NET!!!"

1857. Ham-Space Digest V96 #292

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609201633.AA018607190@relay2.geis.com>
Source record: 21430

GE Item Number: 7754015
Original Msg Id: 385513
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #292
System: MARLBORO#
Date: Fri 20-Sep-96 16:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1858. Ham-Space Digest V96 #291

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609201832.AA298544358@relay2.geis.com>
Source record: 21431

GE Item Number: 1374975
Original Msg Id: 385607
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #291
System: MARLBORO#
Date: Fri 20-Sep-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1859. Mir QSO

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: Bob Snyder <Bob.Snyder@mci.com>
Message-ID: <3242E515.5383@mci.com>
Source record: 21432

Does anyone know if cards are available for Mir QSOs?

1860. European Satellite Observers Meeting

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: bdp@ipp-garching.mpg.de
Message-ID: <51umi8$5iuc@sat.ipp-garching.mpg.de>
Source record: 21433
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

I would like to draw the attention of everyone interested
in visual satellite observing to the second edition of the European
Satellite Observers Meeting (Eurosom), which takes place in Ghent,
Belgium during the weekend of October 19/20, 1996.

This rather informal meeting will feature (english language) talks
by experienced satellite observers from the United States, Sweden,
United Kingdom, Germany, France and Belgium. Video-observations of
high-resolution observations of e.g. Shuttle-MIR; Shuttle and external
tank re-entries; artificial comets; several tethered satellites;
the Galileo Earth flyby at 600,000 km range; etc. will be shown.
The calculational and software aspect of our hobby will also receive
attention, as will advanced observing programs of positional,
flash period and space debris measurements or observations.

Registration costs are 400 BEF (about 14 US $) which includes a copy
of the proceedings and should be done NOW. You can register through WWW.
Check out the Eurosom Home Page for details:
http://www.rzg.mpg.de/~bdp/eurosom.html

Cheers,
Bart

Bart De Pontieu -- Max-Planck-Institute for extraterrestrial Physics, Garching
bdp@mpe-garching.mpg.de -- http://www.rzg.mpg.de/~bdp/vsohp/satintro.html
Join us at Eurosom 2, Oct 19/20 1996 -- http://www.rzg.mpg.de/~bdp/eurosom.html
BWGS-coordinator -- Flash editor -- SeeSat-L administrator -- would-be-observer
----

1861. MIR future ham activity? Anyone Know?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <32430B85.573E@lanl.gov>
Source record: 21434

Now that non-licensed Shannon Lucid has left MIR, does anyone know of
any plans for future MIR ham activity? Is John Blaha a ham by any
chance? I guess if he's interested he might continue Lucid's unlicensed
operations at any rate... ?
--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
|My views rarely (if ever) reflect those of my employers|
http://nis-www.lanl.gov/~jdport/

1862. NORAD Two-Line Orbital Element Set: Space Shuttle (96263.05828237)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <51v7e6$os2@blackbird.afit.af.mil>
Source record: 21435

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96263.05828237 .00003253 00000-0 42555-4 0 6721
2 16609 51.6552 11.0632 0009620 184.0847 176.0032 15.61963704604629
STS 79
1 24324U 96057A 96264.25000000 -.00000279 00000-0 29036-5 0 148
2 24324 51.6506 5.0541 0007150 192.3024 33.4833 15.61988144 617
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1863. SETI/home satelitte dish

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: egroff@q.continuum.net
Message-ID: <egroff.52.0013833F@q.continuum.net>
Source record: 21436

Hi:

A while back I came across a web site that talked about using satellite dishes to monitor for extraterrestial radio communications. I have lost the URL and wonder if anyone can help me out.

Thanks,

Errol Groff
H.H. Ellis Technical School
Danielson, CT

1864. Re: Mir QSO (0/1)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <51us34$prr@news.monad.net>
Source record: 21437

> Bob Snyder <Bob.Snyder@mci.com> writes:
> Does anyone know if cards are available for Mir QSOs?
>
>>>>
sure N6JLH in california.. see attachment.. 73

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

1865. BEYOND TECHNOLOGY

Newsgroup: rec.radio.amateur.space
Date: 1996-09-20 00:00:00 UTC
From: GetFree@mail.com
Message-ID: <32430235.31EB@mail.com>
Source record: 21438
Cross-posted to:
rec.music.makers.choral,rec.music.makers.guitar,rec.photo.technique.art,rec.radio.amateur.space,rec.skiing.resorts.misc

Taking 5 minutes to read what follows can change your life :

I saw an article in an internet newsgroup telling me I could make $50,000 within a month for an investment of only $5.

I thought it was a huge joke. I spoke to my wife, attorney and friends about it, and they all agreed it was some kind of scam. I can't stand scams, because usually someone gets burned, and I didn't want it to be me. Of course, I rejected the idea at first. after a short period of about two weeks ,I thought : "I have already heard of such things. But on the Internet ?!?!? ". I decided that even if I had to throw $5 into the fire, I wouldn't mind it that much, and gave it a try .After all I needed a LOT more than five dollars.

Two weeks later, I began receiving money -- every day! I could not believe it! Soon, hundreds, and then thousands of dollars began to roll in. Within 4 weeks, I had received a total of $32,445! It came from everywhere in the world. My bank account has changed its "-" into a big "+" (++++)!!!,I bought myself a car and things I wanted for a long long time for my wife and kids!

If you follow the three steps below, there is no reason why the same shouldn't happen to you! This is a legitimate investment opportunity. You invest $5, and you receive a return on your investment. So does the next investor. NOT ILLEGAL, NOT A CHAIN LETTER- PERFECTLY LEGITIMATE.

If you are not interested, then don't participate, but please print this article and pass it on to someone who may be interested, so they can take advantage.

The procedure is simple: 1) Write your name and address, an e-mail address, and the name of the newsgroup where you learned of this on 5 sheets of paper. Below that, write the words, "Please add me to your list." Fold $1 note or bank draft or money order in each piece of paper and send them to the following 5 addresses.:

1. Oleg Gorbik,
10834-97 St.
Edmonton, AB, T5H 2M3 CANADA

2. Nir Levi,
PO BOX 342
Yavne, ISRAEL

3. Landon
#1 Lakeway Drive
Conroe, Tx 77304 USA

4. Olivier Arcadipane
237 rue Francois Andre
7390 Quaregnon BELGIUM

5. Beyond Technology
5641 Apgar Street
Houston, Texas 77032 USA

2) Now remove the top name from the list, and move the other four names up. In other words, #5 becomes #4 and so on. Put your name as the fifth one on the list. Use a simple text editor such as Notepad, in your "accessories" window (If you have MS-Windows),or DOS editor. In fact, any editor will do.

3) Post the article to at least 200 newsgroups. There are 17,000, so it shouldn't be hard to find that many. Try posting to as many newsgroups as you can, and the bigger the newsgroup is, the more people are to see your message!

You are now in the an order services business, and should start seeing returns within a week or two. Of course, the more newsgroups you post to, the greater your return is. If you wish to remain anonymous, you may use a psuedonym, call yourself "The Manager", "The Boss", whatever but make sure your address is correct.

Now, here is why the system works:

-Of every 200 posts I made, I received 5 responses. Yes, only 5. You make $5 for every 200 posts with your name at #5.

-Each person who sent you $1 now also makes 200 additional postings with your name at #4. ie. 1000 postings. On average therefore, 50 people will send you $1 with your name at #4. $50.

-Your 50 new agents make 200 postings each with your name at #3 or 10,000 postings. Average return 500 people = $500. They make 200 postings each with your name at #2=100,000 postings=5000 return at $1 each=$5000.

-Finally, 5,000 people make 200 postings with your name at #1 and you get a return of $50,000 before your name drops off the list. AND THATS IF EVERYONE DOWN THE LINE MAKES 200 POSTINGS! Total income in one cycle=$55,000.

From time to time, when you see your name no longer on the list, you take the latest posting that appears in the newsgroups, and send out another $5, and put your name at #5, and start posting again. Remember, 200 postings is only a guideline. the more you post, the greater the return.

Lets review why you should do this. THE ONLY COST IS $5. Anyone can afford $5 for such an effortless investment with such SPECTACULAR RETURNS.

Some people have said to me, "what happens if the scheme is played out and no one sends me any money? "Big Deal, so you lose $5-but what are the chances of that happening ?? Do you Realize that NOBODY cares for the LEGAL chance of winning such a BIG money as 50,000.00 $$$$???? and all for a microscopic investment of five separate dollars? just think of all of the new Internet users that join the net every day!!!

There are millions of internet users, and millions of new net surfers every month !!! This is the great plus of the Internet, people all over the world can hear you and listen carefully if you talk reasonably. Everyone will take that chance ! I agree, If it wasn't the Internet, and was a small circle of people, the chance wouldn't have been so small. the amount of money had to be 200 times bigger, and the chances were zero. It wouldn't succeed.

But here, on the Internet, it is a giant village, where new thousands of members join in every day ! you CAN'T lose !!!!

Remember- read the instructions carefully, and play fairly. That's the only way this will work. Get a printout so you can refer back to this article easily.

Try to keep a list of everyone that sends you money and always keep an eye on the postings to make sure everyone is playing fairly. You know where your name should be.

REMEMBER-HONESTY IS THE BEST POLICY. YOU DO NOT NEED TO CHEAT THIS IDEA TO MAKE MONEY!! BESIDES,NOT PLAYING THE GAME FAIRLY IS ILLEGAL.SO LET'S BE REASONABLE AND PLAY FAIRLY,SO WE CAN ALL ENJOY THE INTERNET GOLD MINE.

GOOD LUCK FOR YOU ALL, And remember, play fair and you'll win, I don't want to mention what might happen to those who won't. AND AGAIN,SEE YOU NEXT TIME WITH SOMETHING YOU WANTED FOR A LONG TIME !!!

1866. Q? on earlier SAREX packet robot contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <32435BC5.463@ix.netcom.com>
Source record: 21439

Hello, and thanks for reading this.
Is there a place on the net to obtain lists of contacts that made it into the list of the Shuttle packet robot on earlier shuttle missions? (For those unaware, there is no packet on the current STS-79 mission, only 2m FM voice contacts.)
--
73 de Jim, KD1YV

1867. Re: Mir QSO

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: "Gary V. Smith" <gsmith@michiana.org>
Message-ID: <3243C979.70D8@michiana.org>
Source record: 21440

Bob Snyder wrote:
>
> Does anyone know if cards are available for Mir QSOs?Hello Bob,

Yes, the Russian space agency will QSL all MIR contacts. I have two QSL cards from the MIR. One for a packet contact back in '93, and the other for an FM voice contact with Shannon Lucid in April of this year. I have the mailing address around here somewhere and will e-mail it as soon as I'm able to locate it.

Ttul, tnx es 73 de
Gary - KD6RXT
South Bend, IN
-k-

1868. Re: Yaesu 736 6mtr module Q?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: kc4nhb@iu.net
Message-ID: <3243adcf.16255225@news.iu.net>
Source record: 21441
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

On Thu, 05 Sep 1996 22:54:44 -0500, "Charles H. Reichert"
<qa2696@email.mot.com> wrote:

>Mary Ellen Powers wrote:
>>
>> All,
>>
>> Does anyone know how much power the 6 meter module for a yaese 736 puts
>> out. I have one, brand new, and I can't seem to get any more that about 3
>> watts our of it. Is this correct???
>
>Not Really! The 736 should put out 25W on 6. The older 726R put out
>10W. The 736 1.2Ghz module is around 10W out.
>
>
> Chuck KD9JQ

According to my manual, the FT-736R output is 25 watts on 2 meters and
70 CM. The 6 meter module is rated at 10 watts. These figures are
about what I get when using FM, however, the reading on SSB is much
lower (yes, I am using a peak reading watt meter)

73 de Roger Snyder, KC4NHB
kc4nhb@iu.net

1869. Re: SETI/home satelitte dish

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: Jim Kelly <skeptic@netaxs.com>
Message-ID: <3243F015.78E2@netaxs.com>
Source record: 21442

Hi Errol,

Here it is:

http://seti1.setileague.org/homepg.htm

161,

Jim, KK3K
--
Jim Kelly, Amateur Radio Licensee KK3K (skeptic@netaxs.com) \
Ph.D. Candidate - Political Science - Temple University \
Member: Lambda Amateur Radio Club / \
Home Page URL: http://www.netaxs.com/people/skeptic/ / \

1870. Re: MIR future ham activity? Anyone Know?

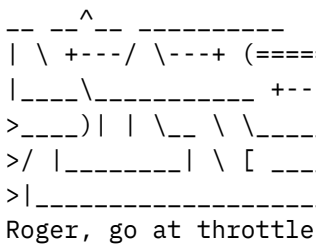
Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <520pq8$e6g@paperboy.ids.net>
Source record: 21443

In article <32430B85.573E@lanl.gov> Jim Devenport, jdevenport@lanl.gov writes:
>Now that non-licensed Shannon Lucid has left MIR, does anyone know of
>any plans for future MIR ham activity? Is John Blaha a ham by any
>chance? I guess if he's interested he might continue Lucid's unlicensed
>operations at any rate... ?

Shannon _WAS_ legally "licensed" to use the amateur radio aboard the Mir space station. I would be rather arrogant to asume that the FCC's authority extends to the Mir space station, or for that matter to any American outside of the U.S. territorial limits.

The Russian amateur radio regulations (which apply aboard the Mir space station) permit anybody aboard Mir to use their amateur radio equipment, with the station call R0MIR. It was quite legal for her to use the radio to communicate with any licensed ham on Earth.

John Blaha earned the license KC5TZQ specifically because of his Mir mission, although he did use SAREX (with a licensed control operator) on his previous mission, STS-58. During the preflight press conference he stated "I think the SAREX and amateur radio is a tremendous capability with the spaceflight. I'm looking forward to using it on Mir to talk to people all over the world when we have some free time, and telling them what we're doing on the flight and answering any questions they may have. I think it's a tremendous capability."

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

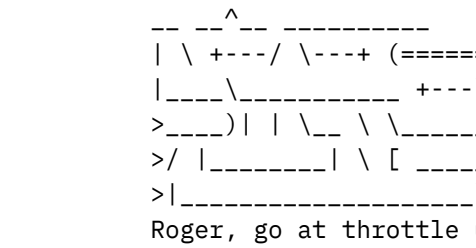
1871. Re: Q? on earlier SAREX packet robot contacts

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <520pv6$e6p@paperboy.ids.net>
Source record: 21444

In article <32435BC5.463@ix.netcom.com> KD1YV, jimkd1yv@ix.netcom.com
writes:
>Is there a place on the net to obtain lists of contacts that made it into the list of
>the Shuttle packet robot on earlier shuttle missions?

check out the Johnson Space Center Amateur Radio Club (W5RRR)'s home page
at -
http://www.phoenix.net/~mbordel/

Matt KC5BTL and Gil WA5NOM put up the number of contacts for every SAREX
flight from STS-50 to date.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

1872. Ham-Space Digest V96 #293

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609211532.AA154049950@relay2.geis.com>
Source record: 21445

GE Item Number: 8757125
Original Msg Id: 386016
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #293
System: MARLBORO#
Date: Sat 21-Sep-96 15:35

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1873. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: skarka@pobox.com
Message-ID: <skarka-2109960141240001@news.linex.com>
Source record: 21446
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

In article <32421569.2082@pacifier.com>, Rusty Countryman
<byronc@pacifier.com> wrote:

I can't believe it! There doesn't seem to be a relay for the shuttle
>> audio anywhere in the Northwest.

You can get it from my Shuttle web page...
>>

Danny Skarka, television technical director/effects designer
****
skarka@pobox.com http://www.pobox.com/~skarka
Marin County, California USA

1874. Unamsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: Arlon Nelson <anrestel@parshall.ndak.net>
Message-ID: <3244A8AE.7416@parshall.ndak.net>
Source record: 21447

Anybody out there have the uplink/downlink frequencies for the MO-30
or UNAMSAT that was just launched.

Thanks

73's
Nels
anrestel@parshall.ndak.net

1875. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: skarka@pobox.com
Message-ID: <R.skarka-2109960141240001@news.linex.com>
Source record: 21448
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

Reposting article removed by rogue canceller.

In article <32421569.2082@pacifier.com>, Rusty Countryman
<byronc@pacifier.com> wrote:

I can't believe it! There doesn't seem to be a relay for the shuttle
>> audio anywhere in the Northwest.

You can get it from my Shuttle web page...
>>

Danny Skarka, television technical director/effects designer
****
skarka@pobox.com http://www.pobox.com/~skarka
Marin County, California USA

1876. Re: MIR future ham activity? Anyone Know?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-21 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <520i5e$dg0@news.monad.net>
Source record: 21449

John Blaha is a ham, KC5TZQ, he was active on the flight up to Mir. He seems like a real interesting guy, but I'll bet he is going to be very very
busy. I expect to hear him on though.. There are plans afloat to get Mir involved in some "official scheduled " school contacts though I would
think Valeri Korzun, Flight Commander, will participate in those as he speaks English well and has been very active on the radio so far..
The packet radio has been on, but has been jammed up pretty good by people sending connect requests at improper times.. but some
messages are still getting through.. 73 DAVE

> Jim Devenport <jdevenport@lanl.gov> writes:
> Now that non-licensed Shannon Lucid has left MIR, does anyone know of
> any plans for future MIR ham activity? Is John Blaha a ham by any
> chance? I guess if he's interested he might continue Lucid's unlicensed
> operations at any rate... ?
> --
> |---|
> |Jim Devenport WB5AOX |
> |All Standard Disclaimers Disclaimed |
> |My views rarely (if ever) reflect those of my employers|
> |http://nis-www.lanl.gov/~jdport/ |
> |---|
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

1877. Re: Mir QSO

Newsgroup: rec.radio.amateur.space
Date: 1996-09-22 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <324549fb.17279764@news.cyberhighway.net>
Source record: 21450

On Fri, 20 Sep 1996 12:40:21 -0600, Bob Snyder <Bob.Snyder@mci.com>
wrote:

>Does anyone know if cards are available for Mir QSOs?

Hi Bob,

No no no, it is not necessary to QSL to the Russian Space Agency for a
MIR QSO, used to be, but not any more.. To QSL for a MIR contact
(phone or packet) simply send a SASE and your qsl info to:

DAVID G LARSEN N6JLH
P. O. BOX 311
PINE GROVE, CA 95665

He is handling QSL's for the MIR. Makes it real nice too, no more
waiting a year for a QSL out of Russia.. This info is straight from
the ARRL..

Congrats on your contact and 73's

de John KB7VZL

1878. Ham-Space Digest V96 #294

Newsgroup: rec.radio.amateur.space
Date: 1996-09-22 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609221632.AA142819941@relay2.geis.com>
Source record: 21451

GE Item Number: 2693367
Original Msg Id: 386190
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #294
System: MARLBORO#
Date: Sun 22-Sep-96 16:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1879. ARLK068 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-22 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk068.1996@arrl.org>
Source record: 21452
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK068
ARLK068 Keplerian data

ZCZC SK68
QST de W1AW
Keplerian Bulletin 68 ARLK068
From ARRL Headquarters
Newington, CT September 21, 1996
To all radio amateurs

SB KEP ARL ARLK068
ARLK068 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96264.58333333 -.00000273 00000-0 29763-5 0 154
2 24324 51.6530 3.3741 0007445 192.4164 109.0045 15.61991714 667
AO-10
1 14129U 83058B 96258.80553099 -.00000072 00000-0 10000-3 0 04573
2 14129 25.9409 189.4400 6039998 48.9314 349.2917 2.05882584071710
RS-10/11
1 18129U 87054A 96263.97653896 .00000014 00000-0 -13220-5 0 02772
2 18129 82.9233 78.4741 0010216 254.0348 105.9675 13.72369127463172
UO-11
1 14781U 84021B 96263.98633559 .00000085 00000-0 22227-4 0 09329
2 14781 97.8071 250.5287 0012229 141.6671 218.5403 14.69480301671571
RS-12/13
1 21089U 91007A 96264.06723527 .00000074 00000-0 62583-4 0 09399
2 21089 82.9231 118.9938 0029360 332.6384 27.3226 13.74073818282067
AO-13
1 19216U 88051B 96264.52869611 .00047206 12803-5 12170-2 0 2787
2 19216 57.1311 90.4223 7433801 51.1254 354.6524 2.13396686 31853
UO-14
1 20437U 90005B 96264.07403753 -.00000019 00000-0 93584-5 0 02264
2 20437 98.5410 345.2967 0010337 286.0760 73.9286 14.29931090347618
RS-15
1 23439U 94085A 96264.08960115 -.00000039 00000-0 10000-3 0 01780
2 23439 64.8140 229.6064 0159620 182.4519 177.5639 11.27528832071485
```

```
AO-16
1 20439U 90005D 96263.81835599 -.00000005 00000-0 15054-4 0 00217
2 20439 98.5554 347.4342 0010743 287.4955 72.5026 14.29984117347594
DO-17
1 20440U 90005E 96263.83120994 .00000035 00000-0 30421-4 0 00146
2 20440 98.5569 348.1324 0010850 286.3734 73.6269 14.30126449347625
WO-18
1 20441U 90005F 96263.75311607 .00000022 00000-0 25548-4 0 00297
2 20441 98.5573 347.9874 0011396 288.1204 71.8735 14.30095499347613
LO-19
1 20442U 90005G 96263.81166112 .00000010 00000-0 20589-4 0 00224
2 20442 98.5595 348.5806 0011676 286.4670 73.5199 14.30205398347646
FO-20
1 20480U 90013C 96264.03396889 -.00000035 00000-0 21598-5 0 09236
2 20480 99.0188 270.8448 0539972 269.5897 84.3337 12.83234495310053
AO-21
1 21087U 91006A 96264.00121667 .00000093 00000-0 82657-4 0 07536
2 21087 82.9394 251.5277 0034517 304.0049 55.7826 13.74572144283031
UO-22
1 21575U 91050B 96264.09282872 .00000026 00000-0 23137-4 0 07176
2 21575 98.3427 327.6134 0007757 348.5133 11.5877 14.37036460271692
KO-23
1 22077U 92052B 96263.71831020 -.00000037 00000-0 10000-3 0 06075
2 22077 66.0788 351.5327 0015215 274.9596 84.9684 12.86297989192964
KO-25
1 22828U 93061F 96264.12627778 .00000013 00000-0 22711-4 0 04871
2 22828 98.5723 338.1862 0010578 303.0994 56.9141 14.28152056123666
IO-26
1 22826U 93061D 96264.09755931 .00000000 00000-0 17653-4 0 05087
2 22826 98.5727 338.0885 0009549 319.8182 40.2297 14.27812682155549
AO-27
1 22825U 93061C 96264.10847182 -.00000011 00000-0 12953-4 0 05067
2 22825 98.5715 337.9145 0008569 318.5963 41.4558 14.27703729155539
PO-28
1 22829U 93061G 96263.79385353 -.00000026 00000-0 69888-5 0 04977
2 22829 98.5728 337.9238 0009492 304.0892 55.9354 14.28133197155538
FO-29
1 24278U 96046B 96263.70864625 .00000040 00000-0 75977-4 0 00176
2 24278 98.5782 335.3095 0351575 166.5202 194.5610 13.52626768004556
Mir
1 16609U 86017A 96264.59375022 .00011976 00000-0 14003-3 0 6749
2 16609 51.6524 3.3178 0008693 194.0874 165.9873 15.62014438604876

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
September 24, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1880. Radio Interview on CHUO FM 89.1 Ottawa, Canada

Newsgroup: rec.radio.amateur.space
Date: 1996-09-22 00:00:00 UTC
From: robbie@cyberus.ca
Message-ID: <523udn$q6q@cybernews.cyberus.ca>
Source record: 21453

I have a "regular" segment on CHUO FM 89.1 U of Ottawa Community Radio that features a focus on leisure activities people indulge in. I would like to interview people who are into amateur radio. My show will be about 15 mins, including a short interview. If your in the Ottawa area, would you like to further your hobby and volunteer for an interview? I'd like to interview people that have something a little out of the ordinary to speak-on...something that our listeners would find amusing. If you send in some text, instead of an interview, I'm sure I might make use of your material. It's fun, I have fun volunteering for this, and others would be interested in hearing what you have to say. Please e-mail me at robbie@cyberus.ca
Thanks!, and hope to hear from you!
Robbie (ve3zzr)

1881. Sat. gear 4 Sale

Newsgroup: rec.radio.amateur.space
Date: 1996-09-23 00:00:00 UTC
From: "Robert D." <rdew@mc.net>
Message-ID: <324622E0.4DF0@mc.net>
Source record: 21454

Amateur Radio Equipment FOR SALE List

Vendor Description Asking

Yaesu 736R w/ 2m and 440, tone etc. (mint) 1,400 firm
1.2g downconverter 299
Kansas City Tracker (equivalent) 299
Yeasu 5400B rotator 299
2m amplifier 180
440 amplifier 195
KLM Sat 2m22 125~
KLM Sat 435-44cx 175~
M2 Boom (fiberglass) 75~
Majara Dish Mode S 120~
PacComm PSK-1 350
PacComm DFM TNC the set
Software bundle (Sat Tracker, Nova etc.) 100

- - - -- - - - - --non-sat gear - - - - - - -- - - - - - - -- - - -- -
Bird 8-000 meters (8 of them,mint) 50firm
Thrulines 2 and 1 orifice (5) 99 ea
Slugs 2-30 2500w, 70
2-30 250w, 50
1.1-1.8g. 50
Tri-Ex 35' crank up tower - had OSCAR on it 500~
Tri-Ex spare winch 40

all prices plus shipping
~ impractical to ship - cash and carry only
e-mail to rdew@mc.net - NO NEWSGROUP REPLIES PLEASE!!!
--
Robert ... KF9ZK
surfing at 400kbs using DirecPC!

1882. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-23 00:00:00 UTC
From: Bill Stewart <stewart@peganet.com>
Message-ID: <324755B1.404F@peganet.com>
Source record: 21455
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

Michael Rivero wrote:
>
> I can't believe it! There doesn't seem to be a relay for the shuttle
> audio anywhere in the Northwest. The AMSAT list shows no entries for
> the states of Washington, Oregon, Idaho, or Montana.
>
> Major bummers!
>
> Does anyone know of a shuttle repeater, either shortwave or VHF
> operating in the vicinity of Boeing Field?
>
> Please email and post.
>
> Thanks
>
>
> --
> PIXELODEON PRODUCTIONS | Special Effects / Documentary Films
> Mike & Claire - The Rancho Runnamukka http://www.accessone.com/~rivero
> None of the polls predicted the huge republican sweep in 1994!!!!!!

I am listening to it in real time right now on 7.18530 mHz on the 40
meter band. It's also broadcast by WA3NAN on 14.29540, 21.39540 and
28.650. As I write this the shuttle just un-docked from MIR. WA3NAN
transmits from Greenbelt, MD so point your beam about 100 degrees from
Seattle.

Also, Houston Chronicle Interactive has links to NASA audio using
REALAUDIO through the internet that runs about 17 seconds off from real
time.
--
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(` o-o ') ,--,;\)
-------oooO-(_)-Oooo------- ,-'-..._\
Amateur Radio Station N4CRO _...._(_)
-------------------------- |c c)) You mess with me,
___ /`._ / / you mess with my
-==[___]\/; \/ Illudium Pew-36
`3-'| `) Explosive Space
Bill Stewart <'/||\`> Modulator ....
2324 Dover Ave __|::|
Fort Myers, FL 33907 USA (__.';|
email: stewart@peganet.com (_)

1883. Any info on JAS-2?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: mds@lexis-nexis.com
Message-ID: <527h2n$gn7@mailgate.lexis-nexis.com>
Source record: 21456

I understand in mid August JAS-2 was placed in orbit. What is the latest information on this bird. I checked the web site, but no new information, i.e. Keplerian elements, OSCAR designation, or operation status.

Anyone have any updates?

Mike Suhar
WB8GXB

1884. NORAD Two-Line Orbital Element Set: Space Shuttle (96266.70503952)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <527gsg$295@blackbird.afit.af.mil>
Source record: 21457

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96266.70503952 .00003229 00000-0 42246-4 0 6797
2 16609 51.6564 352.6658 0007458 196.2103 163.8732 15.61997922605240
STS 79
1 24324U 96057A 96267.16666667 -.00000271 00000-0 30311-5 0 238
2 24324 51.6561 350.3441 0010286 193.5128 244.2822 15.62023144 1077
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1885. NORAD Two-Line Orbital Element Sets (TLE871)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <527h0g$29g@blackbird.afit.af.mil>
Source record: 21458

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #871 -
Alouette 1
1 00424U 62049A 96263.50532114 .00000112 00000-0 12120-3 0 2297
2 00424 80.4592 190.6769 0022113 147.8216 212.4286 13.67876421695231
ATS 1
1 02608U 66110A 96265.56107778 -.00000230 00000-0 10000-3 0 9810
2 02608 14.6024 351.7975 0008730 102.2883 257.8415 1.00304293 25836
ATS 3
1 03029U 67111A 96266.26259814 -.00000124 00000-0 10000-3 0 5477
2 03029 14.9131 358.7536 0008933 260.7760 91.1341 1.00273255105733
Starlette
1 07646U 75010A 96265.78134354 -.00000136 00000-0 44008-5 0 9991
2 07646 49.8281 127.5288 0206222 189.5132 170.1828 13.82191143 92329
LAGEOS
1 08820U 76039A 96263.18531800 .00000033 00000-0 00000+0 0 2252
2 08820 109.8490 58.2044 0044042 108.4846 252.0490 6.38664647219834
ETS-2
1 09852U 77014A 96260.27515825 -.00000282 00000-0 10000-3 0 753
2 09852 13.3493 31.8689 0005895 120.5112 239.6026 1.00007534 18550
GOES 2
1 10061U 77048A 96266.67577752 .00000048 00000-0 10000-3 0 7331
2 10061 12.5006 35.9425 0012611 122.1420 272.5918 1.00249881 15424
IUE
1 10637U 78012A 96266.35385892 -.00000229 00000-0 10000-3 0 2808
2 10637 35.9305 81.5864 1377464 59.5040 290.0681 1.00209214 20907
GOES 3
1 10953U 78062A 96266.21221762 -.00000137 00000-0 10000-3 0 7133
2 10953 11.4936 38.8990 0002519 116.1334 180.8031 1.00267608 20022

```
SeaSat 1
1 10967U 78064A 96266.88559317 -.00000041 00000-0 30990-4 0 5170
2 10967 107.9928 16.8912 0002605 250.5148 109.5710 14.38122531955491
Nimbus 7
1 11080U 78098A 96262.62985525 -.00000002 00000-0 35710-4 0 6157
2 11080 98.9324 120.2672 0009791 76.0155 284.2088 13.83690436904094
GOES 5
1 12472U 81049A 96263.53093743 .00000089 00000-0 10000-3 0 9506
2 12472 8.3423 49.2230 0008760 55.2553 304.9317 1.00253942 14046
Cosmos 1383
1 13301U 82066A 96265.86591411 .00000015 00000-0 74291-6 0 5309
2 13301 82.9267 62.9078 0027376 337.0724 22.9205 13.68076682710596
LandSat 4
1 13367U 82072A 96264.61273963 .00000025 00000-0 15313-4 0 9964
2 13367 98.0650 312.5821 0006296 196.9333 163.1657 14.57185327754434
DMSP B5D2-1
1 13736U 82118A 96266.56065346 .00000058 00000-0 42838-4 0 841
2 13736 98.6253 93.3811 0009264 100.9395 259.2827 14.25803084714943
IRAS
1 13777U 83004A 96266.53724269 -.00000039 00000-0 30658-5 0 4396
2 13777 98.9678 89.9752 0011645 185.5941 174.5095 13.99264763366987
Cosmos 1447
1 13916U 83021A 96265.53760920 .00000079 00000-0 67380-4 0 6210
2 13916 82.9451 119.7895 0036494 243.5270 116.2145 13.74345074676973
TDRS 1
1 13969U 83026B 96267.05983505 -.00000308 00000-0 10000-3 0 6333
2 13969 9.1204 42.7055 0002200 127.3059 164.7932 1.00269491 22367
GOES 6
1 14050U 83041A 96262.27176714 -.00000200 00000-0 10000-3 0 5416
2 14050 7.1737 52.7391 0004000 67.0784 247.2516 1.00227566107127
OSCAR 10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 4551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354 71843
LandSat 5
1 14780U 84021A 96266.73441027 .00000011 00000-0 12758-4 0 5481
2 14780 98.3203 324.5004 0002800 8.8917 351.2328 14.57054956668165
UoSat 2
1 14781U 84021B 96265.07581670 .00000034 00000-0 13569-4 0 9140
2 14781 97.8072 251.5705 0012050 138.1115 222.1010 14.69480084671735
Cosmos 1574
1 15055U 84062A 96264.23589182 .00000058 00000-0 45265-4 0 8214
2 15055 82.9586 175.8434 0029272 76.2350 284.2065 13.73639266614030
Cosmos 1602
1 15331U 84105A 96265.42212721 .00000159 00000-0 15827-4 0 5044
2 15331 82.5332 22.8609 0020729 355.3514 4.7484 14.84784660647250
ERBS
1 15354U 84108B 96264.41715260 -.00000146 00000-0 84301-5 0 2178
2 15354 56.9959 357.6966 0007962 75.9207 284.2707 14.94976924651084
NOAA 9
1 15427U 84123A 96267.08509472 .00000069 00000-0 59801-4 0 8511
```

```
2 15427 98.9364 332.0224 0015910 38.5265 321.7040 14.13805481607466
Mir
1 16609U 86017A 96266.70503952 .00003229 00000-0 42246-4 0 6797
2 16609 51.6564 352.6658 0007458 196.2103 163.8732 15.61997922605240
SPOT 1
1 16613U 86019A 96266.73768629 -.00000045 00000-0 00000+0 0 9874
2 16613 98.8268 334.5722 0000971 45.6797 314.4459 14.19985292234156
Cosmos 1766
1 16881U 86055A 96263.46967785 .00000107 00000-0 99299-5 0 4183
2 16881 82.5173 82.3874 0020481 28.9486 331.2863 14.83760150547823
EGP
1 16908U 86061A 96266.83385784 -.00000083 00000-0 10000-3 0 1189
2 16908 50.0082 56.7948 0011464 259.8628 100.0910 12.44415011128562
NOAA 10
1 16969U 86073A 96267.01038677 .00000002 00000-0 19166-4 0 7837
2 16969 98.5293 261.2990 0014480 68.2406 292.0313 14.25002616520533
MOS-1
1 17527U 87018A 96266.17987868 -.00000043 00000-0 00000+0 0 4643
2 17527 98.9389 326.0082 0018527 64.9562 295.3538 14.00441870488561
GOES 7
1 17561U 87022A 96266.55807455 -.00000174 00000-0 10000-3 0 658
2 17561 3.2530 68.7363 0004469 315.1157 83.5412 1.00263926 18285
Kvant-1
1 17845U 87030A 96267.08886764 .00030238 00000-0 34259-3 0 7596
2 17845 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795539419
DMSP B5D2-3
1 18123U 87053A 96267.06897344 -.00000017 00000-0 13730-4 0 6038
2 18123 98.7705 95.7572 0014360 340.0273 20.0334 14.15453509478346
RS-10/11
1 18129U 87054A 96266.01795278 .00000027 00000-0 12999-4 0 2629
2 18129 82.9221 76.9639 0010324 245.9730 114.0344 13.72369402463453
Meteor 2-16
1 18312U 87068A 96266.55140086 .00000015 00000-0 23137-6 0 5109
2 18312 82.5533 274.8515 0011785 314.8910 45.1292 13.84084561459644
Meteor 2-17
1 18820U 88005A 96267.23642557 .00000019 00000-0 32574-5 0 508
2 18820 82.5434 329.1101 0017791 15.6524 344.5181 13.84761873437099
DMSP B5D2-4
1 18822U 88006A 96267.04917904 .00000011 00000-0 22929-4 0 3496
2 18822 98.3822 94.4419 0007183 77.9279 282.2703 14.23200893448491
Glonass 34
1 19163U 88043A 96265.72486563 .00000063 00000-0 10000-3 0 1166
2 19163 65.3049 82.5835 0006589 149.2956 210.7930 2.13102366 64291
Glonass 36
1 19165U 88043C 96264.37414942 .00000058 00000-0 10000-3 0 5191
2 19165 65.2780 82.5898 0002210 358.9675 1.0898 2.13102157 64884
METEOSAT 3
1 19215U 88051A 96266.52123869 -.00000075 00000-0 10000-3 0 2805
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AO-13
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2 19274 82.5184 181.6273 0019443 162.9075 197.2798 14.82521109443616
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1 19336U 88064A 96265.57113816 .00000051 00000-0 10000-3 0 5130
2 19336 82.5383 98.2328 0017049 358.1372 1.9694 13.16978970392166
Glonass 39
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2 19503 65.5439 321.4713 0006193 161.4282 198.6648 2.13101803 62397
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1 19531U 88089A 96267.08628070 .00000008 00000-0 29461-4 0 6679
2 19531 99.1815 287.7353 0011698 331.8569 28.1969 14.13104355412277
TDRS 3
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2 19548 2.6975 72.1898 0004224 125.0494 340.6202 1.00275878 16451
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2 19749 65.2483 82.2179 0005085 252.8747 107.1244 2.13101562 59848
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1 19750U 89001B 96263.55825448 .00000053 00000-0 10000-3 0 5300
2 19750 65.2601 82.2468 0005235 247.9812 112.0058 2.13101828 59885
GPS BII-01
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2 19802 55.3876 106.7787 0030216 106.0323 254.3598 2.00553397 55650
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1 19822U 89016A 96266.86122869 .00010076 00000-0 48166-3 0 7829
2 19822 75.0624 67.1678 3743263 32.4510 345.9391 7.93489561174431
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2 19851 82.5195 206.0799 0016026 71.3306 288.9594 13.84416483381845
MOP-1
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2 19876 2.1678 71.1432 0017309 290.1830 70.3239 0.97108860 7480
TDRS 4
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2 19883 0.0632 105.1641 0005249 101.6471 359.2695 1.00268623 27545
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1 20061U 89044A 96266.20990375 .00000020 00000-0 10000-3 0 2728
2 20061 54.1364 282.3918 0168808 220.9796 137.7923 2.00562294 53407
Nadezhda 1
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2 20103 82.9580 36.4644 0037867 138.5645 221.8392 13.73869259362124
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2 20185 55.1773 107.2123 0018834 327.6736 32.3711 2.00808770 51982
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2 20302 53.2272 222.1292 0052892 206.6644 152.9777 2.00568691 50790
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1 20305U 89086A 96266.84669420 .00000044 00000-0 10000-3 0 6493
2 20305 82.5431 57.0602 0007600 67.0808 293.1045 13.04427724330933
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2 20322 98.9436 277.2844 0009348 128.3217 231.8781 14.03453812350179
Kvant-2
1 20335U 89093A 96267.08886764 .00030238 00000-0 34259-3 0 6976
2 20335 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795388420
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2 20438 98.5326 344.7549 0009602 287.6768 72.3335 14.29237122347728
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2 20439 98.5552 348.8777 0010757 283.2297 76.7684 14.29984497347808
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WO-18
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2 20441 98.5572 349.9819 0011381 281.9413 78.0493 14.30095807347905
LO-19
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2 20442 98.5596 350.0261 0011712 282.1939 77.7931 14.30205770347859
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1 20452U 90008A 96264.99215830 -.00000013 00000-0 10000-3 0 2198
2 20452 54.0461 162.8602 0060184 89.0528 271.6885 2.00576247 48733
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2 20491 99.0707 340.5449 0470755 68.2024 296.8491 13.02994132314459
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2 20496 43.1023 18.7698 0011889 312.8176 47.1687 15.35891603368494
Nadezhda 2
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2 20508 82.9573 170.9540 0045849 92.4821 268.1584 13.73512586329338
OKEAN 2
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GPS BII-07
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2 20580 28.4678 324.9984 0006466 91.6915 268.4410 14.91097864152848
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Kristall
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ROSAT
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Meteor 2-19
1 20670U 90057A 96266.92763347 .00000020 00000-0 48751-5 0 843
2 20670 82.5438 270.2354 0016056 346.8676 13.2064 13.84128123315264
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1 20788U 90081A 96267.19567545 .00000108 00000-0 10000-3 0 562
2 20788 98.8122 269.3108 0014494 223.8431 136.1401 14.01351173309825
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2 20826 82.5252 207.8913 0011702 250.4838 109.5060 13.83636189302122
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2 20959 55.1969 106.9019 0110920 235.4783 123.5467 2.00559345 42594
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2 21006 65.2425 81.4141 0056186 188.4308 171.5232 2.13102718 45085
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AO-21
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RS-12/13
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Nadezhda 3
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2 21218 64.8747 320.3254 0010292 336.4300 23.6038 2.13102632 42451
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NOAA 12
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2 21263 98.5533 283.3289 0013403 355.8037 4.3027 14.22656773278372
OKEAN 3
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2 21577 98.3310 325.6060 0007164 356.0088 4.1046 14.36526570271541
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2 21578 98.3729 336.9173 0004714 343.6402 16.4631 14.39241978272294
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1 21639U 91054B 96266.43965278 .00000061 00000-0 00000+0 0 912
2 21639 0.0302 295.7875 0002265 267.5224 142.2075 1.00275013 18834
Meteor 3-5
1 21655U 91056A 96266.23272884 .00000051 00000-0 10000-3 0 9197
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UARS
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DMSP B5D2-6
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Glonass 53
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Glonass 54
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Glonass 55
1 21855U 92005C 96266.25445525 .00000062 00000-0 00000+0 0 3326
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2 21930 55.7205 344.8808 0027897 183.8706 176.1417 2.00549431 32462
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2 21987 28.4314 260.3267 0009320 21.7961 338.3015 15.19903075238238
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2 22012 81.6712 16.6111 0116397 213.5825 145.7940 14.91727610229723
GPS BIIA-14
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2 22014 54.8477 164.7715 0094188 327.8660 31.6027 2.00572168 24320
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Glonass 58
1 22058U 92047C 96264.51114164 -.00000019 00000-0 10000-3 0 1378
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1 22231U 92079A 96266.80418241 -.00000018 00000-0 00000+0 0 7979
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TDRS 6
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Glonass 59
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Glonass 60
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ASTRO-D
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UFO F1
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2 22654 3.3335 70.8460 2867378 244.7528 83.1086 1.42203345 12953
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2 22657 55.2208 343.9826 0081352 240.5327 118.7020 2.00566670 20893
RADCAL
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1 22700U 93042A 96266.26781522 .00000005 00000-0 10000-3 0 5918
2 22700 54.1688 224.3609 0052298 0.2941 359.6878 2.00560726 23697
NOAA 13
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2 22739 99.0524 222.8566 0009385 313.2720 46.7664 14.10972441160832
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Meteor 2-21
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2 22782 82.5464 271.1564 0023946 69.2509 291.1208 13.83060359154385
UFO F2
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SPOT 3
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AO-27
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2 22825 98.5720 341.0092 0008398 309.0826 50.9606 14.27703961155981
IO-26
1 22826U 93061D 96266.76048802 .00000002 00000-0 18477-4 0 5015
2 22826 98.5703 340.6968 0009308 311.6451 48.3934 14.27813045155929
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1 22827U 93061E 96267.22960647 .00000000 00000-0 17641-4 0 5636
2 22827 98.5713 341.0569 0009006 297.1809 62.8448 14.27949499156007
ITAMSAT
1 22828U 93061F 96266.71851508 .00000020 00000-0 25534-4 0 4805
2 22828 98.5718 340.7292 0010450 295.2872 64.7237 14.28152433124036
PO-28
1 22829U 93061G 96263.23336257 .00000028 00000-0 28605-4 0 4944
2 22829 98.5733 337.3749 0009604 306.8764 53.1535 14.28133607155456
KO-25
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2 22830 98.4612 327.4192 0010810 269.5695 90.4237 14.28114446155806
GPS BIIA-23
1 22877U 93068A 96266.40376509 -.00000025 00000-0 10000-3 0 4790
2 22877 55.7196 45.2852 0044542 299.1072 60.4442 2.00569112 21342
METEOSAT 6
1 22912U 93073B 96266.22168403 -.00000104 00000-0 00000+0 0 5523
2 22912 0.1700 47.9746 0002424 152.8582 230.5216 1.00274802 8838
HST Array
1 22920U 90037C 96266.26626203 .00005231 00000-0 34374-3 0 5160
2 22920 28.4652 217.1621 0003667 93.5461 266.5546 15.05422808154069
Meteor 3-6
1 22969U 94003A 96266.25433265 .00000051 00000-0 10000-3 0 2851
2 22969 82.5626 192.0080 0016272 0.4101 359.7028 13.16738234127825
TUBSAT-B
1 22970U 94003B 96266.18382500 .00000051 00000-0 10000-3 0 2760
2 22970 82.5574 191.9420 0016405 358.9240 1.1840 13.16827876127829
GPS BIIA-24
1 23027U 94016A 96263.49474700 -.00000065 00000-0 10000-3 0 4031
2 23027 55.0662 346.0456 0067155 203.7401 156.0815 2.00560132 18597
Glonass 62
1 23043U 94021A 96266.68091975 -.00000015 00000-0 00000+0 0 4027
2 23043 64.6113 320.4985 0007276 199.7576 160.2834 2.13102901 19083
Glonass 63
1 23044U 94021B 96265.62485615 -.00000018 00000-0 00000+0 0 3728
2 23044 64.6042 320.5326 0031546 205.6325 154.2795 2.13103171 19068
Glonass 64
1 23045U 94021C 96265.80239790 -.00000017 00000-0 00000+0 0 3808
2 23045 64.5972 320.5287 0009890 30.4482 329.6796 2.13102098 19067
GOES 8
1 23051U 94022A 96265.14652678 -.00000272 00000-0 10000-3 0 5795
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2 23051 0.2165 90.7623 0004479 99.8455 147.8586 1.00278865 16326
MSTI 2
1 23101U 94028A 96267.14247636 .00006269 00000-0 95532-4 0 3561
2 23101 97.0788 99.5520 0010351 326.6672 33.3929 15.54783442134516
STRV-1A
1 23125U 94034B 96266.45176077 .00002113 00000-0 74323-3 0 3329
2 23125 7.0405 195.4597 7243528 145.6551 294.9520 2.32739713 18387
STRV-1B
1 23126U 94034C 96266.52626155 .00002768 00000-0 80920-3 0 2869
2 23126 7.0404 195.3800 7245660 145.7682 295.0382 2.32824736 18421
Nadezhda 4
1 23179U 94041A 96264.24699201 .00000055 00000-0 41149-4 0 2200
2 23179 82.9474 166.1481 0034848 217.4623 142.4086 13.75684630109869
Glonass 65
1 23203U 94050A 96265.47044886 .00000006 00000-0 00000+0 0 3424
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Glonass 66
1 23204U 94050B 96267.11181301 -.00000013 00000-0 00000+0 0 3577
2 23204 64.7503 200.8542 0015010 344.6836 15.2651 2.13102416 16489
Glonass 67
1 23205U 94050C 96266.52506667 -.00000007 00000-0 00000+0 0 3425
2 23205 64.7615 200.8637 0002395 289.5126 70.4586 2.13102610 16475
DMSP B5D2-7
1 23233U 94057A 96267.10168109 .00000052 00000-0 51787-4 0 9308
2 23233 98.8195 324.4018 0011545 264.2677 95.7173 14.12736713106652
OKEAN 1-7
1 23317U 94066A 96267.26139364 .00000016 00000-0 -97000-6 0 1852
2 23317 82.5462 328.8098 0027462 118.7895 241.6079 14.74041510104981
ELEKTRO
1 23327U 94069A 96261.83130373 -.00000110 00000-0 00000+0 0 1991
2 23327 0.2183 113.5725 0004402 15.0861 243.7247 1.00273997 6933
RESURS 1-3
1 23342U 94074A 96264.99690037 .00000042 00000-0 15023-4 0 5771
2 23342 97.9566 319.7281 0001798 65.7081 294.4315 14.69861922100884
Glonass 68
1 23396U 94076A 96266.36900801 .00000062 00000-0 00000+0 0 3222
2 23396 65.1339 80.9830 0029774 188.0525 171.9502 2.13102456 14316
Glonass 69
1 23397U 94076B 96267.01448880 .00000060 00000-0 00000+0 0 3037
2 23397 65.1122 80.9708 0010839 322.5107 37.4581 2.13101820 14322
Glonass 70
1 23398U 94076C 96265.49041470 .00000061 00000-0 00000+0 0 3279
2 23398 65.1032 80.9976 0001680 270.6744 89.3536 2.13102014 14304
LUCH (Altair-2)
1 23426U 94082A 96265.16574794 -.00000295 00000-0 00000+0 0 3924
2 23426 1.2478 266.6978 0001661 290.8991 317.8477 1.00272860 6466
RS-15
1 23439U 94085A 96265.33131263 -.00000039 00000-0 10000-3 0 1637
2 23439 64.8137 227.5983 0159443 182.2338 177.7888 11.27528810 71628
NOAA 14
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1 23455U 94089A 96267.02906685 .00000124 00000-0 92931-4 0 7538
2 23455 98.9536 212.2481 0009616 333.3610 26.7067 14.11612435 89252
Glonass 71
1 23511U 95009A 96266.38734932 -.00000016 00000-0 00000+0 0 2353
2 23511 64.6280 320.7825 0008294 217.1307 142.8829 2.13103800 12040
Glonass 72
1 23512U 95009B 96265.09930885 -.00000019 00000-0 00000+0 0 2472
2 23512 64.6211 320.8339 0006209 304.0645 55.9452 2.13101751 12017
Glonass 73
1 23513U 95009C 96266.32953745 -.00000016 00000-0 00000+0 0 2590
2 23513 64.6214 320.8032 0014888 204.6723 155.3267 2.13102926 12042
GMS 5
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2 23522 0.4070 7.6095 0000759 195.0921 145.0006 1.00259728 5399
DMSP B5D2-8
1 23533U 95015A 96267.03108826 .00000021 00000-0 35049-4 0 6775
2 23533 98.8446 268.2508 0007728 130.0673 230.1177 14.12753962 77445
OSC 1
1 23545U 95017A 96265.56812505 -.00000147 00000-0 -24662-4 0 1654
2 23545 69.9734 306.5176 0010921 42.3587 317.8389 14.45391521 77580
OSC 2
1 23546U 95017B 96266.57152607 .00001165 00000-0 34763-3 0 1973
2 23546 69.9770 304.3278 0010611 28.8597 331.3081 14.45409085 77738
Microlab 1
1 23547U 95017C 96265.55045526 .00000212 00000-0 77080-4 0 1367
2 23547 69.9790 306.4367 0010908 34.8413 325.3418 14.45581617 77599
OFEQ 3
1 23549U 95018A 96266.08336379 .00020300 00000-0 49939-3 0 3271
2 23549 143.3641 99.4931 0217779 235.5230 122.4749 15.17618913 81061
GFZ-1
1 23558U 86017JE 96266.24502563 .00003661 00000-0 45790-4 0 1583
2 23558 51.6514 343.5433 0005581 222.5428 137.5121 15.62747659605188
ERS-2
1 23560U 95021A 96267.22467754 .00000079 00000-0 45497-4 0 2802
2 23560 98.5487 339.8822 0001121 64.9022 295.2277 14.32249358 74604
Spektr
1 23579U 95024A 96267.08886764 .00030238 00000-0 34259-3 0 4495
2 23579 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795 76731
GOES 9
1 23581U 95025A 96266.27431157 .00000065 00000-0 10000-3 0 2526
2 23581 0.2123 267.7350 0002108 307.0824 109.9827 1.00269367 4895
Helios 1A
1 23605U 95033A 96267.23329211 .00000076 00000-0 23577-4 0 3152
2 23605 98.1256 201.5524 0001488 55.4116 304.7229 14.63835979 64902
UPM SAT 1
1 23606U 95033B 96264.24454372 .00000103 00000-0 26842-4 0 2134
2 23606 98.1069 199.9668 0006255 248.9384 111.1153 14.67281292 64652
CERISE
1 23607U 95033C 96266.37587522 .00000056 00000-0 18667-4 0 1193
2 23607 98.1085 201.9111 0005240 239.3443 120.7233 14.66963404 64983
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TDRS 7
1 23613U 95035B 96266.47785829 .00000075 00000-0 00000+0 0 2169
2 23613 0.8780 82.4827 0002581 143.8910 136.0134 1.00266723 4361
Glonass 74
1 23620U 95037A 96265.64404259 .00000003 00000-0 00000+0 0 1836
2 23620 64.8231 200.7477 0018271 170.8991 189.1355 2.13103057 9069
Glonass 75
1 23621U 95037B 96265.35230948 .00000007 00000-0 00000+0 0 1932
2 23621 64.8306 200.7562 0018118 182.1290 177.8658 2.13102391 9055
Glonass 76
1 23622U 95037C 96266.34896330 -.00000005 00000-0 00000+0 0 1968
2 23622 64.8262 200.7248 0036597 166.8085 193.2866 2.13102642 9074
Prognoz-M2
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2 23632 69.6930 249.7560 8063189 323.1900 320.2350 0.26333100 1102
SICH-1
1 23657U 95046A 96263.11584881 .00000102 00000-0 12121-4 0 1096
2 23657 82.5314 114.1151 0029330 102.8765 257.5725 14.73494379 56665
RADARSAT
1 23710U 95059A 96265.89933278 -.00000044 00000-0 00000+0 0 1864
2 23710 98.5807 271.2201 0001280 73.1322 287.0001 14.29974881 46063
Glonass 79
1 23734U 95068A 96265.52830818 .00000005 00000-0 00000+0 0 1660
2 23734 64.8182 200.6751 0018691 321.1450 38.7151 2.13101966 6024
Glonass 78
1 23735U 95068B 96266.66909013 -.00000009 00000-0 00000+0 0 1600
2 23735 64.8243 200.6188 0007389 219.7495 140.1853 2.13125177 6049
Glonass 77
1 23736U 95068C 96266.70128059 -.00000009 00000-0 00000+0 0 1395
2 23736 64.8116 200.6331 0008322 205.0096 154.9459 2.13102244 6047
XTE
1 23757U 95074A 96265.85299070 .00000577 00000-0 19229-4 0 871
2 23757 22.9835 113.7407 0014244 137.5719 222.5880 14.97693749 39970
Polar
1 23802U 96013A 96266.36217225 .00000123 00000-0 00000+0 0 559
2 23802 86.2545 25.0280 6552944 281.7145 16.3239 1.36677624 2881
1996010E
1 23824U 96010E 96263.27043800 .00009377 00000-0 85247-2 0 1058
2 23824 47.6726 227.4946 7300387 50.4618 354.1900 2.22317873 4707
GPS BIIA-25
1 23833U 96019A 96265.62319332 -.00000070 00000-0 00000+0 0 821
2 23833 54.6719 344.1126 0035786 151.8471 208.3945 2.00564537 3613
Priroda
1 23848U 96023A 96267.08886764 .00030238 00000-0 34259-3 0 1389
2 23848 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795 23822
MSX
1 23851U 96024A 96264.53189943 -.00000045 00000-0 10000-5 0 985
2 23851 99.3849 245.8296 0006527 236.5270 123.5265 13.97585253 20817
MSTI 3
1 23868U 96031A 96267.02728429 .00001864 00000-0 39509-4 0 585
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2 23868 97.1214 95.7704 0012550 169.1555 190.9988 15.46290749 19933
TOMS-EP
1 23940U 96037A 96267.24473726 .00002131 00000-0 98234-4 0 424
2 23940 97.4283 171.4826 0014224 6.1615 353.9809 15.21278572 12543
GPS BIIA-26
1 23953U 96041A 96266.03719407 .00000039 00000-0 00000+0 0 488
2 23953 55.0629 104.4126 0019239 338.1163 21.8638 2.00568909 1411
Progress M-32
1 24071U 96043A 96267.08886764 .00030238 00000-0 34259-3 0 604
2 24071 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795 8341
ADEOS
1 24277U 96046A 96265.75573106 -.00000044 00000-0 00000+0 0 752
2 24277 98.6232 341.2527 0001175 135.5577 224.5115 14.27641676 4980
JAS 2
1 24278U 96046B 96263.63467394 .00000064 00000-0 10053-3 0 168
2 24278 98.5782 335.2452 0351599 166.7111 194.3589 13.52626986 4543
Soyuz TM-24
1 24280U 96047A 96267.08886764 .00030238 00000-0 34259-3 0 420
2 24280 51.6524 350.7349 0009732 192.1009 167.9307 15.62078795 5722
Microsat
1 24291U 96050A 96266.14597724 .00050383 62947-5 32216-3 0 233
2 24291 62.7915 291.9075 0650160 111.2848 255.8879 14.59118445 3498
Interbol-2
1 24292U 96050B 96256.75717246 -.00000428 00000-0 -72304-2 0 70
2 24292 63.0056 3.1777 5603377 288.6112 19.5130 4.14411413 591
Magion 5
1 24293U 96050C 96266.39903364 .00000055 00000-0 91837-3 0 156
2 24293 62.7894 359.3644 5632716 288.7201 20.2232 4.14604016 1031
1996050D
1 24294U 96050D 96266.16888863 .00076365 70115-5 45377-3 0 231
2 24294 62.7626 290.5673 0601083 110.4773 256.1851 14.70870699 3524
1996050E
1 24295U 96050E 96266.17423984 .00187741 60215-5 58287-3 0 305
2 24295 62.8106 291.0096 0650389 111.4995 255.6727 14.68482384 3516
1996050F
1 24296U 96050F 96266.61485316 .00000181 00000-0 26355-2 0 169
2 24296 62.7546 359.4860 5630083 288.7541 20.2439 4.15038744 1018
Cosmos 2333
1 24297U 96051A 96266.85279807 -.00000047 00000-0 00000+0 0 105
2 24297 71.0137 127.0155 0002017 4.4022 355.7117 14.12572263 2619
1996051B
1 24298U 96051B 96266.57161571 -.00000047 00000-0 00000+0 0 158
2 24298 71.0162 127.6377 0013107 6.7542 353.3755 14.12404710 2572
1996051C
1 24299U 96051C 96266.06752338 -.00000042 00000-0 00000+0 0 76
2 24299 71.0365 131.3456 0191012 47.1828 314.5155 13.73494215 2428
1996051D
1 24300U 96051D 96265.86699487 -.00000041 00000-0 00000+0 0 69
2 24300 71.0337 131.7450 0198522 72.5599 289.7089 13.72074984 2399
1996051E
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1 24301U 96051E 96263.12110585 -.00000042 00000-0 00000+0 0 65
2 24301 71.0006 136.7607 0211098 49.3909 312.5347 13.69809520 2012
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1 24302U 96051F 96266.12691076 -.00000041 00000-0 00000+0 0 78
2 24302 70.9992 130.8498 0211043 66.8726 295.4474 13.68887868 2424
1996051G
1 24303U 96051G 96266.70773810 -.00000046 00000-0 00000+0 0 64
2 24303 71.1069 127.8948 0072340 306.3480 53.0970 14.07173631 2589
Cosmos 2334
1 24304U 96052A 96265.18838643 .00000244 00000-0 24809-3 0 205
2 24304 82.9359 193.3665 0028182 230.2925 129.5742 13.72897737 2093
UNAMSat
1 24305U 96052B 96267.22665419 .00000204 00000-0 20364-3 0 255
2 24305 82.9369 191.8516 0029236 229.0942 130.7676 13.73084642 2420
1996052C
1 24306U 96052C 96265.82930371 .00006556 00000-0 69300-2 0 238
2 24306 82.9305 192.8665 0022025 247.2116 112.6555 13.74237613 2245
Inmarsat III F2
1 24307U 96053A 96265.14337186 .00000125 00000-0 00000+0 0 123
2 24307 2.6933 287.6680 0004526 239.5833 272.7287 1.00268651 147
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1 24308U 96053B 96260.61263131 .22409944 12771-4 13612-3 0 494
2 24308 51.5889 204.9437 0007273 264.2999 95.9881 16.53719997 1619
GE-1
1 24315U 96054A 96264.57590777 -.00000113 00000-0 00000+0 0 203
2 24315 0.0423 288.4344 0003904 223.5513 312.1064 1.00215239 129
1996054B
1 24316U 96054B 96253.31661619 -.00002911 29281-5 10000-4 0 52
2 24316 25.0364 140.7010 8099270 178.2712 189.4727 1.35090812 12
1996049C
1 24317U 96049C 96267.13197510 .00015042 00000-0 14255-2 0 73
2 24317 83.0033 163.1465 2214378 104.1753 281.3999 10.81392405 1410
1996049D
1 24318U 96049D 96267.13637135 .00014117 00000-0 13365-2 0 91
2 24318 82.9925 163.1457 2215407 103.9256 281.7063 10.81200687 1415
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1 24319U 96049E 96267.19927593 .00043517 00000-0 41900-2 0 124
2 24319 83.0021 163.1017 2203908 103.8715 281.6126 10.83234615 1362
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1 24320U 96056A 96265.91358210 .00000019 00000-0 00000+0 0 163
2 24320 54.5050 284.6282 0022885 31.0682 331.8163 2.00080704 72
1996056C
1 24321U 96056C 96267.03974927 .00051728 12734-6 10649-2 0 202
2 24321 35.0447 270.5679 6040136 203.4814 110.0139 4.06892722 448
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1 24323U 96056B 96265.80702241 .00000704 00000-0 42058-4 0 54
2 24323 35.5378 197.4450 0100045 202.7517 156.8737 15.08626790 1047
STS 79
1 24324U 96057A 96267.16666667 -.00000271 00000-0 30311-5 0 238
2 24324 51.6561 350.3441 0010286 193.5128 244.2822 15.62023144 1077
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1996049F
1 24325U 96049F 96266.71067848 .00070135 00000-0 66038-2 0 86
2 24325 82.9957 163.3138 2198732 104.5584 281.0048 10.84671485 1572
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1886. UC Amateur Radio Club

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: lewi2727@uceng.san.uc.edu
Message-ID: <527od3$art@news.ececs.uc.edu>
Source record: 21459
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space,rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.policy,rec.radio.amateur.homebrew,uc.general,uc.ece,uc.compsci,uc.announce

The University of Cincinnati ARC will hold its first meeting during the 1996-1997 school year on Wednesday, October 9. We look forward to seeing some new faces (ok, and the old ones too...)

The club has resources for all hams, as well as scanner/shortwave enthusiasts.

If you would like to contact me, you can phone me at 556-7685 or the clubstation at 556-9899 (when the phone is working...) You can also page me at589-9822 or email me: lewse@email.uc.edu

We maintain an E-mail list to keep former/present/potential/future membersup to date on club activities. If you would like to be added, just say/type the word!!

-73- de N8TFD/Steve

1887. Re: Any info on JAS-2?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <528lvd$pla@faatcrl.faa.gov>
Source record: 21460

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

1888. DSP software for Creative ?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: faimar@linknet.it
Message-ID: <faimar-2409961641100001@faimar.linknet.it>
Source record: 21461

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

1889. HELP me BAYCOM

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: petronet@sovam.com
Message-ID: <529cb4$60@news.sovam.com>
Source record: 21462

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

1890. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: fisher@skylab.enet.dec.com
Message-ID: <529k1l$fcc@nntpd.lkg.dec.com>
Source record: 21463
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

1891. ARLK069 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk069.1996@arrl.org>
Source record: 21464
Cross-posted to: rec.radio.info,rec.radio.amateur.space

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SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069
From ARRL Headquarters
Newington, CT September 24, 1996
To all radio amateurs

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
```

```
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1892. NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <529pq8$c65@blackbird.afit.af.mil>
Source record: 21465

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1893. Ham-Space Digest V96 #296

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609242344.AA037658657@relay2.geis.com>
Source record: 21466

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1894. WTB: 220mhz transverters

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: "Alan K. Adamson" <ne1h@ne1h.radio.org>
Message-ID: <01bbaa6e$2ac504e0$b7c41cce@typhoon.ne1h.radio.org>
Source record: 21467
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.space,rec.radio.swap

All,

I am looking for transverters in general, but primarily at 220mhz trasverters. A company called Microwave Modules made some a few years back. I have a 440mhz version and would like to find some working one. Again, I am looking for all freqs with a focus on 220mhz. Please email to ne1h@ne1h.radio.org or reply to this posting. There may be others that will work the requirement is 10mtrs/220mhz or 10mtrs/other freqs. I need the downcovert side to be 10mtrs.

Thanks,
Alan K. Adamson
NE1H
Atlanta, GA

1895. Re: SETI/home satelitte dish

Newsgroup: rec.radio.amateur.space
Date: 1996-09-24 00:00:00 UTC
From: starwalt@carol.net
Message-ID: <starwalt.1.002BFF45@carol.net>
Source record: 21468

In article <egroff.52.0013833F@q.continuum.net> egroff@q.continuum.net (Errol Groff) writes:
>From: egroff@q.continuum.net (Errol Groff)
>Subject: SETI/home satelitte dish
>Date: Fri, 20 Sep 1996 19:30:37

>Hi:

>A while back I came across a web site that talked about using satellite dishes
>to monitor for extraterrestial radio communications. I have lost the URL and
>wonder if anyone can help me out.

>Thanks,

>Errol Groff
>H.H. Ellis Technical School
>Danielson, CT

Errol,
Try this, I think its the one you are looking for:

http://seti1.setileague.org/homepg.html

It's the home page for the Seti League. This is from the Aug. 95 issue of QST. I heard Exc. Dir. , Paul Shuch, N6TX, give the first presentation of the Seti League at the Society of Amateur Radio Astronomers National Convention in 1995. I belong to SARA and SETI is an aspect of Radio Astronomy. Check SARA's homepage out also. Use a search engine and feed it SARA. You might even try SETI. There's a lot out there....maybe more than we know.

Good Luck!

Doug

1896. Re: SETI/home satelitte dish

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: tswift@infi-pos.com
Message-ID: <52a2m5$4il@news.infi-pos.com>
Source record: 21370

egroff@q.continuum.net (Errol Groff) wrote:

>Hi:

>A while back I came across a web site that talked about using satellite dishes
>to monitor for extraterrestial radio communications. I have lost the URL and
>wonder if anyone can help me out.

>Thanks,

>Errol Groff
>H.H. Ellis Technical School
>Danielson, CT

Errol:

The URL is http://seti1.setileague.org/homepg.html. If you loose it
again, just search uneer SETI (search for extra-terrestrial
intelligence).

Tom Swift
KD2MF
Holmdel NJ

1897. RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: kb0rlo@juno.COM
Message-ID: <19960924.202809.9414.0.KB0RLO@juno.com>
Source record: 21371

Is the 2 meter radio on RS-12 working? I can't seem to find my signal downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

1898. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <52ao03$6ks@paperboy.ids.net>
Source record: 21372
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

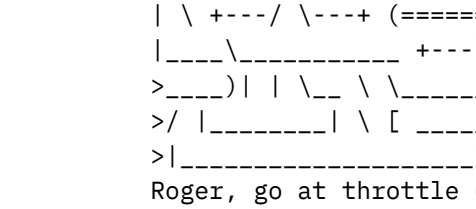
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

1899. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: user@memo.ericsson.se
Message-ID: <52au11$elq@erinews.ericsson.se>
Source record: 21373

kb0rlo@juno.COM wrote:

>Is the 2 meter radio on RS-12 working? I can't seem to find my signal
>downlink on 10
>meters.

Last thin I heard RS-12 is only operating 15 meters up and 10 meters
down. RS-10 and 15 is only operating 2 meters up and 10 meters down.
I'm not 100% about this but my own experience confirms this

/ Tommy

1900. Ham-Space Digest V96 #297

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609251644.AA285639879@relay2.geis.com>
Source record: 21374

GE Item Number: 8790961
Original Msg Id: 387804
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #297
System: MARLBORO#
Date: Wed 25-Sep-96 16:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1901. Re: Unamsat

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: John DiStefano <ke3su@amsat.org>
Message-ID: <01bbab02$47ab17e0$7c0667cf@omni2.voicenet.com>
Source record: 21375

Arlon, here is a copy of a message sent to the Amsat-BB from David XE1TU.
73 de John KE3SU

As I had promised, here is the list of frequencies at which UNAMSAT-B
will operate:

Downlinks:

UHF TX1 437.206 MHz
UHF TX2 437.138 MHz (secondary).

Uplinks:

VHF CHA 145.815 MHz
VHF CHB 145.835 MHz
VHF CHC 145.855 MHz
VHF CHD 145.875 MHz

The modulations are the same as in the previous microsats.

On board we have also a 40.997 MHz pulse transmitter and a wide band
receiver centered on the same freq. that will be looking for echoes
produced on the ionized trails of meteors as they enter the atmosphere.
You could use this signal to get echoes from meteors in your area when
UNAMSAT-B is passing below your horizon.

Polarizations are exactly the same as in PACSAT and all the equipment you
have to work the existing microsats will work with UNAMSAT-B.

Saludos

David xe1tu
UNAMSAT.

1902. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: Charlie Panek <charlier@lsid.hp.com>
Message-ID: <32496CFF.4677@lsid.hp.com>
Source record: 21376

kb0rlo@juno.COM wrote:
>
> Is the 2 meter radio on RS-12 working? I can't seem to find my signal
> downlink on 10
> meters.
>
> Mike
> KB0RLO
> KB0RLO@juno.com

I'm afraid you have that backwards. RS-12 is operating (at least the
last time I checked) in mode KT, which is 15m uplink, and simultaneous
10m and 2m downlink:
From the AMSAT web page:

Linear Transponder:

Note: Satellite RS-12 is presently active in Mode KT
(simultaneous downlinks on both 10 meters and 2 meters)

Mode KT Uplink: 21.210 - 21.250
Mode K Downlink: 29.410 - 29.450

Mode T Downlink: 145.910 - 145.950

Now RS-10, on the other hand *is* in mode A:

Mode A Uplink: 145.860 - 145.900 MHz
Mode A Downlink: 29.360 - 29.400 MHz

Hope that helps.
73,

--
Charlie Panek KX7L Hewlett Packard Company
charlier@lsid.hp.com Lake Stevens Division
Everett, Washington

1903. WWW: Used Microwave Components

Newsgroup: rec.radio.amateur.space
Date: 1996-09-25 00:00:00 UTC
From: bass@cais.cais.com
Message-ID: <52a1u6$anf@news2.cais.com>
Source record: 21469

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

1904. Swap Meet Hudsonville MI.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: Donf@cris.com
Message-ID: <52ci54$m69@herald.concentric.net>
Source record: 21377

THE GRAND RAPIDS AMATEUR RADIO ASSOCIATION
Presents

SUPER SWAP '96
Saturday, Sept. 28, 1996
At Unity Cristian High School in Hudsonville, MI

Seller setup at 6AM, General entry at 8AM.

Buy and sell new and used Amateur and Computer
equipment and Software. Pick up that bargain
you have been waiting for. Sell or trade that
equipment that is just laying around the shack.

Tickets are $4 in advance 5$ at the door. Tables
are $8 each. Make sure to reserve yours, they are
selling fast.

Directions: Unity Christian High School is located at
3487 Oak St. in Hudsonville, MI. From M-21 (Chicago Dr.)
Head north at 32nd Ave, Turn left to Oak St. From
I-196, use Exit 62 at 32nd Ave, Go 1.4 Miles to Oak St.
and turn left to the school.

Talk In 147.260 & 444.4 CTCSS 94.8 The W8DC Repeater

For advance tickets or table reservation contact,
GRARA, C/O SuperSwap '96, PO Box 1248,
Grand Rapids, MI 49501 or
Call Dave Devos at 616-698-7022

1905. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: daniel@securicor.co.nz
Message-ID: <52cj5u$89t@wnnews1.netlink.net.nz>
Source record: 21378
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

: The best thing to do is get a local amateur radio club to retransmit the
: shuttle audio via a local repeater, and even better would be to also
: transmit amateur television.

I have been trying to pick up the various HF re-transmissions of mission audio, without success. (Since I'm in New Zealand, obviously the 2m retransmissions in the US are not an option. ;-)

I have consulted all the FAQs, I'm aware of the frequencies for various sites and the limitations the re-transmissions work within (local weather, volunteer operator avilability, crew sleep times, etc).

What I would like to know, is when (generally) are these stations on the air? From past experience, can anyone tell me when the best mission audio is broadcast? (Obviously launch and landing times are good possibilities, but what about the days in between?).

I guess a significant factor would be the interaction between local hours (oerator availability) and crew waking/work hours (times of maximum activity).

I'm hoping that someone who has operated, or heard, these broadcasts could provide an indication like "We tend to operate between 4pm and 11pm CST during missions", or "I've heard the best stuff at around 9pm EST" or "We operate 24 hours during missions".

I'd appreciate any information, and if you could tell me which station you are referring to that'd be great. It wouldn't hurt to confirm frequencies, but I believe I have all of those already.

And I'd like to thank all those who participate in Shuttle audio broadcasts, I'm sure you do a terrific job ... and I'd like to be able to hear you! :-)

: If it doesn't exist - don't complain about it - do something about it.

I'm probably outside the footprint of the necessary sattelite(s), but maybe something on this side of the world carries NASA TV/audio?

I am a *complete* newbie in the area of receiving sattelite transmissions (I'm well-versed in HF/VHF/UHF radio, scanning, DX, SWL, etc) and I'd like to give it a go sometime. Can anyone point me at some good resources and information for people wanting to get into this? What do you need? Dish? Special receiver? What does all this stuff cost? Where can you get it etc? I'm sure these must be FAQs on a list somewhere ...

(Perhaps mail would be better, as I'm straying off topic a bit).

Thanks,
Daniel.

1906. VHF DX Opportunity

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: Mark Gingrich <grinch@rahul.net>
Message-ID: <52cktd$a6m@bug.rahul.net>
Source record: 21379
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.space,rec.radio.amateur.misc

On Thursday morning, 26 September, around 8:12 a.m. EDT (12:12 UTC), the Space Shuttle Atlantis (STS-79) is expected to touch down at Kennedy Space Center. About 25 minutes prior to landing, as it crosses the coast of British Columbia, the orbiter will experience sufficient atmospheric friction to create an ionized wake, a condition persisting for nearly fifteen minutes as the craft streaks like a meteor over the southern extremes of Alberta and Saskatchewan, through central North Dakota, and buzzes the cities of Minneapolis, Madison, Chicago, and Cincinnati.

DXers working VHF frequencies -- TV, FM, 2-meter, and 6-meter ham bands -- who reside within a thousand miles of all but the easternmost re-entry track will have a rare opportunity: the Shuttle-generated plasma trail may enhance reception of over-the-horizon signals, much like meteor scatter. Meteors, known to be just pea-gravel-sized flotsam colliding at high speed with Earth's atmosphere, create narrow ionized columns for a few seconds; in contrast, the near-airliner-sized Shuttle should cut a much larger plasma swath over an interval of minutes. Such temporary plasmas redirect very-high-frequency radio signals over the horizon, whereas reception usually is limited to line-of-site distances from the transmitter. Shuttle plasma effects may persist for as long as a few minutes.

DXers should tune to a known distant station in the general direction of the Shuttle's re-entry track -- that is, if you are south of the track, try for a northerly station, on an unoccupied, interference-free frequency in your area. The following Web site may assist you in finding candidate U.S. FM stations, their frequencies, and transmitter power:

http://www.airwaves.com/fmdb.html

- Re-entry Time Line -

If the re-entry goes as planned, the time line is as follows:

Event Time UTC EDT CDT MDT PDT

Arrives British Columbia 11:48 7:48 6:48 5:48 4:48

Overflies Calgary, Alberta 11:51 7:51 6:51 5:51 4:51

Overflies Fargo, ND 11:54 7:54 6:54 5:54 4:54

Overflies Chicago, IL 11:57 7:57 6:57 5:57 4:57

Overflies Cincinnati, OH 11:58 7:58 6:58 5:58 4:58

KSC Touch down 12:12 8:12 7:12 6:12 5:12

More detailed predictions (containing "look angles" at best visibility
for various locales) are available at the end of the document found at:

http://shuttle.nasa.gov/sts-79/orbit/orbiter/sighting/sighting.html

Note that only observers west of Minnesota will have a decent chance
at visually sighting the Shuttle, due to lessened interference from
sunlight/twilight. The sonic boom, however, may be detectable to
everyone in the vicinity of the re-entry track; be aware that it occurs
a few minutes *after* the Shuttle's closest approach to your location.

- Last-Minute Sources of Information -

Weather conditions at Kennedy may cause last-minute postponement of
the landing. The following Web site provides weather status:

http://www.ksc.nasa.gov/weather/weather.html

Last-minute information about the Shuttle's re-entry/landing status
is available at:

http://shuttle.nasa.gov/

Also, last-minute schedule changes are usually reported on the hourly
national news (e.g., CBS Radio affiliate stations, CNN, etc.) and on
NASA TV.

I would be especially interested in receiving successful (or even un-
successful) reports of DX catches made possible by Shuttle plasma scatter.

Good luck!

--
~~~~~~
Mark Gingrich grinch@rahul.net San Leandro, California
~~~~~~

1907. NORAD Two-Line Orbital Element Set: Space Shuttle (96269.00817073)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <52d3kb$371@blackbird.afit.af.mil>
Source record: 21380

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96269.00817073 .00004082 00000-0 51677-4 0 6836
2 16609 51.6518 341.0575 0011570 199.7592 160.2950 15.62038539605603
STS 79
1 24324U 96057A 96268.91666667 -.00000254 00000-0 32231-5 0 292
2 24324 51.6531 341.5238 0011450 193.4931 12.8470 15.62371769 1342
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1908. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: william.r.jones.1@gsfc.nasa.gov
Message-ID: <52e83d$htk@post.gsfc.nasa.gov>
Source record: 21381
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

In article <52cj5u$89t@wnnews1.netlink.net.nz>, daniel@securicor.co.nz (Daniel Ayers) says:
>
>: The best thing to do is get a local amateur radio club to retransmit the
>: shuttle audio via a local repeater, and even better would be to also
>: transmit amateur television.
>
>I have been trying to pick up the various HF re-transmissions of mission
>audio, without success. (Since I'm in New Zealand, obviously the 2m
>retransmissions in the US are not an option. ;-)
>
>I have consulted all the FAQs, I'm aware of the frequencies for various
>sites and the limitations the re-transmissions work within (local weather,
>volunteer operator avilability, crew sleep times, etc).
>
>What I would like to know, is when (generally) are these stations on the air?
>From past experience, can anyone tell me when the best mission audio is
>broadcast? (Obviously launch and landing times are good possibilities, but
>what about the days in between?).
>

See the WA3NAN Web site at:

http://garc.nasa.gov/www/garc-home-page.html

for answers to most of your questions. Note that there is a link to
the "current retransmission status" which usually indicates if the
station is on the air. There are a few bugs still in this link, so
bear with them.

1909. ARLS015 SAREX a success

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls015.1996@arrl.org>
Source record: 21382
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS015
ARLS015 SAREX a success

ZCZC AS23
QST de W1AW
Space Bulletin 015 ARLS015
From ARRL Headquarters
Newington, CT September 26, 1996
To all radio amateurs

SB SPACE ARL ARLS015
ARLS015 SAREX a success

The space shuttle Atlantis has returned to Earth. The three hams aboard the shuttle--Jay Apt, N5QWL, Carl Walz, KC5TIE, and John Blaha, KC5TZQ--spoke with students at two schools in the Midwest and a third in England during their mission, which ended Thursday, September 26. Blaha replaced Shannon Lucid aboard the space station Mir, where he'll spend 120 days. Lucid had been living on Mir for the last six months. The shuttle had docked with the station last week to make the exchange and to drop off food, water, equipment and supplies at Mir.

STS-79 carried the Shuttle Amateur Radio EXperiment (SAREX) payload in configuration M (voice-only operations).

While still docked with Mir, the Atlantis crew successfully completed three prearranged SAREX contacts. The first was on Friday, September 20, with Immaculate Conception Elementary School in Celina, Ohio. Pupils there made a very successful SAREX contact with astronaut Carl Walz, KC5TIE. Eleven-year-old Steven Eizensmits, KC8ENC, of Mendon, Ohio, initiated the 6 1/2-minute contact, and pupils got answers to nine questions as some 400 of their classmates and media representatives looked on (9 TV and cable stations, 2 radio stations and one newspaper sent reporters). Also among the crowd were the mayor of Celina and a couple of members of the Ohio legislature. After the contact, the pupils got a congratulatory telephone call from retired astronaut and US Sen John H. Glenn Jr--the first American to orbit the Earth.

Crew members spoke with two schools on Sunday, September 22. Students at the Royal School For Girls in Haslemere, Surrey, England, got answers to four questions during the QSO. Audio quality was reported as ''somewhat poor,'' but students thought the event was ''pretty keen.'' Some 150 people showed up for the occasion,

including representatives from the BBC and local television.

The last SAREX contact was with Andover Middle School in Andover, Kansas. Students and administrators at the school called the contact a ''once-in-a-lifetime'' opportunity. Audio quality was adequate, and students asked a couple of dozen questions, most of them fielded by Jay Apt, N5QWL. At the school itself, some 200 people and media representatives turned out.

After the Kansas contact, the crew members turned their attention to personal contacts. The ARRL has received dozens of reports from amateurs who made successful contact with the crew throughout the mission. We even got reports from hams in Canada and Finland. After Atlantis and Mir separated, John Blaha, KC5TZQ, was heard working ground stations on the East Coast on 145.55 MHz. ''Good strong signal as Mir passed over Knoxville,'' reported Greg Williams, KE4HSM.

Send STS-79 QSL cards and reports to: ARRL EAD, STS-79 QSL, 225 Main St, Newington, CT 06111-1494. Include the following information in your QSL or report: STS-79, date, time in UTC, frequency and mode. Include a stamped, self-addressed business-size envelope if you wish to receive a card (non-US stations should include one IRC). The Bergen Amateur Radio Association in New Jersey has graciously volunteered to manage the mailing for this mission.

Space shuttle Columbia will carry the next SAREX payload, during mission STS-83 in March, 1997.
NNNN
/EX

1910. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-26 00:00:00 UTC
From: jgarver@ichips.intel.com
Message-ID: <52f0qk$840@news.jf.intel.com>
Source record: 21383

In article <52au11$elq@erinews.ericsson.se>,
Tommy Karlberg <user@memo.ericsson.se> wrote:
>kb0rlo@juno.COM wrote:

>>Is the 2 meter radio on RS-12 working? I can't seem to find my signal
>>downlink on 10
>>meters.

>Last thin I heard RS-12 is only operating 15 meters up and 10 meters
>down. RS-10 and 15 is only operating 2 meters up and 10 meters down.
>I'm not 100% about this but my own experience confirms this

RS-12:
They (whoever 'they' are) turned on the 2 meter DOWNLINK almost a year
ago but I haven't checked it in a couple three weeks or more.
No, you won't hear yourself on 10 meters because you are
supposed to be listening there or on 2 meters and transmitting on
15 meters with the appropriate license, whatever that is.
I find that the 2 meter downlink is much more strong and clear than
ten meters and I didn't even bother with it before 'they' switched
on two.

RS-12:
29.407 beacon, tune up for activity
145.98x same thing only clearer

21.225 Mhz or abouts. Transmit and find yourself.

This is from memory, can't find my list.

--
jgarver@ichips.intel.com WA7LDV I don't speak for Intel

1911. Navstar GPS Constellation Status (96-09-25)

Newsgroup: rec.radio.amateur.space
Date: 1996-09-27 00:00:00 UTC
From: Richard Langley <lang@unb.ca>
Message-ID: <Pine.SUN.3.95.960927125637.29120C-100000@jupiter.sun.csd.unb.ca>
Source record: 21384
Cross-posted to: comp.infosystems.gis,rec.aviation.misc,rec.boats.electronics,rec.radio.amateur.space,sci.electronics,sci.engr.surveying,sci.geo.satellite-nav,sci.space.news

```
Navstar GPS Constellation Status
(96-09-25)

Blk NORAD Orbit Launch
II PRN Internat. Catalog Plane Date
Seq SVN Code ID Number Pos'n (UT) Clock Available/Decommissioned
-------------------------------------------------------------------------------
Block I
01 04 1978-020A 10684 78-02-22 78-03-29 85-07-17
02 07 1978-047A 10893 78-05-13 78-07-14 81-07-16
03 06 1978-093A 11054 78-10-06 78-11-13 92-05-18
04 08 1978-112A 11141 78-12-10 79-01-08 89-10-14
05 05 1980-011A 11690 80-02-09 80-02-27 83-11-28
06 09 1980-032A 11783 80-04-26 80-05-16 91-03-06
07 81-12-18 Launch failure
08 11 1983-072A 14189 83-07-14 83-08-10 93-05-04
09 13 1984-059A 15039 84-06-13 84-07-19 94-06-20
10 12 1984-097A 15271 84-09-08 84-10-03 95-11-18
11 03 1985-093A 16129 85-10-09 85-10-30 94-04-13

Block II
II-1 14 14 1989-013A 19802 E-1 89-02-14 Cs 89-04-15 05:02 UT
II-2 13 02 1989-044A 20061 B-3 89-06-10 Cs 89-08-10 20:46 UT
II-3 16 16 1989-064A 20185 E-5 89-08-18 Cs 89-10-14 20:21 UT
II-4 19 19 1989-085A 20302 A-4 89-10-21 Rb 89-11-23 03:13 UT
II-5 17 17 1989-097A 20361 D-3 89-12-11 Cs 90-01-06 03:30 UT
II-6 18 18 1990-008A 20452 F-3 90-01-24 Cs 90-02-14 22:26 UT
II-7 20 20 1990-025A 20533 90-03-26 90-04-18 96-05-10
II-8 21 21 1990-068A 20724 E-2 90-08-02 Cs 90-08-22 15:00 UT
II-9 15 15 1990-088A 20830 D-2 90-10-01 Cs 90-10-15 00:39 UT

Block IIA
II-10 23 23 1990-103A 20959 E-4 90-11-26 Cs 90-12-10 23:45 UT
II-11 24 24 1991-047A 21552 D-1 91-07-04 Rb 91-08-30 04:44 UT
II-12 25 25 1992-009A 21890 A-2 92-02-23 Cs 92-03-24 11:00 UT
II-13 28 28 1992-019A 21930 C-5 92-04-10 Cs 92-04-25 20:32 UT
II-14 26 26 1992-039A 22014 F-2 92-07-07 Cs 92-07-23 19:43 UT
II-15 27 27 1992-058A 22108 A-3 92-09-09 Cs 92-09-30 20:08 UT
II-16 32 01 1992-079A 22231 F-1 92-11-22 Cs 92-12-11 14:49 UT
II-17 29 29 1992-089A 22275 F-4 92-12-18 Cs 93-01-05 16:39 UT
II-18 22 22 1993-007A 22446 B-1 93-02-03 Cs 93-04-04 05:20 UT
II-19 31 31 1993-017A 22581 C-3 93-03-30 Rb 93-04-13 20:53 UT
II-20 37 07 1993-032A 22657 C-4 93-05-13 Cs 93-06-12 16:15 UT
```

II-21 39 09 1993-042A 22700 A-1 93-06-26 Cs 93-07-20 12:54 UT
II-22 35 05 1993-054A 22779 B-4 93-08-30 Cs 93-09-28 19:29 UT
II-23 34 04 1993-068A 22877 D-4 93-10-26 Cs 93-11-22 18:20 UT
II-24 36 06 1994-016A 23027 C-1 94-03-10 Cs 94-03-28 14:20 UT
II-25 33 03 1996-019A 23833 C-2 96-03-28 Cs 96-04-09 21:17 UT
II-26 40 10 1996-041A 23953 E-3 96-07-16 Rb 96-08-15 15:05 UT
II-27 30 30 1996-056A 24320 B-2 96-09-12

Notes
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1. NORAD Catalog Number is also known as U.S. Space Command (USSPACECOM) object number and NASA catalog number.
2. No orbital plane position = satellite no longer operational.
3. Clock: Rb = Rubidium; Cs = Cesium.
4. Selective Availability (S/A) had been enabled on Block II satellites during part of 1990; S/A off between about 10 August 1990 and 1 July 1991 due to Gulf crisis; standard level re-implemented on 15 November 1991; occasionally off for test and other purposes. Currently, PRN15 and PRN28 appear to have little or no S/A imposed.
5. Anti-spoofing (A-S) was activated on 94-01-31 at 00:00 UT on all Block II satellites (ref. NANU 050-94042); occasionally off for test and other purposes. A-S was turned off on all satellites at 20:00 UT on 95-04-19 and back on on 95-05-10; off again between 95-06-19 and 95-07-10; and between 95-10-10 and 95-10-31. A-S has been off on PRN28 since 95-02-21.
6. PRN number of SVN32 was changed from 32 to 01 on 93-01-28.
7. The active clock on PRN01 was switched from a Rb to a Cs between 96-08-16 and 96-08-22 (ref. USNO and NANUs 134-96229 and 141-96234).
8. PRN05 and PRN06 are equipped with corner-cube reflectors for satellite laser ranging (SLR). SLR tracking of the satellites will permit onboard clock errors and satellite ephemeris errors in GPS tracking to be differentiated.
9. The decommissioning date for PRN06/SVN03 is the date of termination of operations of this satellite (ref. USNO) and is about 3 weeks later than other published dates for "deactivation".
10. PRN16 will be moved from the E-3 slot to the E-5 slot to make room for PRN10. An orbit maneouvre was carried out on 96-08-19 (ref. NANUs 120-96204, 137-96232).
11. PRN20 hs been unusable since 15:18 UT on 96-05-10 and will not return to service (ref. NANU 118-96204). Cause of failure: loss of 3-axis stabilisation. PRN20 was moved out of the B-2 slot to make room for PRN30 (ref. NANU 162-96256).
12. PRN28 has been moved from the C-2 slot to the C-5 slot, about 40 degrees away. This move, which was initiated on 96-03-06 by lowering the orbit of PRN28 by about 6 km, made way for PRN03. PRN03 is a backup for PRN28 which has some undisclosed equipment problem. PRN28 will remain on the air, with some subsystems shut down to conserve power (ref. NANUs 045-96066, NANU 068-96100, and GPS World Newsletter). The move was completed on 96-08-23 (ref. NANUs 127-96236 and 144-96236).
13. PRN30 (SVN30) was launched on 96-09-12 at 08:49 UT.
14. Announced date of next scheduled launch: 97-01-13 (first Block IIR

satellite).
15. Compiled by Richard B. Langley, Dept. of Geodesy and Geomatics Engineering,
University of New Brunswick.

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Fredericton, N.B., Canada E3B 5A3 Telex: 014-46202
Fredericton? Where's that? See: http://degaulle.hil.unb.ca/NB/fredericton.html
==========

1912. winorbit color problem

Newsgroup: rec.radio.amateur.space
Date: 1996-09-27 00:00:00 UTC
From: tkenny@qsun.ho.att.com
Message-ID: <324bf9cb.87074590@nntpa.cb.att.com>
Source record: 21385

Is it me or is there a problem with getting colors set
in winorbit? I'm using version 3.0 alpha 3 and the colors
seem to change for any except the map (continents and oceans)

Thanks and 73, Tom Kenny KB2GLO

1913. Re: VHF DX Opportunity

Newsgroup: rec.radio.amateur.space
Date: 1996-09-27 00:00:00 UTC
From: robert colin newell <rnewell@castle.uvic.ca>
Message-ID: <324C1092.6352@castle.uvic.ca>
Source record: 21386
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.space,rec.radio.amateur.misc

Mark Gingrich wrote:
>
> On Thursday morning, 26 September, around 8:12 a.m. EDT (12:12 UTC), the
> Space Shuttle Atlantis (STS-79) is expected to touch down at Kennedy Space
This just arrived in my NEWS BOX! Sorry.
A bit more notice next time would be great !
I was up at those hours.. It would have been nice
to know that this was going on..

http://espresso.ts.uvic.ca
The Worlds only Interactive SW WWW Site

1914. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-27 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <52h7sk$dtm@newsbf02.news.aol.com>
Source record: 21387

Hi !

RS-12 is running since some months in mode KT.

Mode K = 15m up / 10 m down
Mode T = 15 m up / 2 m down

That means that you can hear the downlink on two bands
(10 and 2 m) the same time. The 2 m signals are very strong
even with my simple groundplane antenna....

Good luck !

73 Oscar near Ulm / Germany, DJ0MY

1915. Re: MIR future ham activity? Anyone Know?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-27 00:00:00 UTC
From: lewis@phoenix.net
Message-ID: <lewis-ya023080002709962051140001@news.phoenix.net>
Source record: 21388

In article <32430B85.573E@lanl.gov>, Jim Devenport <jdevenport@lanl.gov> wrote:

>Now that non-licensed Shannon Lucid has left MIR, does anyone know of
>any plans for future MIR ham activity? Is John Blaha a ham by any
>chance?

John's call is KC5TZQ. He is a Tech licensed earlier this spring. You will
probably start hearing from him after he has a chance to settle in.

Lewis

--
Lewis P. Stephens Jr. KM5BH (Amateur Radio Callsign)
Amber, Inc. CLARC (Clear Lake Amateur Radio Club)
lewis@phoenix.net NAMU (NASA Area Macintosh Users)
LewisS3@AOL.com
73404.1403.compuserve.com

1916. Ham-Space Digest V96 #298

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609280033.AA147080833@relay2.geis.com>
Source record: 21389

GE Item Number: 503483
Original Msg Id: 388582
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #298
System: MARLBORO#
Date: Sat 28-Sep-96 0:22

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1917. Ham-Space Digest V96 #299

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609280332.AA241351531@relay2.geis.com>
Source record: 21390

GE Item Number: 9515467
Original Msg Id: 388945
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #299
System: MARLBORO#
Date: Sat 28-Sep-96 3:17

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1918. Re: Any info on JAS-2?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <52ifm2$t1b@dfw-ixnews4.ix.netcom.com>
Source record: 21391

Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few weeks ago. Unfortunately, I hear that NORAD seems to be having trouble getting accurate keps for it. I tried monitoring it tonight and heard nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20 UTC). Most of the time, when I listen for it, I hear nothing, and I think this is because of bad keps. At any rate, when I have heard it, the analog transponder has been on and the signals have been excellant.

73's de Bernie, KF0QS

1919. Re: DSP software for Creative ?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: bperr@premier1.net
Message-ID: <52ibpd$1mk@news.premier1.net>
Source record: 21392

faimar@linknet.it (Luca Babini) Remarked With This...:

>Hi ...
>I'm looking for software to use Creative Sound Blaster as DSP for EME
>operation..

>Any info ???

>Luca Babini
>e-mail: faimar@linknet.it
Luca,
You might try looking for a program called fftdsp written by AF9Y. I
Think this is what you may be looking for. Do a www search from yahoo
or alta vista he has a web site with a demo copy available for
download.
73's
WA7LZE
E-Mail
bperr@premier1.net

1920. (I think) that I finally made a Mir packet contact.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <324CB791.38EF@ix.netcom.com>
Source record: 21393

Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since I was first licensed and found out about Mir.)

Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected. Does anybody know if this type of connect qualifies me for a QSL card? This is the one card that I am dying to get, more so than any of the other HF DX contacts I have made.

On a similar topic, who was that QSL manager for Mir, I think it was N6-something-or-other. Is he still the manager?

Regarding the earlier question about Mir on amateur radio, I think that they have been more active in the last couple of days than they were in the last 6 months. Two days in a row, I was able to hear them calling CQ on voice, including John Blaha using his own call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I wasn't able to bust the pileups for that, but I will keep trying :-) I heard from another local ham that he made a contact with John Blaha on the Mir radio while the Shuttle was still docked :-)

Looks like Mir is back, and QRV more than ever :-)

--
73 de Jim, KD1YV

1921. Just heard Mir on voice again

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <324CBDDC.6B2F@ix.netcom.com>
Source record: 21394

They just passed by, and one of the crew was calling CQ from R0MIR. I tried to get them, but it wasn't a very close pass for me, and I guess that they could not hear me. However, I did listen to them making several other contacts.

Good luck working Mir !

--
73 de Jim, KD1YV

1922. RS-12 ROBOT QSL Manager??

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <324D9BC9.5150@mwt.net>
Source record: 21395

I saw that a DL??? is handling QSL cards for contacts with the RS-12
ROBOT. It was in QST a couple months back but can't seem to find it.
Anybody know the German QSL Manager's call?? Thanks...Scott, N0EDV
By the way, I'm active again on RS-12 from Grid EN43 if anybody needs it.

--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

1923. Re: RS-12 Robot Freqs????

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <324D9D57.502B@mwt.net>
Source record: 21396

Steve Kubisch wrote:
>
> Does anyone know the current uplink and downlink freqs
> for the robot on RS-12.
>
> 73,
> Steve -WW7Y-
> kub@pacificorp.comLast I knew, robot uplink 21.130, downlink 29.454, all +/- doppler.

--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

1924. Ham-Space Digest V96 #300

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609281532.AA070554724@relay2.geis.com>
Source record: 21397

GE Item Number: 9851346
Original Msg Id: 389830
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #300
System: MARLBORO#
Date: Sat 28-Sep-96 15:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1925. Mir Activity

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: mherrick@ptialaska.NET
Message-ID: <01BBAD1B.D9557800@dialups_13.kodiak.ptialaska.net>
Source record: 21398

All,
I am looking for information on MIR frequencies for Packet and voice. Anyone have any pointers?

73's Mark KL0AD

1926. Re: (I think) that I finally made a Mir packet contact.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <52jomg$jb@dfw-ixnews11.ix.netcom.com>
Source record: 21399

Dear OM:

Congratulations on your MIR contact. I have had a keyboard to keyboard QSO with MIR as well (your connection is sufficient IMHO for a card). One thing I have learned the hard way about connecting to MIR's packet station is to give my TNC the "PASSALL" command. This will cause my TNC to display all packets received, even if there are some errors in the data received at my station. Given MIR's relatively short period of availability on a pass, it's a good idea.

The QSL manager for MIR is as follows:

Don Larsen, N6JLH
P.O. Box 1501
Pine Grove, CA. 95665

Don would appreciate it if you sent him an SASE when you QSL. If you have questions, you can e-mail him at the following address:

docdave@ix.netcom.com, or docdave@inrech.com

73's de Bernie, KF0QS

1927. KC5TZQ and R0MIR active

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: BJ ARTS <bjarst@uslink.net>
Message-ID: <01bbad25$c454af20$15bc92ce@bjarts.uslink.net>
Source record: 21400

This morning passes have been very active from MIR. R0MIR and KC5TZQ have both been on. John KC5TZQ was on during the 1000 UTC pass over north America. Both KC5TZQ and R0MIR have answered stations calling CQ when the packet station was running. It seems as if the crew will answer a CQ if the heard it and are near the radio.. Good luck making a contact with the space station.. 73 de BJ WT0N

1928. RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: kb0rlo@juno.COM
Message-ID: <19960928.141127.3806.0.KB0RLO@juno.com>
Source record: 21401

Thanks for all the help with RS-12. My satellite tracking program(STSorbit+) gave the following up- and downlink freqs. for RS-12

uplink downlink
21.2300 29.4308
21.2300 145.9360
145.4300 29.4300

Apparently it's only working in the first two modes. I was trying to uplink on 2 Meters because I only had a Tech+ license. I just upgraded to Advanced today, so I can uplink on 15 Meters now. Thanks for all the help.

73's
Mike

1929. FO-29 - WHERE IS IT?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: "Bernard A. Poskus and Cheryl A. Blehm-Poskus" <hamdan@ix.netcom.com>
Message-ID: <52kb9m$d68@sjx-ixn5.ix.netcom.com>
Source record: 21402

Hello all, and thanks for reading this message. Are we getting good keps for FO-29. I have heard it on several occasions, loud and clear, and have had one QSO on it (have heard myself on the downlink more than once, quite clearly). However, frequently, when my computer tells me it should be passing overhead (I am in Denver, grid: DM-79), I just don't hear it at all. My computer is accurate for all the other satellites. I've heard that NORAD has had a problem differentiating it from its booster and has given wrong keps for it on occasion (I get my keps from the AMSAT mailing list). Is anyone else having this problem, or perhaps is FO-29 being shutdown at times while it is in its shakedown period?

An answer would be appreciated because this is driving me crazy (it's a short drive).

73's de Bernie, KF0QS

1930. WISP with DSP232 ???

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <324D7577.775F@iglou.com>
Source record: 21403

Is anyone running WISP with the AEA DSP232 TNC? I have the TNC receiving at 9600 baud to a dumb terminal but doesn't do much when I run a pass with it on WISP.

Charlie KB8BWE
rubenc@iglou.com

1931. ARLK070 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk070.1996@arrl.org>
Source record: 21404
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK070
ARLK070 Keplerian data

ZCZC SK70
QST de W1AW
Keplerian Bulletin 70 ARLK070
From ARRL Headquarters
Newington, CT September 28, 1996
To all radio amateurs

SB KEP ARL ARLK070
ARLK070 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96271.04858238 .00000022 00000-0 71823-5 0 02676
2 18129 82.9227 73.2427 0010304 230.9896 129.0331 13.72369624464144
UO-11
1 14781U 84021B 96270.99985834 .00000167 00000-0 36022-4 0 09266
2 14781 97.8078 257.2382 0012238 119.4498 240.7931 14.69482853672600
RS-12/13
1 21089U 91007A 96271.05767876 .00000042 00000-0 28383-4 0 09295
2 21089 82.9227 113.8091 0028831 313.2114 46.6638 13.74073627283020
AO-13
1 19216U 88051B 96270.60658504 .00079083 -98239-6 17436-2 0 02844
2 19216 57.1138 88.9685 7427123 52.0908 354.3348 2.14362125031987
UO-14
1 20437U 90005B 96271.14134881 .00000015 00000-0 22682-4 0 02167
2 20437 98.5403 352.2278 0010119 263.7519 96.2511 14.29932375348623
RS-15
1 23439U 94085A 96271.09640041 -.00000039 00000-0 10000-3 0 01704
2 23439 64.8133 218.2743 0158566 181.2009 178.8551 11.27528937072275
AO-16
1 20439U 90005D 96271.16528958 -.00000010 00000-0 12922-4 0 00141
2 20439 98.5553 354.6532 0010596 264.8437 95.1539 14.29984775348641
```

```
DO-17
1 20440U 90005E 96271.31734142 -.00000007 00000-0 14132-4 0 123
2 20440 98.5566 355.4920 0010763 263.5855 96.4085 14.30126852348694
WO-18
1 20441U 90005F 96271.16944292 .00000003 00000-0 18039-4 0 00200
2 20441 98.5573 355.2785 0011298 265.6329 94.3563 14.30096178348676
LO-19
1 20442U 90005G 96271.15745768 -.00000013 00000-0 11906-4 0 00193
2 20442 98.5597 355.8064 0011429 263.2235 96.7650 14.30206149348691
FO-20
1 20480U 90013C 96271.05097770 -.00000005 00000-0 68716-4 0 09175
2 20480 99.0211 276.5272 0539960 253.6490 100.4601 12.83234654310958
AO-21
1 21087U 91006A 96270.98913716 .00000093 00000-0 82657-4 0 07578
2 21087 82.9404 246.3544 0034281 284.4139 75.3211 13.74572818283990
UO-22
1 21575U 91050B 96271.12524353 .00000030 00000-0 24313-4 0 07308
2 21575 98.3416 334.4277 0007444 326.3375 33.7342 14.37037340272703
KO-23
1 22077U 92052B 96271.18233784 -.00000037 00000-0 10000-3 0 06326
2 22077 66.0790 335.9051 0015274 273.0988 86.8282 12.86298128193925
KO-25
1 22828U 93061F 96271.20238425 -.00000007 00000-0 14578-4 0 4815
2 22828 98.5713 345.1291 0009922 281.0354 78.9704 14.28152579124676
IO-26
1 22826U 93061D 96271.24542064 -.00000023 00000-0 84065-5 0 5025
2 22826 98.5720 345.1007 0008935 297.7967 62.2307 14.27813006156560
AO-27
1 22825U 93061C 96271.11671350 .00000008 00000-0 20834-4 0 05206
2 22825 98.5717 344.7903 0008240 297.7672 62.2675 14.27704466156531
FO-29
1 24278U 96046B 96271.59491249 -.00000066 00000-0 00000+0 0 180
2 24278 98.7571 342.3841 0302653 138.2966 224.2187 13.46298940 5659
Mir
1 16609U 86017A 96271.18334238 .00005367 00000-0 65942-4 0 07596
2 16609 51.6516 330.0870 0012647 205.3653 154.6715 15.62062899605944

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
October 1, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

1932. Re: (I think) that I finally made a Mir packet contact.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-28 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <52iukk$5n3@news.monad.net>
Source record: 21405

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)

>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.
> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

1933. Re: (I think) that I finally made a Mir packet contact.

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <52knu6$evc@news.mhv.net>
Source record: 21406

In article <324CB791.38EF@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>Tonight I finally made my first Mir contact (have been trying for nearly 3
> years, since
>I was first licensed and found out about Mir.)
>
>Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard
> connect, and
>not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then
> disconnected.
>Does anybody know if this type of connect qualifies me for a QSL card? This is
> the one
>card that I am dying to get, more so than any of the other HF DX contacts I
> have made.
>
>On a similar topic, who was that QSL manager for Mir, I think it was
>N6-something-or-other. Is he still the manager?
>
>Looks like Mir is back, and QRV more than ever :-)

>73 de Jim, KD1YV

You qualify, I got mine that way. N6JLH is the manager: Dave Larsen,
P.O.Box 1501, Pine Grove, Calif. 95665

It took me a few months to get my first. The last crew did not like using the
radio gear. The new crew seems to really love it. I know John Blaha like to
get on a lot. Congrats and let's hope we both get a voice contact soon!

73!

Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1934. Re: Just heard Mir on voice again

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <52ko27$evc@news.mhv.net>
Source record: 21407

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1935. Re: Mir Activity

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <324e4689.82610752@news.cyberhighway.net>
Source record: 21408

On 28 Sep 96 17:01:47 GMT, mherrick@ptialaska.NET (Mark M Herrick)
wrote:

>All,
> I am looking for information on MIR frequencies for Packet and voice. Anyone have any
pointers?
>
>73's Mark KL0AD
>

Hi Mark,

MIR's packet is on 145.550MHz (simplex) as is voice. The call is
R0MIR-1 for the packet box, and you can use that call when trying for
a voice contact. John Blaha has a call, but I can't remember it off
the top of my head. Hope this helps..

John KB7VZL

1936. Plymouth Radio Club 1997 Rally

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: lawspear@cbm.co.uk
Message-ID: <52m10i$9q3@cave.hiway.co.uk>
Source record: 21409

Plymouth Radio Club holds its 1997 Rally on Sunday 25th May 1997 at the College of Further Education Kings Road Devonport Plymouth.

The venue is excellent with lots of free car parking, a licensed bar and restaurant. There is plenty of space to browse and mingle.

Email me if you would like more information or want to book table space.

1937. Ham-Space Digest V96 #301

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609291532.AA270091148@relay2.geis.com>
Source record: 21410

GE Item Number: 5323455
Original Msg Id: 389946
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #301
System: MARLBORO#
Date: Sun 29-Sep-96 15:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1938. DX and Satellite Cyberscheds available at http://www.sarrio

Newsgroup: rec.radio.amateur.space
Date: 1996-09-29 00:00:00 UTC
From: wb6siv@cyberg8t.com
Message-ID: <wb6siv-2909962317530001@host38.cyberg8t.com>
Source record: 21411

Posting Cyberscheds on the WWW can benefit ham radio operators throughout the world with their DX and Satellite schedules.I already have a couple of operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and easily by using the WWW and e-mail.I have set aside a section of my web site for hams to post their request for over-the-air schedules. Included in the posting is a place to list the posters specific ham radio contact needs (countries, zones,IOTA, grid squares ect...). The postings will also include an e-mail link that will allow hams that read the posts, to easily request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located

at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

1939. Ham-Space Digest V96 #302

Newsgroup: rec.radio.amateur.space
Date: 1996-09-30 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199609301635.AA091551308@relay2.geis.com>
Source record: 21412

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1940. questions from a beginner

Newsgroup: rec.radio.amateur.space
Date: 1996-09-30 00:00:00 UTC
From: chapman@cedar.eng.auburn.edu
Message-ID: <52p394$t6n@ultranews.duc.auburn.edu>
Source record: 21413

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB

--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

1941. AMSAT APRS and other ham files

Newsgroup: rec.radio.amateur.space
Date: 1996-09-30 00:00:00 UTC
From: ke4htm@bluenet.net
Message-ID: <52nv73$e5m@clark.zippo.com>
Source record: 21414

```
The Western North Carolina APRS Home Page
-----------------------------------------
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM
```

1942. Re: HELP! Is shuttle audio available in Seattle?

Newsgroup: rec.radio.amateur.space
Date: 1996-09-30 00:00:00 UTC
From: Jonathan Griffitts <jcg@qadas.com>
Message-ID: <skNj4DAmFIUyEw37@qadas.com>
Source record: 21415
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space,rec.radio.amateur

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

1943. Help with Freq's...

Newsgroup: rec.radio.amateur.space
Date: 1996-09-30 00:00:00 UTC
From: "alex@hic.net" <alex@hic.net>
Message-ID: <3250C01D.4811@hic.net>
Source record: 21416

I am looking at an older radio that has Sat capability but works only, 116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make a good antennae for it but I don't want to invest unless 3D or something else might let me use it.

Thanks Alex@hic.net
KC5GEL

1944. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610010900.CAA04093@UCSD.EDU>
Source record: 21320

```
From smtp Wed Sep 25 09:53 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 25 Sep 96 09:53 PDT
Received: by mail.ucsd.edu; id EAA11239
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:41 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11225
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:39 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 11817
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609251130.EAA11225@mail.ucsd.edu>
Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #297
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

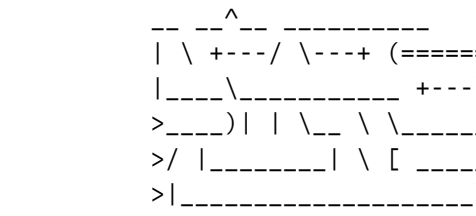
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a

couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

```
Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
```

```
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************
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1945. *** 2 More FREE DigiDay Calendar programs ***

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: mricci@visionx.com
Message-ID: <52r16f$rep@gnews2.voicenet.com>
Source record: 21321

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design it's out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steve's Shareware of the Day WINner's will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of What's So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

1946. Mir Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: Claton Cadmus <aplitech@spacestar.com>
Message-ID: <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>
Source record: 21322

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

1947. Re: Mir Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <52rg4k$lh5@news.mhv.net>
Source record: 21323

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

1948. JOTA (the hut?)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: jeffrey_austin@juno.COM
Message-ID: <19961001.130909.18743.1.jeffrey_austin@juno.com>
Source record: 21324

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

1949. KANSAS CITY TRACKER

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: peter@speedline.ca
Message-ID: <325138f1.2639750@news.speedline.ca>
Source record: 21325

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

1950. Internet for Ham: exist a book?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: kaleida@mbox.vol.it
Message-ID: <52ouik$8os@everest.vol.it>
Source record: 21326

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

1951. Opinions on satellite tracking software wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: aikido@magicnet.net
Message-ID: <3250b8d9.200789108@news.magicnet.net>
Source record: 21417

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

1952. R0MIR active

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: BJ ARTS <bjarst@uslink.net>
Message-ID: <01bbaf68$4fff1f80$17bc92ce@bjarts.uslink.net>
Source record: 21418

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

1953. An open gripe letter to N6JLH (again)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-01 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <3250c655.17509248@news.cyberhighway.net>
Source record: 21419

When I got my Amateur Radio License a few years ago, my primary interest was in packet radio and space communications. Probably the single biggest thrill in my otherwise dull life was to have a few QSO's with Dr. Norm Thaggard while he was onboard the MIR. Besides my voice contacts with the doctor and a few SAREX voice and packet contacts, I really enjoy logging onto the MIR packet BBS (or at least trying to) and read and leave messages. Unfortunately, I happen to share the MIR's "radiological footprint" with N6JLH and therefore am RARELY blessed with a "******CONNECTED TO R0MIR-1" on my screen.

What does N6JLH have to do with my ability to connect to the MIR? I would like an answer to that question myself! What I do know is this, for the last several years I have been trying to (as well as several local licensed friends) utilize the packet bbs that is on-board MIR for the use of all licensed amateur radio enthusiasts, but for the same amount of time I have been seeing N6JLH connected to the pbbs on MIR 99.9% of every pass that I have monitored in the last couple of years. One could say, "perhaps N6JLH is just lucky, has lots of power and great big antenna's." perhaps that is true, BUT, I now believe that he has more than just luck, more than just high power, more than just big antenna's, this SOB has managed to get the packet pbbs onboard the MIR configured to DUMP (forcefully log off) anyone who happens to be connected to it when N6JLH makes a connect! I ask you, is this fair? No, it certainly isn't. And I am royally peeved about it.

I made this comment several years ago on a packet message to allUSA, MANY replies came back saying that this isn't possible, N6JLH has no more chance of connecting to the MIR's pbbs than anyone else. For a long time I reluctantly believed that, now I say BS! Time after time after time I would connect to the MIR's pbbs (when I was fortunate enough to have the MIR pass from the direct north before it got over N6JLH) and the very second that N6JLH would make a connect attempt, the pbbs would immediately drop my connection and just as fast, connected to N6JLH! This isn't just once or twice, DOZENS of times this has happened. One might say, "Oh, John, thats bologna," well, this evening I decided to capture the scrollback of another pbbs attempt, have a look for yourself!

*** CONNECTED to R0MIR-1
R0MIR-1>KB7VZL [09/30/96 23:51:37]:
K(ill) K n [CR] deletes message number n (only to/from your callsign).
R0MIR-1>KB7VZL [09/30/96 23:51:38]:
KM(ine) KM[CR] deletes all READ messages addressed to your call

```
sign.
R0MIR-1>KB7VZL [09/30/96 23:51:38]:
L(ist) L [CR] lists the 10 latest messages.
R0MIR-1>KB7VZL [09/30/96 23:51:39]:
M(ine) M [CR] lists the 10 latest messages to/from your callsign.
R0MIR-1>KB7VZL [09/30/96 23:51:47]:
R(ead) R n [CR] reads message number n.
R0MIR-1>KB7VZL [09/30/96 23:51:47]:
S(end) S (callsign) [CR] begins a message addressed to (callsign).
R0MIR-1>KB7VZL [09/30/96 23:51:48]:
Subject: ending with [CR].
R0MIR-1>KB7VZL [09/30/96 23:51:48]:
Logged on to R0MIR's Personal Message System
R0MIR-1>KB7VZL [09/30/96 23:51:56]:
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
*** DISCONNECTED
R0MIR-1>N6JLH [09/30/96 23:52:06]:
Logged on to R0MIR's Personal Message System
R0MIR-1>N6JLH [09/30/96 23:52:18]:
R0MIR-1>N6JLH [09/30/96 23:52:18]:
You have mail waiting.
R0MIR-1>N6JLH [09/30/96 23:52:18]:
-----------------------------------------
```

Note that only six seconds have elapsed from the time the pbbs sent me the menu to the time that I was disconnected and N6JLH was connected. Amateurs who know packet know that several retries have to be sent before the pbbs will time out a connection, taking LOTS longer than 6 seconds! Also, MIR's pbbs was nearly full scale at the time I was given the axe by N6JLH. No, I refuse to believe that MIR simply lost my signal and went on to the next connect request, do you see the pbbs sending a CQ?? No, you don't, because it didn't send one! N6JLH typed c r0mir-1 and hit return, the MIR heard it, executed some kind of quick log-off script to boot me off and log N6JLH on in my place. This has been the scenario for years! I have gone through this exact same thing over and over and over and frankly, I am SICK OF IT! As are many of my friends who also have to put up with N6JLH's monopoly of the MIR's pbbs.

I am very much aware that N6JLH is responsible for MIR's QSL cards for those who are lucky enough to live far enough away from him to manage a connection, but does this give him the right to TOTALLY MONOPOLIZE the pbbs on MIR for just about the entire west coast? I say no. But, he's been doing it for so long that I seriously doubt it will ever stop. Can't he just log on once per evening and leave the rest of the passes for others to enjoy a connection, it doesn't seem so. Has this man been duct taped to his chair in front of his packet station, he is ALWAYS there, every single pass! Is he using a script file to do his logging? Which would be even more rude than what he is already.

"But John, since he takes care of the QSL's for the pbbs he needs to log onto the MIR's pbbs many times to get needed information!"

B S, I have watched the messages that are sent to him and that he sends, 99.9% of them have ABSOLUTELY NOTHING to do with anything realted to the pbbs! Idle chit-chat, thats all..

N6JLH, I believe that you are a disgrace to the Amateur Radio Community, your "god-like" control over who connects to the pbbs onboard MIR is a power that I believe that no one man should posess, I think that your CONSTANT use of the MIR pbbs when others are either already online with it, or attempting a connect to it is extreamely RUDE and unfair to all of us who would enjoy even one connect every few weeks.

N6JLH, for heavens sake, TAKE A VACATION and let someone else log onto MIR, after all IT BELONGS TO EVERYONE, not just N6JLH. You truely take the fun out of this hobby.

To all of you reading this on the east coast, I swear on my Grandmothers grave that everything I have said is true and that this is what we put up with out west. I'm about this close to throwing this TNC into the river.

John KB7VZL

1954. Re: Any info on JAS-2?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-02 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <52teid$ei1@bbcnews.rd.bbc.co.uk>
Source record: 21327

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

1955. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-02 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610020901.CAA24468@UCSD.EDU>
Source record: 21328

```
From smtp Wed Sep 25 09:53 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 25 Sep 96 09:53 PDT
Received: by mail.ucsd.edu; id EAA11239
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:41 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11225
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:39 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 11817
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609251130.EAA11225@mail.ucsd.edu>
Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #297
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

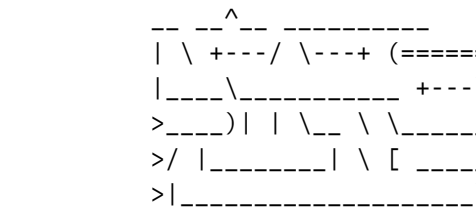
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a

couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

```
Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
```

```
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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1956. DC/MD/VA RA Enthusiasts?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-02 00:00:00 UTC
From: broom@acm.org
Message-ID: <DynLrE.G4F@net.usnews.com>
Source record: 21329
Cross-posted to: sci.astro.amateur,rec.radio.amateur.space

I'm looking for people in the DC metro area who are interested in, or already active in Amateur Radio Astronomy. I would like to combine expertise and resources to construct and operate an RA site, and conduct data analysis.

Followups or email OK.

-Ralph Broom-

1957. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-10-02 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <52uv3t$4qj@blackbird.afit.af.mil>
Source record: 21330

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1958. NORAD Two-Line Orbital Element Sets (TLE876)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-02 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <52uuvo$4q6@blackbird.afit.af.mil>
Source record: 21331

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #876 -
Alouette 1
1 00424U 62049A 96276.15929579 .00000068 00000-0 69564-4 0 2326
2 00424 80.4582 178.1955 0023257 114.9448 245.4115 13.67876964696960
ATS 1
1 02608U 66110A 96265.56107778 -.00000230 00000-0 10000-3 0 9810
2 02608 14.6024 351.7975 0008730 102.2883 257.8415 1.00304293 25836
ATS 3
1 03029U 67111A 96275.31622310 -.00000129 00000-0 10000-3 0 5518
2 03029 14.9141 358.6533 0008572 259.9635 120.2840 1.00273191105838
Starlette
1 07646U 75010A 96274.60183749 -.00000140 00000-0 76151-6 0 18
2 07646 49.8290 92.7233 0206020 218.6112 139.9893 13.82191415 93542
LAGEOS
1 08820U 76039A 96275.86920832 .00000019 00000-0 00000+0 0 2284
2 08820 109.8500 62.5526 0043505 105.7433 254.7869 6.38664549220645
ETS-2
1 09852U 77014A 96273.27365078 -.00000255 00000-0 10000-3 0 772
2 09852 13.3582 31.6802 0005993 121.3906 238.6620 1.00003027 18689
GOES 2
1 10061U 77048A 96275.41956688 .00000042 00000-0 10000-3 0 7404
2 10061 12.5097 35.8524 0012312 122.4850 188.0292 1.00252347 15507
IUE
1 10637U 78012A 96273.40398247 -.00000269 00000-0 10000-3 0 2826
2 10637 35.9400 81.4733 1377839 59.6914 313.2754 1.00206519 20986
GOES 3
1 10953U 78062A 96275.32532177 -.00000139 00000-0 10000-3 0 7187
2 10953 11.5070 38.7967 0003238 105.3629 241.2092 1.00267170 20114

```
SeaSat 1
1 10967U 78064A 96275.23263119 -.00000021 00000-0 37603-4 0 5199
2 10967 107.9930 34.1595 0002556 248.8645 111.2223 14.38124456956691
Nimbus 7
1 11080U 78098A 96273.62091091 -.00000061 00000-0 -17579-4 0 6165
2 11080 98.9241 130.7094 0009886 45.9299 314.2669 13.83690244905610
GOES 5
1 12472U 81049A 96274.50249709 .00000025 00000-0 10000-3 0 9533
2 12472 8.3314 49.1772 0013077 65.4951 294.6475 1.00252309 14357
Cosmos 1383
1 13301U 82066A 96273.91087929 .00000029 00000-0 16836-4 0 5324
2 13301 82.9284 57.0085 0027039 314.5618 45.3328 13.68077078711693
LandSat 4
1 13367U 82072A 96273.74532423 .00000112 00000-0 34557-4 0 67
2 13367 98.0617 321.4273 0007192 165.7914 194.1724 14.57184784755764
DMSP B5D2-1
1 13736U 82118A 96275.89402433 .00000065 00000-0 45654-4 0 914
2 13736 98.6224 102.5629 0009451 75.8105 284.4127 14.25805086716273
IRAS
1 13777U 83004A 96276.04747586 -.00000234 00000-0 -13121-3 0 4482
2 13777 98.9685 99.2870 0012005 159.1735 200.9918 13.99260868368318
Cosmos 1447
1 13916U 83021A 96273.54595236 .00000085 00000-0 74239-4 0 6236
2 13916 82.9446 113.8660 0036583 220.4956 139.3478 13.74345699678077
TDRS 1
1 13969U 83026B 96276.22785517 -.00000309 00000-0 10000-3 0 6404
2 13969 9.1354 42.6192 0002434 135.7808 225.7582 1.00265877 22462
GOES 6
1 14050U 83041A 96276.19917657 -.00000197 00000-0 10000-3 0 5483
2 14050 7.1991 52.5970 0004564 78.0852 221.6438 1.00224515107268
AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 4571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649 72045
LandSat 5
1 14780U 84021A 96276.21115018 .00000053 00000-0 22064-4 0 5514
2 14780 98.3194 333.9645 0002338 344.4489 15.6637 14.57056509669541
UO-11
1 14781U 84021B 96273.51927443 .00000176 00000-0 37545-4 0 9169
2 14781 97.8080 259.6482 0012418 112.1357 248.1167 14.69484035672971
Cosmos 1574
1 15055U 84062A 96272.24831546 .00000025 00000-0 10146-4 0 8234
2 15055 82.9596 169.9393 0029243 54.7136 305.6748 13.73639574615130
Cosmos 1602
1 15331U 84105A 96274.25037803 .00000247 00000-0 26154-4 0 5066
2 15331 82.5341 14.5919 0019641 326.3537 33.6432 14.84788946648566
ERBS
1 15354U 84108B 96273.24381082 -.00000106 00000-0 12090-4 0 2193
2 15354 56.9977 322.4237 0008655 83.5940 276.6072 14.94981086652406
NOAA 9
1 15427U 84123A 96275.78984451 .00000073 00000-0 62455-4 0 8638
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2 15427 98.9360 340.7222 0015807 15.7961 344.3698 14.13807336608698
Mir
1 16609U 86017A 96276.19408002 .00000915 00000-0 16289-4 0 6923
2 16609 51.6519 304.8165 0012480 224.8931 251.6678 15.62085522606724
SPOT 1
1 16613U 86019A 96276.25015739 -.00000045 00000-0 00000+0 0 9903
2 16613 98.8260 344.0529 0000619 4.7871 355.3311 14.19986292235509
Cosmos 1766
1 16881U 86055A 96275.94566170 .00000130 00000-0 12816-4 0 4211
2 16881 82.5170 70.6904 0019396 349.9408 10.1416 14.83763032549671
EGP
1 16908U 86061A 96275.34708428 -.00000083 00000-0 10000-3 0 1202
2 16908 50.0076 30.6192 0011389 282.5487 77.4073 12.44414933129626
NOAA 10
1 16969U 86073A 96275.85749704 .00000035 00000-0 33033-4 0 7967
2 16969 98.5296 269.8978 0014298 44.7049 315.5277 14.25004095521797
MOS-1
1 17527U 87018A 96275.68202519 -.00000043 00000-0 00000+0 0 4686
2 17527 98.9353 335.2871 0018385 35.3828 324.8572 14.00448650489895
GOES 7
1 17561U 87022A 96275.50903081 -.00000172 00000-0 10000-3 0 811
2 17561 3.2725 68.6627 0004148 333.7724 55.8403 1.00262574 18373
Kvant-1
1 17845U 87030A 96276.10939128 -.00006017 00000-0 -61072-4 0 7732
2 17845 51.6533 305.2471 0012495 226.4576 133.5364 15.62079712540829
DMSP B5D2-3
1 18123U 87053A 96275.76361989 .00000038 00000-0 42001-4 0 6175
2 18123 98.7702 104.3083 0013872 314.5173 45.4867 14.15455052479572
RS-10/11
1 18129U 87054A 96274.91268992 .00000032 00000-0 18756-4 0 2640
2 18129 82.9222 70.3845 0010377 218.8389 141.2026 13.72369807464671
Meteor 2-16
1 18312U 87068A 96275.08168711 .00000041 00000-0 23222-4 0 5126
2 18312 82.5500 268.0789 0011064 287.6827 72.3125 13.84085231460824
Meteor 2-17
1 18820U 88005A 96275.69027781 .00000059 00000-0 39553-4 0 577
2 18820 82.5428 322.3851 0017287 352.9833 7.1084 13.84762448438262
DMSP B5D2-4
1 18822U 88006A 96275.90750835 .00000040 00000-0 35813-4 0 3553
2 18822 98.3822 102.8782 0007215 54.5816 305.6039 14.23202295449752
Glonass 34
1 19163U 88043A 96275.11003125 .00000077 00000-0 10000-3 0 1197
2 19163 65.2734 82.2635 0007334 160.5263 199.5383 2.13103703 64496
Glonass 36
1 19165U 88043C 96275.16708152 .00000010 00000-0 10000-3 0 5232
2 19165 65.2832 82.2284 0002470 348.8344 11.1848 2.13102182 65119
METEOSAT 3
1 19215U 88051A 96270.64710632 -.00000153 00000-0 10000-3 0 2811
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AO-13
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2 19274 82.5177 173.6700 0020273 135.0182 225.2679 14.82523806444872
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2 19336 82.5370 92.4229 0016127 338.1961 21.8479 13.16978862393248
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Kristall
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TDRS 5
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Meteor 3-5
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DMSP B5D2-6
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ASTRO-D
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UFO F1
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NOAA 13
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UFO F2
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2 22827 98.5711 349.8581 0008750 271.5882 88.4286 14.27950688157284
KO-25
1 22828U 93061F 96275.26589015 .00000019 00000-0 25269-4 0 4821
2 22828 98.5708 349.1164 0009741 268.2641 91.7424 14.28153202125259
POSAT
1 22829U 93061G 96276.26477352 .00000026 00000-0 27968-4 0 4975
2 22829 98.5717 350.1632 0009469 265.7502 94.2596 14.28135055157313
GPS BIIA-23
1 22877U 93068A 96274.38091566 -.00000060 00000-0 10000-3 0 4848
2 22877 55.7259 44.9676 0040358 300.8025 58.7953 2.00567851 21504
METEOSAT 6
1 22912U 93073B 96274.11534144 -.00000106 00000-0 00000+0 0 5565
2 22912 0.1852 50.2967 0002687 155.0287 195.5869 1.00274647 8916
HST Array
1 22920U 90037C 96275.87865091 .00006176 00000-0 40643-3 0 5218
2 22920 28.4649 153.9646 0004059 184.3048 175.7404 15.05554722155511
Meteor 3-6
1 22969U 94003A 96274.53671588 .00000051 00000-0 10000-3 0 2875
2 22969 82.5636 186.1678 0015736 340.4466 19.6052 13.16738836128916
TUBSAT-B
1 22970U 94003B 96274.23770665 .00000051 00000-0 10000-3 0 2780
2 22970 82.5590 186.2635 0016004 338.2235 21.8198 13.16828121128888
GPS BIIA-24
1 23027U 94016A 96272.46918449 -.00000083 00000-0 10000-3 0 4097
2 23027 55.0648 345.6823 0067236 204.8171 154.9127 2.00561171 18777
Glonass 62
1 23043U 94021A 96275.59685281 .00000027 00000-0 10000-3 0 4078
2 23043 64.6143 320.2174 0007539 199.8270 160.1801 2.13103100 19274
Glonass 63
1 23044U 94021B 96272.66373622 -.00000036 00000-0 00000+0 0 3757
2 23044 64.6077 320.2855 0031686 205.9304 153.9827 2.13102987 19218
Glonass 64
1 23045U 94021C 96276.12613648 -.00000050 00000-0 00000+0 0 3844
2 23045 64.5915 320.1675 0010129 28.7209 331.3988 2.13101851 19288
GOES 8
1 23051U 94022A 96276.10720315 -.00000276 00000-0 10000-3 0 5869
2 23051 0.2368 89.3564 0004511 107.5564 138.3726 1.00274933 16439
MSTI 2
1 23101U 94028A 96275.89514837 .00005365 00000-0 81677-4 0 3596
2 23101 97.0786 108.2107 0009561 291.1471 68.8767 15.54892196135877
STRV-1A
1 23125U 94034B 96267.30964985 .00002240 00000-0 77999-3 0 3331
2 23125 7.0434 195.0735 7243324 146.4056 293.7495 2.32745302 18404
STRV-1B
1 23126U 94034C 96275.95130323 .00002728 00000-0 80245-3 0 2959
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2 23126 7.0701 191.1811 7243391 153.9121 276.0597 2.32894838 18646
Nadezhda 4
1 23179U 94041A 96272.75667796 .00000013 00000-0 -19047-5 0 2229
2 23179 82.9481 159.8451 0035211 192.8988 167.1270 13.75684717111035
Glonass 65
1 23203U 94050A 96272.50936753 .00000003 00000-0 00000+0 0 3448
2 23203 64.7653 200.6490 0006602 153.7157 206.3251 2.13101991 16606
Glonass 66
1 23204U 94050B 96276.02778652 -.00000001 00000-0 00000+0 0 3610
2 23204 64.7445 200.5651 0015003 344.5011 15.4750 2.13102166 16673
Glonass 67
1 23205U 94050C 96275.44100841 .00000004 00000-0 00000+0 0 3471
2 23205 64.7567 200.5658 0002058 284.0615 75.9352 2.13102666 16663
DMSP B5D2-7
1 23233U 94057A 96275.74221760 .00000058 00000-0 54937-4 0 9429
2 23233 98.8182 332.9048 0011502 237.5076 122.4980 14.12738997107879
OKEAN 1-7
1 23317U 94066A 96276.22184812 .00000204 00000-0 27388-4 0 1876
2 23317 82.5431 320.5640 0028036 91.2253 269.2139 14.74044968106301
ELEKTRO
1 23327U 94069A 96269.91073354 -.00000128 00000-0 00000+0 0 2016
2 23327 0.2334 115.5239 0003713 36.2238 257.2135 1.00273474 7016
RESURS 1-3
1 23342U 94074A 96274.59541027 .00000098 00000-0 24306-4 0 5801
2 23342 97.9555 329.0848 0001648 62.5091 297.6284 14.69864697102294
Glonass 68
1 23396U 94076A 96275.28490536 .00000009 00000-0 00000+0 0 3256
2 23396 65.1294 80.6813 0029909 188.0338 171.9336 2.13102382 14500
Glonass 69
1 23397U 94076B 96273.58410625 .00000003 00000-0 00000+0 0 3073
2 23397 65.1176 80.7465 0010926 321.7387 38.2004 2.13101808 14467
Glonass 70
1 23398U 94076C 96275.34486519 .00000009 00000-0 00000+0 0 3307
2 23398 65.1076 80.6628 0001595 269.9908 90.0071 2.13101703 14511
LUCH (Altair-2)
1 23426U 94082A 96274.22481135 -.00000300 00000-0 00000+0 0 3980
2 23426 1.2256 266.4179 0002261 297.1484 341.9995 1.00269125 6558
RS-15
1 23439U 94085A 96274.28937141 -.00000039 00000-0 10000-3 0 1652
2 23439 64.8130 213.1110 0158567 180.6394 179.4345 11.27528867 72635
NOAA 14
1 23455U 94089A 96275.81821443 .00000137 00000-0 10001-3 0 7667
2 23455 98.9545 221.0193 0009140 307.4370 52.5972 14.11614492 90492
Glonass 71
1 23511U 95009A 96276.24174577 -.00000050 00000-0 00000+0 0 2406
2 23511 64.6238 320.4361 0008232 221.4772 138.5238 2.13103592 12258
Glonass 72
1 23512U 95009B 96273.54602135 -.00000043 00000-0 00000+0 0 2506
2 23512 64.6175 320.5362 0006355 302.6651 57.3421 2.13101450 12199
Glonass 73
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1 23513U 95009C 96273.36842176 -.00000042 00000-0 00000+0 0 2620
2 23513 64.6229 320.5565 0014977 204.7676 155.2314 2.13102799 12199
GMS 5
1 23522U 95011B 96273.79398731 -.00000308 00000-0 10000-3 0 1598
2 23522 0.4341 11.2812 0000605 174.2498 249.0091 1.00276557 5507
DMSP B5D2-8
1 23533U 95015A 96275.74234142 .00000062 00000-0 57252-4 0 6914
2 23533 98.8447 276.8525 0008105 107.3618 252.8442 14.12755748 78672
OSC 1
1 23545U 95017A 96274.14941022 .00000242 00000-0 85730-4 0 1674
2 23545 69.9714 286.5975 0011254 27.6448 332.5279 14.45397169 78828
OSC 2
1 23546U 95017B 96275.15277207 .00000055 00000-0 32650-4 0 2018
2 23546 69.9800 284.4199 0011530 15.3796 344.7684 14.45405063 78971
Microlab 1
1 23547U 95017C 96274.13061565 .00000286 00000-0 97960-4 0 1384
2 23547 69.9788 286.5234 0011394 19.9734 340.1839 14.45587839 78839
OFEQ 3
1 23549U 95018A 96275.95080706 .00017243 00000-0 41775-3 0 3325
2 23549 143.3610 159.8462 0216756 318.4660 39.9818 15.17994096 82563
GFZ-1
1 23558U 86017JE 96276.22053882 .00002560 00000-0 33706-4 0 1612
2 23558 51.6520 293.1742 0005279 258.6036 101.4289 15.62821099606746
ERS-2
1 23560U 95021A 96276.23664817 .00000019 00000-0 23223-4 0 2832
2 23560 98.5482 348.7639 0001072 73.7601 286.3703 14.32250099 75891
Spektr
1 23579U 95024A 96276.10939128 -.00006017 00000-0 -61072-4 0 4596
2 23579 51.6533 305.2471 0012495 226.4576 133.5364 15.62079712 78141
GOES 9
1 23581U 95025A 96275.29190128 .00000064 00000-0 10000-3 0 2583
2 23581 0.1966 266.4995 0002211 310.4127 123.0596 1.00272435 4989
Helios 1A
1 23605U 95033A 96275.98264973 .00000090 00000-0 26178-4 0 3231
2 23605 98.1273 210.1821 0001280 59.4262 300.7067 14.63838454 66182
UPM SAT 1
1 23606U 95033B 96272.35962864 .00000198 00000-0 43665-4 0 2153
2 23606 98.1081 207.9965 0006189 219.4847 140.5906 14.67285596 65844
CERISE
1 23607U 95033C 96274.90197903 .00000040 00000-0 15820-4 0 1215
2 23607 98.1092 210.3444 0005469 205.1565 154.9346 14.66965076 66234
TDRS 7
1 23613U 95035B 96275.37295703 .00000075 00000-0 00000+0 0 2222
2 23613 0.8959 82.2518 0002763 144.8108 106.1965 1.00269874 4445
Glonass 74
1 23620U 95037A 96275.49849180 .00000003 00000-0 00000+0 0 1870
2 23620 64.8156 200.4138 0018575 170.1963 189.8620 2.13102826 9273
Glonass 75
1 23621U 95037B 96276.14531926 -.00000002 00000-0 00000+0 0 1971
2 23621 64.8263 200.4000 0018265 181.2354 178.7807 2.13102034 9280
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1 23622U 95037C 96274.32640993 .00000008 00000-0 00000+0 0 1992
2 23622 64.8204 200.4596 0036512 166.2136 193.9022 2.13102189 9247
Prognoz-M2
1 23632U 95039A 96275.24015710 -.00000875 00000-0 00000+0 0 846
2 23632 70.4810 249.1450 8046083 323.5120 358.7770 0.26411200 1136
SICH-1
1 23657U 95046A 96275.61079978 .00000104 00000-0 12477-4 0 1120
2 23657 82.5309 102.6107 0029649 64.0362 296.3896 14.73496995 58508
RADARSAT
1 23710U 95059A 96273.59614499 -.00000044 00000-0 00000+0 0 1894
2 23710 98.5810 278.8061 0001270 66.6446 293.4881 14.29978622 47163
Glonass 79
1 23734U 95068A 96275.38280590 .00000004 00000-0 00000+0 0 1705
2 23734 64.8255 200.3358 0018398 321.7452 38.1532 2.13102005 6232
Glonass 78
1 23735U 95068B 96276.05332514 -.00000001 00000-0 00000+0 0 1646
2 23735 64.8161 200.3023 0007514 217.9425 142.0339 2.13125031 6247
Glonass 77
1 23736U 95068C 96275.14801388 .00000005 00000-0 00000+0 0 1447
2 23736 64.8106 200.3478 0007189 206.0806 153.9022 2.13101858 6220
XTE
1 23757U 95074A 96274.51371885 .00000623 00000-0 23051-4 0 891
2 23757 22.9825 54.7832 0014033 239.1416 120.7692 14.97699221 41271
Polar
1 23802U 96013A 96275.14210133 -.00000073 00000-0 10000-3 0 613
2 23802 86.2420 24.9226 6554741 281.1775 16.4344 1.36679010 4938
1996010E
1 23824U 96010E 96272.25960064 .00016885 00000-0 12246-1 0 1078
2 23824 47.6567 225.0477 7304179 52.6441 353.4810 2.22618510 4900
GPS BIIA-25
1 23833U 96019A 96275.59479404 -.00000032 00000-0 10000-3 0 851
2 23833 54.6833 343.7294 0035421 152.1966 208.0267 2.00563342 3943
Priroda
1 23848U 96023A 96276.10939128 -.00006017 00000-0 -61072-4 0 1480
2 23848 51.6533 305.2471 0012495 226.4576 133.5364 15.62079712 25232
MSX
1 23851U 96024A 96275.91487320 -.00000045 00000-0 10000-5 0 1025
2 23851 99.3905 257.4690 0007217 212.7102 147.3601 13.97573521 22404
MSTI 3
1 23868U 96031A 96275.05167314 .00002104 00000-0 44300-4 0 603
2 23868 97.1228 103.6603 0013166 141.2363 218.9825 15.46325498 21177
TOMS-EP
1 23940U 96037A 96273.62492919 .00002710 00000-0 12397-3 0 448
2 23940 97.4309 177.7829 0013764 344.7430 15.3367 15.21317113 13519
GPS BIIA-26
1 23953U 96041A 96275.01143027 -.00000006 00000-0 00000+0 0 536
2 23953 55.0656 104.0527 0018909 337.7528 22.2406 2.00568422 1592
Progress M-32
1 24071U 96043A 96275.02183070 .00014649 00000-0 16906-3 0 682
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2 24071 51.6518 310.7283 0012463 220.1542 139.8715 15.62096796 9585
ADEOS
1 24277U 96046A 96275.91818495 -.00000044 00000-0 00000+0 0 800
2 24277 98.6227 351.2802 0001582 131.0598 229.0720 14.27629349 6513
FO-29
1 24278U 96046B 96276.20991262 -.00000038 00000-0 -53073-5 0 200
2 24278 98.5770 346.1552 0351829 134.1658 228.8969 13.52626033 6240
Soyuz TM-24
1 24280U 96047A 96276.10939128 -.00006017 00000-0 -61072-4 0 521
2 24280 51.6533 305.2471 0012495 226.4576 133.5364 15.62079712 7132
Microsat
1 24291U 96050A 96275.05250760 .00036368 61206-5 23626-3 0 294
2 24291 62.7916 263.4229 0646212 112.5551 254.5124 14.59960175 4790
Magion 5
1 24293U 96050C 96275.56980525 .00000003 00000-0 42710-4 0 227
2 24293 62.7815 356.0482 5624737 288.9296 20.1394 4.14525063 1412
1996050D
1 24294U 96050D 96276.02152113 .00057455 66328-5 34100-3 0 354
2 24294 62.7635 258.4513 0595089 111.9820 254.5580 14.72330881 4974
1996050E
1 24295U 96050E 96276.10442293 .00124133 60656-5 38628-3 0 439
2 24295 62.8152 258.7269 0636142 112.8381 254.1087 14.71720491 4976
Cosmos 2333
1 24297U 96051A 96273.08441539 -.00000047 00000-0 00000+0 0 123
2 24297 71.0142 113.9906 0002503 343.6815 16.4225 14.12573410 3494
1996051B
1 24298U 96051B 96274.85780777 -.00000047 00000-0 00000+0 0 175
2 24298 71.0163 110.3258 0013776 352.4795 7.6118 14.12406890 3746
1996051C
1 24299U 96051C 96274.51548792 -.00000042 00000-0 00000+0 0 94
2 24299 71.0338 114.8208 0190365 35.2524 326.1013 13.73494983 3582
1996051D
1 24300U 96051D 96272.79279008 -.00000041 00000-0 00000+0 0 84
2 24300 71.0301 118.2185 0198508 62.5110 299.6002 13.72072967 3347
1996051E
1 24301U 96051E 96275.75405972 -.00000042 00000-0 00000+0 0 109
2 24301 70.9964 112.1361 0211594 31.4889 329.8669 13.69813296 3742
1996051F
1 24302U 96051F 96274.60324324 -.00000041 00000-0 00000+0 0 158
2 24302 71.0220 114.3716 0210952 54.5249 307.5444 13.68895505 3589
1996051G
1 24303U 96051G 96275.59344659 -.00000046 00000-0 00000+0 0 88
2 24303 71.1031 109.5701 0072728 293.1740 66.1747 14.07173003 3833
Cosmos 2334
1 24304U 96052A 96275.82887142 .00000244 00000-0 24809-3 0 249
2 24304 82.9378 185.5066 0029008 198.6324 161.3770 13.72895442 3558
MO-30
1 24305U 96052B 96273.27486818 .00000204 00000-0 20364-3 0 273
2 24305 82.9352 187.3809 0028961 211.4769 148.4626 13.73085883 3254
1996052C
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1 24306U 96052C 96273.83842059 .00006556 00000-0 69300-2 0 277
2 24306 82.9284 186.9358 0021232 220.3516 139.5166 13.74241870 3347
Inmarsat III F2
1 24307U 96053A 96274.21928828 -.00000077 00000-0 00000+0 0 239
2 24307 2.6758 287.6587 0001991 324.5138 211.8291 0.99350584 237
1996053B
1 24308U 96053B 96260.61263131 .22409944 12771-4 13612-3 0 494
2 24308 51.5889 204.9437 0007273 264.2999 95.9881 16.53719997 1619
GE-1
1 24315U 96054A 96274.30000000 -.00000128 00000-0 00000+0 0 217
2 24315 0.0240 240.4920 0001732 241.3800 252.4000 1.00268381 221
1996054B
1 24316U 96054B 96273.14622619 .00064642 -10697-5 11238-1 0 176
2 24316 25.1075 136.4079 8089590 185.5685 149.4690 1.36011632 281
1996049C
1 24317U 96049C 96274.71736432 .00000955 00000-0 10000-3 0 114
2 24317 82.9890 159.6647 2200804 90.9232 284.6536 10.81310292 2232
1996049D
1 24318U 96049D 96276.11059808 .00013686 00000-0 12881-2 0 131
2 24318 82.9925 158.9748 2214557 88.1490 296.9058 10.81474694 2389
1996049E
1 24319U 96049E 96276.15458752 .00036098 00000-0 34726-2 0 197
2 24319 83.0111 158.9384 2200284 88.0659 296.8853 10.83979021 2336
GPS BII -27
1 24320U 96056A 96266.90939358 .00000016 00000-0 00000+0 0 180
2 24320 54.7074 284.5583 0035222 139.5772 223.2963 2.01506631 82
1996056C
1 24321U 96056C 96276.10571882 .00052636 20389-6 93484-3 0 329
2 24321 35.0254 264.0713 6035987 212.8479 88.4006 4.07941590 811
1996056B
1 24323U 96056B 96274.87347748 .00000862 00000-0 50703-4 0 71
2 24323 35.5402 142.0410 0100736 281.0341 77.9062 15.08642615 2419
1996049F
1 24325U 96049F 96276.11239924 .00066676 00000-0 62654-2 0 172
2 24325 82.9833 158.9219 2192146 88.0253 296.8247 10.86034855 2591
1996058A
1 24435U 96058A 96274.16643666 -.00000156 00000-0 00000+0 0 119
2 24435 0.2061 294.4104 0010053 193.1119 28.6719 0.99936392 33
1996058B
1 24436U 96058B 96273.42259432 .09269389 12720-4 11511-3 0 169
2 24436 51.6361 268.0057 0007631 300.3536 59.6839 16.49186939 442
1996058C
1 24437U 96058C 96271.59134398 .25242040 12693-4 30003-3 0 146
2 24437 51.6231 278.3198 0001631 39.3230 320.7852 16.49906500 141
1996058D
1 24438U 96058D 96271.42903887 -.00000244 00000-0 00000+0 0 20
2 24438 0.2950 290.3227 0008812 316.7620 4.5723 1.00168228 07
1996058E
1 24454U 96058E 96274.32277238 .00000454 00000-0 46345-3 0 33
2 24454 47.6138 281.8432 7264426 0.9288 359.9132 2.26877113 72
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

1959. Re: KANSAS CITY TRACKER

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: Harri Leskinen <harri@bitfield.fi>
Message-ID: <3253746F.594E@bitfield.fi>
Source record: 21332

Peter Gayle wrote:
>
> Hi I just recently bought a KC Tracker at an estate sale.

I have same problem with my KC board.. Please send me copy if you find
it. (EMail attachment ..)

73 de OH2JMS

1960. Re: Ham-Space Digest V96 #298

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: n9rze@prairienet.org
Message-ID: <n9rze-0310960340520001@ruger-2.slip.uiuc.edu>
Source record: 21333

In article <robert.843962929@kd3bj.ampr.org>, robert@kd3bj.ampr.org
(Robert E. Garland) wrote:

> shipco-postmaster@geis.COM writes:
>
> >GE Item Number: 503483
> >Original Msg Id: 388582
> >shipco-postmaster response to your message
>
> > Subject: Ham-Space Digest V96 #298
> > System: MARLBORO#
> > Date: Sat 28-Sep-96 0:22
>
> >Status: 6 Message picked up by receiving system and
> > delivered to all recipients with some exceptions.
>
> >Address Delivered To:
> > REINHART
> >Address Status Message:
> > Invalid cc:Mail address
>
>
> Posts such as this one seem to be living on this newsgroup lately. Can
> anyone explain what gives? If REINHART has requested something and his
> request bounced, can he be alerted?

I'm all for getting rid of this! It's been on the newsgroup for weeks now!
I've sent several messages to the postmaster at the address it comes from.
But nothing seems to be done. Why? I don't think their people understand
what they are doing!

-Marcus Damberger / N9RZE Amateur Radio

1961. Re: Mir Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: clinton.peebles@saloon.bcbbs.net
Message-ID: <9610030556292708@saloon.bcbbs.net>
Source record: 21334

>>What are the current frequencies being used by Mir for packet and voice?
>>
>>Thanks,
>>Claton Cadmus |73 de KA0GKC
>>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>>

T>145.550 simplex for both packet and voice

There's also the SAFEX SPACE REPEATER onboard MIR. RR0DL

447.75 up 141.3 tone
437.95 down
437.925 beacon

I've never heard it, but that's what I have for the frequencies.

• QMPro 1.53 • SYSTEM ERROR: press F13 to continue...

1962. Re: KANSAS CITY TRACKER

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbb162$1ce1ebe0$068067ce@miseno.netwide.net>
Source record: 21335

Peter,

I've placed the drivers on LogSat's home page. Just point your browser to
http://www.logsat.com/pub/kct.zip (~100K) to download them. I also scanned
in a few pages from the manual you might find useful during the setup.
Download them from http://www.logsat.com/pub/kct-doc.zip (~700k).

Good luck!
--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Peter Gayle <peter@speedline.ca> wrote in article
<325138f1.2639750@news.speedline.ca>...
> Hi I just recently bought a KC Tracker at an estate sale.
> When I bought it, I did not realize that I also needed the
> accompanying software disk. If u have this disk I would appreciate a
> copy. I would pay for shipping or an Email transfer with an attachment
> would work well too.
> Thanks.....Peter, VA3PK
>
>

1963. SPACE FREQUENCY QUESTION

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: Gross <sgross@midusa.net>
Message-ID: <32537567.1F36@midusa.net>
Source record: 21336

Hi everyone,

My name is Jeff and I have a Pro-2026 100 channel scanner at home. I hear a lot about the frequencies used by the MIR station and the ham guys up there. I know one of the frequencies is 145.55 MHz. I have that and about 5 other nationwide "space" frequencies programmed into my scanner. My question is: why don't I ever hear anything on my scanner on those frequencies? Do they talk in the middle of the night or what? I've never heard anything on these frequencies and I was just wondering if anyone out here could give me an answer why. Thanks for your time, people.

Thanx,

Jeff G.
sgross@midusa.net

1964. logsat

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32549BBB.6F93@wco.com>
Source record: 21337

can anyone tell me why logsat has ao-10 and oscar 10 and the keps.

do not come close to each other?

thanks 73 steve

1965. Ham-Space Digest V96 #305

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610032141.AA023558890@relay2.geis.com>
Source record: 21338

GE Item Number: 3701293
Original Msg Id: 391717
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #305
System: MARLBORO#
Date: Thu 3-Oct-96 20:57

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1966. Ham-Space Digest V96 #304

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610032142.AA025368936@relay2.geis.com>
Source record: 21339

GE Item Number: 8909457
Original Msg Id: 390980
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #304
System: MARLBORO#
Date: Thu 3-Oct-96 21:59

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1967. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610030857.BAA29500@UCSD.EDU>
Source record: 21340

```
From smtp Tue Oct 1 13:06 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 1 Oct 96 13:06 PDT
Received: by mail.ucsd.edu; id EAA28784
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28754
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 23335
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610011130.EAA28754@mail.ucsd.edu>
Date: Tue, 1 Oct 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #303
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 1 Oct 96 Volume 96 : Issue 303

Today's Topics:
(I think) that I finally made a Mir packet contact.
(none)
DX and Satellite Cyberscheds available at http://www.sarrio
Ham-Space Digest V96 #297
Ham-Space Digest V96 #302
HELP! Is shuttle audio available in Seattle?
Just heard Mir on voice again
questions from a beginner

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 28 Sep 1996 10:28:36 GMT
From: dhend@cyberportal.net
Subject: (I think) that I finally made a Mir packet contact.

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)
>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.

> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 1 Oct 96 10:01:12 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Sun, 29 Sep 1996 23:17:53 -0700
From: wb6siv@cyberg8t.com (Raymond Sarrio)
Subject: DX and Satellite Cyberscheds available at http://www.sarrio

Posting Cyberscheds on the WWW can benefit ham radio operators throughout
the world with their DX and Satellite schedules.I already have a couple of
operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and
easily by using the WWW and e-mail.I have set aside a section of my web
site for hams to post their request for over-the-air schedules. Included
in the posting is a place to list the posters specific ham radio contact
needs (countries, zones,IOTA, grid squares ect...). The postings will also
include an e-mail link that will allow hams that read the posts, to easily
request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

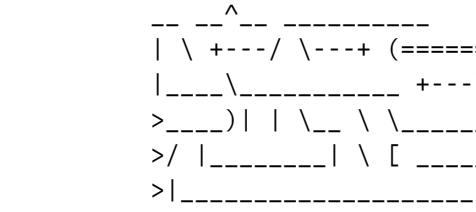
The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also
transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot
satellite dish (a real one, not one of the wimpy little dishes which
doesn't have NASA TV available). Any decent techie can scrounge together
the parts for a simple C-Band dish, recevier, and other components for a
couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225

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2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: 30 Sep 96 16:28:07 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #302

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message
```

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Mon, 30 Sep 1996 20:26:46 -0600
From: Jonathan Griffitts <jcg@qadas.com>
Subject: HELP! Is shuttle audio available in Seattle?

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

Date: Sun, 29 Sep 96 02:51:08 GMT
From: trandall@mhv.net
Subject: Just heard Mir on voice again

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 30 Sep 1996 18:24:36 GMT
From: chapman@cedar.eng.auburn.edu (Richard Chapman)
Subject: questions from a beginner

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB
--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

End of Ham-Space Digest V96 #303
****

1968. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610030855.BAA29472@UCSD.EDU>
Source record: 21341

```
From smtp Wed Sep 25 09:53 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Wed, 25 Sep 96 09:53 PDT
Received: by mail.ucsd.edu; id EAA11239
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:41 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11225
sendmail 8.6.12/UCSD-2.2-sun
Wed, 25 Sep 1996 04:30:39 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 11817
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199609251130.EAA11225@mail.ucsd.edu>
Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #297
To: Ham-Space@UCSD.EDU

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

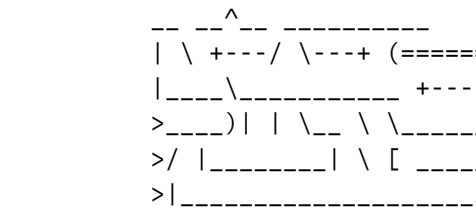
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a

couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

```
Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
```

```
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************
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1969. JOTA

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: jeffrey_austin@juno.COM
Message-ID: <19961002.191206.21759.0.jeffrey_austin@juno.com>
Source record: 21342

For all concerned:

I'll be working AO-27, FO-20 and FO-29. I'll be starting approx 1500 UTC 19 OCT 96. Send me your QTH and I'll find mutual visibilty. Below is some additional info for you to chew on.

-73's de Jeff n8vna@amsat.org

JAMBOREE ON THE AIR

MEDIA CONTACT:
American Radio Relay League (ARRL)
Educational Activities Department
Phone (860) 594-0301
Email jota@arrl.org

WHAT IS JOTA?

When Scouts want to meet young people from another country, they usually think of attending a World Jamboree. But few people realize that each year
more than 400,000 Scouts and Guides "get together" over the airwaves for the annual Jamboree-on-the-Air (JOTA). Modern technology offers Scouts the
exciting opportunity to make friends in other countries without leaving home.

JOTA is an annual event in which Boy and Girl Scouts and Guides from all over the world speak to each other by means of Amateur (ham) Radio. Scouting experiences are exchanged and ideas are shared via radio waves. Since 1958 when the first Jamboree-on-the-Air was held, millions of Scouts
have met each other through this event. Many contacts made during JOTA have

resulted in pen pals and links between Scout troops that have lasted many years.

With no restrictions on age or on the number of participants, and at little

or no expense, JOTA allows Scouts to contact each other by ham radio. The radio stations are operated by licensed ham radio operators. Many Scouts and leaders hold licenses and have their own stations, but the majority participate in JOTA through stations operated by local radio clubs and individual radio amateurs. Some operators use television or computer-linked

communications.

WHEN

JOTA is held the third weekend in October. JOTA 1996 will take place Saturday October 19, at 0001 hours local time to Sunday, October 20, 2359 hours local time, though some activity continues over from Friday to Monday

to take advantage of long distance (DX) time differences.

HOW DO WE TAKE PART?

First, contact a local Amateur Radio operator or club to ask for assistance. If you need help finding one in your area, contact the Educational Activities Department at ARRL HQ at (860) 594-0301. Radio amateurs are enthusiastic about their hobby and most will be willing to help you participate in JOTA. The radio operator may suggest that the Scouts visit his/her station or that the operator bring equipment to your local campsite. Often, JOTA stations are set up in unusual locations, such
as the top of a mountain, or on a boat. For free Girl and Boy Scout brochures, contact the Educational Activities Department at ARRL HQ.

LICENSING REGULATIONS

Ham radio operators have obtained a radio transmission license by passing an exam given by national authorities. License conditions vary from country

to country. In some, Scouts may speak over the air: in others, special permission can be obtained for Scouts to speak over the radio during JOTA.

RULES

Radio operators run their stations in accordance with their national licensing regulations.

Stations should call "CQ Jamboree," or answer stations doing so. Any authorized frequency may be used. It is recommended that stations use the agreed World Scout Frequencies, listed elsewhere in this document. To avoid

congestion, use close-by frequencies.

JOTA is not a contest. The idea is not to contact as many stations as possible during the weekend.

All participating groups are asked to send a report of their activities to
their National JOTA Organizer (NJO) and to ARRL HQ after the event. The NJO

for the US is Dan Dansby, W5URI (see addresses listed elsewhere in this document). NJOs forward national JOTA reports to the World Scout Bureau

for

the World JOTA Report.

Although the worldwide JOTA is organized in October, Scouts can meet on the

air at other times during the year. Regular Scout nets (a pre-arranged time

and frequency when operators meet) are organized nationally or regionally.
An updated list of these nets can always be found in the latest World JOTA
Report which is published in March.

HB9S

The World Scout Bureau operates its own Amateur Radio station, with the call sign HB9S. There is a permanent radio room in the Bureau's Geneva offices, and the station is regularly on the air during Scout nets and JOTA

weekends. Transmitters are on the 10/15/20 meter, 160/80/40 meter and (in the Geneva area) the 440/2 meter bands. Making contact with HB9S requires patience, as many stations call at the same time. Please follow instructions given by the operators and do not interfere with on-going contacts. They speak in as many languages as possible.

SCOUT STATION CALL SIGNS

Each licensed Amateur Radio station has a unique identifier known as a "call sign." The first letters specify the country. Here are call signs of
well-known stations that can often be contacted:

HB9S World Scout Bureau
Geneva Switzerland

K2BSA Boy Scouts of America National Office
Dallas TX

JA1YSS Boy Scouts of Nippon National Office
Tokyo Japan

PA6JAM Scouting Nederland National Station
Sassenheim Netherlands

5Z4KSA The Kenya Scouts Assoc. Paxtu Station
Nyeri Kenya

VK1BP The Scout Assn. of Australia National Station
Canberra Australia

GB2GP The Scout Assn.
Gilwell Park, London UK

XE1ASM Boy Scouts of Mexico

DU1BSP Boy Scouts of Philippines

JOTA PROGRAM ACTIVITIES

Before the event:
* Send a report of your plans to local news reporters. Ask them to visit the station.

* Ask a radio operator to talk about ham radio communications. Visit his/her station to actually see how it works. Learn about radio waves and their propagation.

* Learn to say hello in other languages.

* Learn about other countries and prepare questions to ask over the air.

* Design special QSL cards for the JOTA weekend. Find a way to print cards
or prepare different handmade cards.

* Build a suitable antenna and erect a tower. For ideas, refer to chapter 7

in "Now You're Talking!" available through the ARRL for $19, plus $4 shipping and handling.

* Build a simple radio receiver (send an SASE to ARRL for a list of kits).

* Learn about electricity and how to do simple electrical repairs such as how to fix a blown fuse.

* Learn and practice Morse code. Use a computer to teach the code. ARRL has

a computer program that helps teach code: GGTE Morse Tutor Gold for IBM or
compatible PCs.

* Practice talking into microphones using radio operating procedures and jargon--see examples.

* Find out about your local area in order to answer questions from Scouts in other regions.

During the Event:

* The global weather situation. Get a large wall map of the world. Ask the
Scouts with whom you speak to give the local weather. Mark it on the map for the area where they are located. At the end of the weekend you will have a global weather picture.

* Determine the distance between each radio contact that you made and add them all up. Can you reach 100,000 km (62,000 miles) in one JOTA weekend?

* Learn to say "Scout" in several different languages. Use it whenever possible.

* Invite parents and other friends to visit your JOTA station.

* Organize a weekend hike and take portable radio equipment with you.

* Ask Scouts to keep his/her own personal logbook. Include names, addresses

and other information for Scouts contacted.

* Set up an information section with maps, atlases and other sources. When
a contact is made, Scouts can find out details about the country or region.

* Plot contacts made on a world map.

* Invite the media to your station. Ask a newspaper to take photos.

* Organize a fox hunt, where Scouts have to locate a small hidden transmitter. This can include the use of a map and compass.

After the Event:

* Write to the Scouts contacted. Establish individual (pen pal) or troop links. Send your badge and other information about your area.

* Send your reports (and photos!) to the ARRL. Maybe you'll see your picture in our magazine, QST!

* Send a report to your NJO. He'll send his national JOTA report to the World Scout Bureau.

* Start planning for next year!

1970. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: steve@borisone.DEmon.co.UK
Message-ID: <Pine.LNX.3.91.961003211010.8578E-100000@borisone.demon.co.uk>
Source record: 21343

```
unsubscribe steve@borisone.demon.co.uk
```

1971. Gary <75540.525@CompuServe.COM>: cpezzutt@magnus.acs.ohio

Newsgroup: rec.radio.amateur.space
Date: 1996-10-03 00:00:00 UTC
From: jeffrey_austin@juno.COM
Message-ID: <19961003.182203.12951.0.jeffrey_austin@juno.com>
Source record: 21344

--------- Begin forwarded message ----------
From: Gary <75540.525@CompuServe.COM>
To: Jeffrey S Austin <jeffrey_austin@juno.com>
Subject: cpezzutt@magnus.acs.ohio
Date: 03 Oct 96 11:40:35 EDT
Message-ID: <961003154035_75540.525_FHR58-3@compuserve.com>

Jeffrey,

The IC-970 has been discontinued for over 1 year now. The IC-821H is the

considered replacement for the IC-970.

Gary
ICOM America, Inc

--------- End forwarded message ----------

1972. Is MIR packet on during voice QSO's ?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: bd703@scn.org
Message-ID: <Dyq6pF.Izw@scn.org>
Source record: 21345
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.packet

Is the packet system aboard MIR left on during voice QSO's ?

I keep hearing packet while voice is being sent from MIR and am not
sure if the packet is from a ground station or MIR.

I would THINK they'd turn the TNC off while making voice contacts!

Any info on this would be appreciated

Kerwin
N7JGW
--
****
* They know who you are...
bd703@scn.org * They know where you live...
* And there's no doubt about it!

1973. Help with Hamtronics R139 WxSat Rx

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: pfleming@tiros.manawatu.planet.co.nz
Message-ID: <0d1dvkr60@tiros.manawatu.planet.co.nz>
Source record: 21346
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space

Hi,

I'd be interested in hearing from anyone who is using or constructed
the Hamtronics R139 Weather Satellite Receiver.

I'm having trouble getting the RF amplifier FET, to amplifly signal.
All the oscillator circuit is tuned ok, I've replaced FETs but still
can't get gain. Has anyone else encounterd/solved this problem?

Any help is appreciated.
--
Philip Fleming (ZL2VAX) pfleming@tiros.manawatu.planet.co.nz

"The past always looks better than it was. It's only pleasant
because it isn't here."

1974. Satellite Photo Source?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: bronne@panesu.esu14.k12.ne.us
Message-ID: <531k3q$fts@news.nde.state.ne.us>
Source record: 21347

A friend of mine is looking for satellite photos of some areas in the eastern Med. area i.e. Isreal, Turkey, Cypress. Are there sources to purchase photos of this type? This is for a Master's project for a friend of my wife's. Please e-mail to

bronne@panesu.esu14.k12.ne.us

--

1975. Re: KANSAS CITY TRACKER

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: John DiStefano <ke3su@amsat.org>
Message-ID: <01bbb20a$7d0ad6a0$df0667cf@omni2.voicenet.com>
Source record: 21348

Peter Gayle <peter@speedline.ca> wrote in article
<325138f1.2639750@news.speedline.ca>...
> Hi I just recently bought a KC Tracker at an estate sale.
> When I bought it, I did not realize that I also needed the
> accompanying software disk. If u have this disk I would appreciate a
> copy. I would pay for shipping or an Email transfer with an attachment
> would work well too.
> Thanks.....Peter, VA3PK
>
>
Peter, and group: you can use windows drivers found on the Amsat ftp site
with WiSP. That's my set here. I believe that there are DOS driver there
also that can be used with InstaTrack or QuikTrak. I'm not sure on that
set-up. I have never operated that way. If your operating with Windows 95
it will be a little tricky to set-up but it can be done.
73 John KE3SU

1976. Re: logsat

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbb210$4e6e6860$068067ce@miseno.netwide.net>
Source record: 21349

Steve,

Different 2line keps files might refer to the same satellite using two different names. If the file you used to update the keps 3 months ago contained ao-10, and the one you used yesterday had oscar 10, Logsat is going to have both names: ao-10 with 3 month old elements, and oscar 10 with the new elements.

To erase all of the older satellites, just click on Satellites | Keplerian Elements | Delete Satellites. From there you can choose to remove all satellites with old elements (ex. 2 months). This will remove the older ao-10, and leave you with just oscar 10.

Also, if you look at the status line at the bottom of the screen, you will see there the age of the keps for the current satellite. This way you can immediately tell which one has the fresher elements betwenn ao 10 and oscar 10.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

steve <kd6fyk@wco.com> wrote in article <32549BBB.6F93@wco.com>...
> can anyone tell me why logsat has ao-10 and oscar 10 and the keps.
>
> do not come close to each other?
>
> thanks 73 steve
>

1977. Re: Satellite Photo Source?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbb212$a24c85a0$068067ce@miseno.netwide.net>
Source record: 21350

Brad,

My favorite source of satellite photos are those taken from the Space
Shuttle. Just go to:

http://images.jsc.nasa.gov/html/earth.htm

and click on search. You can then select photos either by just entering the
name of the place you're looking for (text search), or by selecting it
directly by clicking on maps (graphical).

You can also find a wealth of resources at:
http://www.hq.nasa.gov/office/pao/Library/photo.html

Hope you find what you need!

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Brad Ronne <bronne@panesu.esu14.k12.ne.us> wrote in article
<531k3q$fts@news.nde.state.ne.us>...
> A friend of mine is looking for satellite photos of some areas in the
> eastern Med. area i.e. Isreal, Turkey, Cypress. Are there sources to
> purchase photos of this type? This is for a Master's project for a
> friend of my wife's. Please e-mail to
>
> bronne@panesu.esu14.k12.ne.us
>
>
> --
>
>

1978. Re: logsat

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <325579B6.5E3F@wco.com>
Source record: 21351

Roberto Franceschetti wrote:
>
> Steve,
>
> Different 2line keps files might refer to the same satellite using two
> different names. If the file you used to update the keps 3 months ago
> contained ao-10, and the one you used yesterday had oscar 10, Logsat is
> going to have both names: ao-10 with 3 month old elements, and oscar 10
> with the new elements.
>
> To erase all of the older satellites, just click on Satellites | Keplerian
> Elements | Delete Satellites. From there you can choose to remove all
> satellites with old elements (ex. 2 months). This will remove the older
> ao-10, and leave you with just oscar 10.
>
> Also, if you look at the status line at the bottom of the screen, you will
> see there the age of the keps for the current satellite. This way you can
> immediately tell which one has the fresher elements betwenn ao 10 and oscar
> 10.
>
> --
> Roberto Franceschetti
>
> http://www.logsat.com
> roberto@netwide.net
> roberto@logsat.com
>
> steve <kd6fyk@wco.com> wrote in article <32549BBB.6F93@wco.com>...
> > can anyone tell me why logsat has ao-10 and oscar 10 and the keps.
> >
> > do not come close to each other?
> >
> > thanks 73 steve
> >

roberto,thank you for the quick reply.i still do not understand why i
have the same age keps.for ao-10 and oscar 10 but they show different
locations for same bird.also i need the manual for the logsat
program i bought last year.
73 steve

1979. Ham-Space Digest V96 #303

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610031435.AA201343353@relay2.geis.com>
Source record: 21352

GE Item Number: 3204730
Original Msg Id: 390710
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #303
System: MARLBORO#
Date: Thu 3-Oct-96 13:43

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

1980. Re: Is MIR packet on during voice QSO's ? (Yes andNO)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <532qc4$gbj@news.monad.net>
Source record: 21353

The Mir packet station is designed to operate with the packet on or off, it was determined that it was possible to communitcate by voice
and not interupt a packet transfer , Alexander Serebrov told me this.......however in most practical situations it is turned off, as the packet
generally interferes with the voice contact, and if ground stations hear packet they keep right on hammering with conncect request
anyway.. obviously if ground stations followed the rules.. and listened before
transmitting they would either see someone else is connected
or hear the voice and not transmit packet, but clearly this does not happen.
I saw a station timing out last night (a long series of <<RR0>>) and they he commented unproto "thanks for knocking me off again", he
was partially right.. the interference everyone gets from busy's causes a lot of people to time out of the box.. which is what we all have be
trying to eliminate by educating people, explaining it is a single connect box and any interference is apt to cause it to time out..at anyrate I
will post more on how to be more successful with Mir and you might check my web page on the files and information from Miles Mann
WF1F, it is a fair explanation of what works and what causes interference.. and how to be sucessfull..

Best Regards.. DAVE N1PPP

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

1981. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610040855.BAA15728@UCSD.EDU>
Source record: 21354

```
From smtp Wed Oct 2 12:10 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 2 Oct 96 12:10 PDT
Received: by mail.ucsd.edu; id EAA02956
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA02943
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:36 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 19837
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610021130.EAA02943@mail.ucsd.edu>
Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #304
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#

Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also

transmit amateur television.

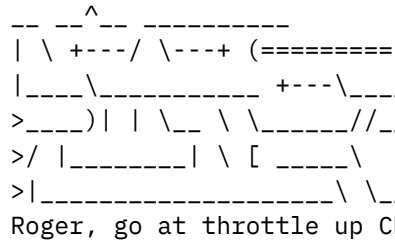
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433

```
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

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Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

1982. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: jeffrey_austin@juno.COM
Message-ID: <19961003.182203.12951.1.jeffrey_austin@juno.com>
Source record: 21355

Date: Thu, 3 Oct 1996 13:39:00 GMT
From: clinton.peebles@saloon.bcbbs.net (Clinton Peebles)
Subject: Mir Freqs.

>>What are the current frequencies being used by Mir for packet and
voice?
>>
>>Thanks,
>>Claton Cadmus |73 de KA0GKC
>>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>>

T>145.550 simplex for both packet and voice

There's also the SAFEX SPACE REPEATER onboard MIR. RR0DL

447.75 up 141.3 tone
437.95 down
437.925 beacon

I've never heard it, but that's what I have for the frequencies.

~ QMPro 1.53 ~ SYSTEM ERROR: press F13 to continue...

Sorry folks, that's not correct. The downlink is 437.95 and the uplink
is 435.750 with a CTCSS of 141.3 Hz. There is no beacon as per se. Please
remember that there is as much as a 20 Hz doppler correction.

UP 435.65 435.70 435.75 435.80
435.85

------------|--------------|--------------|-------------|--------------|----
DN 438.05 438.00 437.95 437.90
437.85

You need not have crossed yagis, I have the M2 Eggbeaters and they work
just fine.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks."

1983. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-04 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610040903.CAA15997@UCSD.EDU>
Source record: 21356

```
From smtp Tue Oct 1 13:06 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 1 Oct 96 13:06 PDT
Received: by mail.ucsd.edu; id EAA28784
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28754
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 23335
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610011130.EAA28754@mail.ucsd.edu>
Date: Tue, 1 Oct 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #303
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 1 Oct 96 Volume 96 : Issue 303

Today's Topics:
(I think) that I finally made a Mir packet contact.
(none)
DX and Satellite Cyberscheds available at http://www.sarrio
Ham-Space Digest V96 #297
Ham-Space Digest V96 #302
HELP! Is shuttle audio available in Seattle?
Just heard Mir on voice again
questions from a beginner

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 28 Sep 1996 10:28:36 GMT
From: dhend@cyberportal.net
Subject: (I think) that I finally made a Mir packet contact.

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)
>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.

> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 1 Oct 96 10:01:12 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Sun, 29 Sep 1996 23:17:53 -0700
From: wb6siv@cyberg8t.com (Raymond Sarrio)
Subject: DX and Satellite Cyberscheds available at http://www.sarrio

Posting Cyberscheds on the WWW can benefit ham radio operators throughout
the world with their DX and Satellite schedules.I already have a couple of
operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and
easily by using the WWW and e-mail.I have set aside a section of my web
site for hams to post their request for over-the-air schedules. Included
in the posting is a place to list the posters specific ham radio contact
needs (countries, zones,IOTA, grid squares ect...). The postings will also
include an e-mail link that will allow hams that read the posts, to easily
request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

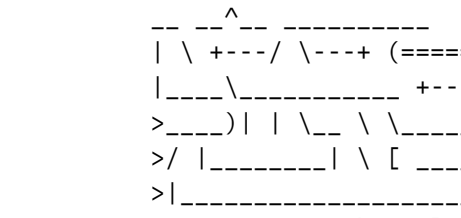
The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also
transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot
satellite dish (a real one, not one of the wimpy little dishes which
doesn't have NASA TV available). Any decent techie can scrounge together
the parts for a simple C-Band dish, recevier, and other components for a
couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225

```
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: 30 Sep 96 16:28:07 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #302

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message
```

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Mon, 30 Sep 1996 20:26:46 -0600
From: Jonathan Griffitts <jcg@qadas.com>
Subject: HELP! Is shuttle audio available in Seattle?

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

Date: Sun, 29 Sep 96 02:51:08 GMT
From: trandall@mhv.net
Subject: Just heard Mir on voice again

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 30 Sep 1996 18:24:36 GMT
From: chapman@cedar.eng.auburn.edu (Richard Chapman)
Subject: questions from a beginner

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB
--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

End of Ham-Space Digest V96 #303
****

1984. Re: Ham-Space Digest V96 #298

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.474.39@anjo.com>
Source record: 21357

RE: Re: Ham-Space Digest V96 #298
BY: Marcus Damberger to ALL on Thu Oct 03 1996 03:40:52

> From: n9rze@prairienet.org (Marcus Damberger)
> Newsgroups: rec.radio.amateur.space
> Organization: Prairienet
> Message-ID: <n9rze-0310960340520001@ruger-2.slip.uiuc.edu>
>
> In article <robert.843962929@kd3bj.ampr.org>, robert@kd3bj.ampr.org
> (Robert E. Garland) wrote:
>
> > shipco-postmaster@geis.COM writes:
> >
> > >GE Item Number: 503483
> > >Original Msg Id: 388582
> > >shipco-postmaster response to your message
> >
> > > Subject: Ham-Space Digest V96 #298
> > > System: MARLBORO#
> > > Date: Sat 28-Sep-96 0:22
> >
> > >Status: 6 Message picked up by receiving system and
> > > delivered to all recipients with some exceptions.
> >
> > >Address Delivered To:
> > > REINHART
> > >Address Status Message:
> > > Invalid cc:Mail address
> >
> >
> > Posts such as this one seem to be living on this newsgroup lately. Can
> > anyone explain what gives? If REINHART has requested something and his
> > request bounced, can he be alerted?
>
> I'm all for getting rid of this! It's been on the newsgroup for weeks now!
> I've sent several messages to the postmaster at the address it comes from.
> But nothing seems to be done. Why? I don't think their people understand
> what they are doing!

I've sent several notes to the postmaster too. It would appear that someone
(REINHART) has requested daily digests of something (this NG?) be mailed to
them, and when the mail arrives, the server at geis.COM barfs up a complaint.

If we can't prevent that (due to a deaf postmaster@gis.COM) then the only
other thing is to stop the digest from bing sent. But how do we find out who

is sending the digest without the help of the postmaster@geis.COM in th first
place?

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

1985. Re: Is MIR packet on during voice QSO's ?

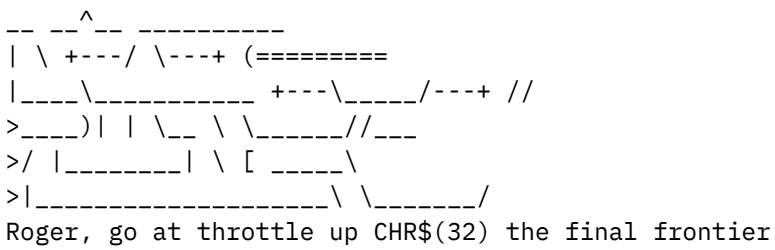
Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <534e2f$aue@paperboy.ids.net>
Source record: 21358
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.packet

In article <Dyq6pF.Izw@scn.org> SCN User, bd703@scn.org writes:
>Is the packet system aboard MIR left on during voice QSO's ?
>
>I keep hearing packet while voice is being sent from MIR and am not
>sure if the packet is from a ground station or MIR.
>
>I would THINK they'd turn the TNC off while making voice contacts!

I would suspect that the packet you hear is not coming from Mir - it's unconsiderate hams in your area who are continuing to send packet up to Mir, even though it's in voice mode and nobody's responding.

That's one of the key reasons why automated packet stations are discouraged for use with Mir. The same radio and frequencies are used for both voice and packet, so any packet from the ground is clearly a form of interference when the cosmonaut is trying to use voice.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

1986. Re: SPACE FREQUENCY QUESTION

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: georgef@prolog.net
Message-ID: <534jrt$hl6@news.ptd.net>
Source record: 21359

In article <32537567.1F36@midusa.net>, sgross@midusa.net says...
>
>Hi everyone,
>
> My name is Jeff and I have a Pro-2026 100 channel scanner at
>home. I hear a lot about the frequencies used by the MIR station and the
>ham guys up there. I know one of the frequencies is 145.55 MHz. I have
>that and about 5 other nationwide "space" frequencies programmed into my
>scanner. My question is: why don't I ever hear anything on my scanner
>on those frequencies? Do they talk in the middle of the night or what?
>I've never heard anything on these frequencies and I was just wondering
>if anyone out here could give me an answer why. Thanks for your time,
>people.
>
>Thanx,
>
>Jeff G.
>sgross@midusa.net

I've tried the same thing without receiving any hams during a SAREX Mission or from MIR. But I have (just about every orbit) heard the Voice DownLink from MIR (non-ham) the only problem, its in russian. The frequency is 143.625MHz (fm). Also, you'll need a satallite tracking program, and current elements for MIR. What is really neat, when my tracking software says MIR is about 13degrees over the horizon, I start picking up the signal, and when MIR is to be 13 degrees over the horizon on the decent, I stop hearing the signal. You can almost set your watch by it! If you need tracking software and the satellite elements check out AMSATS homepage (I think its http://www.amsat.org)

Hope this helps,
George

1987. RS or OSCAR Output power on 10meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: georgef@prolog.net
Message-ID: <534jvf$hl6@news.ptd.net>
Source record: 21360

I was wondering if anyone know what the output power of the 10meter downlinks are from the RS and/or OSCAR sats?

Thanks
George

1988. Re: Opinions on satellite tracking software wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: grandall@phase2net.com
Message-ID: <325626a9.0@news.intercenter.net>
Source record: 21361

Try Nova for Windows , there is a site on the internet to download a
sample program, It works great with WIN95.

Good Luck
Gary
KD4VRZ
grandall@phase2net.com

aikido@magicnet.net (Matt O'Born) wrote:

>Hello to all,

>I've just upgraded my old 286 (finally..!) with a brand new computer
>running Windows95. On my piece of antique I was using STSOrbit and
>Traksat for my modest satellite activity (RS satellites and NOAA
>reception). With my new machine I'd like to use a satellite tracking
>program that works under Windows. I've been told about Logsat and
>WISP. Has anyone out there had any experience with them? Do you have
>any others you can suggest? I'm looking for either shareware programs
>or commercial ones (if they are worth the price). Any comments are
>welcome!

>Matt O'Born
>aikido@magicnet.net

1989. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610050855.BAA13869@UCSD.EDU>
Source record: 21362

```
From smtp Wed Oct 2 12:10 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 2 Oct 96 12:10 PDT
Received: by mail.ucsd.edu; id EAA02956
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA02943
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:36 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 19837
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610021130.EAA02943@mail.ucsd.edu>
Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #304
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#

Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also

transmit amateur television.

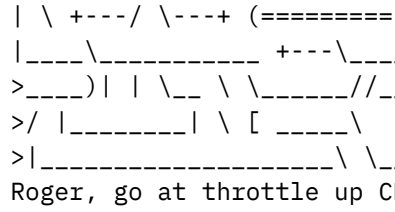
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433

```
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

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```

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

1990. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610050859.BAA13903@UCSD.EDU>
Source record: 21363

```
From smtp Thu Oct 3 08:48 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 3 Oct 96 08:48 PDT
Received: by mail.ucsd.edu; id EAA17872
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:44 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17857
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:42 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2876
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610031130.EAA17857@mail.ucsd.edu>
Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #305
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?
```

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

1991. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610050901.CAA14037@UCSD.EDU>
Source record: 21364

```
From smtp Tue Oct 1 13:06 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 1 Oct 96 13:06 PDT
Received: by mail.ucsd.edu; id EAA28784
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28754
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 23335
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610011130.EAA28754@mail.ucsd.edu>
Date: Tue, 1 Oct 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #303
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 1 Oct 96 Volume 96 : Issue 303

Today's Topics:
(I think) that I finally made a Mir packet contact.
(none)
DX and Satellite Cyberscheds available at http://www.sarrio
Ham-Space Digest V96 #297
Ham-Space Digest V96 #302
HELP! Is shuttle audio available in Seattle?
Just heard Mir on voice again
questions from a beginner

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 28 Sep 1996 10:28:36 GMT
From: dhend@cyberportal.net
Subject: (I think) that I finally made a Mir packet contact.

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)
>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.

> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 1 Oct 96 10:01:12 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Sun, 29 Sep 1996 23:17:53 -0700
From: wb6siv@cyberg8t.com (Raymond Sarrio)
Subject: DX and Satellite Cyberscheds available at http://www.sarrio

Posting Cyberscheds on the WWW can benefit ham radio operators throughout
the world with their DX and Satellite schedules.I already have a couple of
operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and
easily by using the WWW and e-mail.I have set aside a section of my web
site for hams to post their request for over-the-air schedules. Included
in the posting is a place to list the posters specific ham radio contact
needs (countries, zones,IOTA, grid squares ect...). The postings will also
include an e-mail link that will allow hams that read the posts, to easily
request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

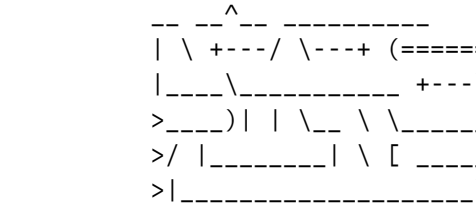
The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also
transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot
satellite dish (a real one, not one of the wimpy little dishes which
doesn't have NASA TV available). Any decent techie can scrounge together
the parts for a simple C-Band dish, recevier, and other components for a
couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225

```
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************

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Date: 30 Sep 96 16:28:07 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #302

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message
```

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Mon, 30 Sep 1996 20:26:46 -0600
From: Jonathan Griffitts <jcg@qadas.com>
Subject: HELP! Is shuttle audio available in Seattle?

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

Date: Sun, 29 Sep 96 02:51:08 GMT
From: trandall@mhv.net
Subject: Just heard Mir on voice again

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 30 Sep 1996 18:24:36 GMT
From: chapman@cedar.eng.auburn.edu (Richard Chapman)
Subject: questions from a beginner

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB
--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

End of Ham-Space Digest V96 #303
****

1992. Re: KANSAS CITY TRACKER

Newsgroup: rec.radio.amateur.space
Date: 1996-10-05 00:00:00 UTC
From: John DiStefano <ke3su@amsat.org>
Message-ID: <01bbb2ef$22d171e0$df0667cf@omni2.voicenet.com>
Source record: 21365

Peter Gayle <peter@speedline.ca> wrote in article
<325138f1.2639750@news.speedline.ca>...
> Hi I just recently bought a KC Tracker at an estate sale.
> When I bought it, I did not realize that I also needed the
> accompanying software disk. If u have this disk I would appreciate a
> copy. I would pay for shipping or an Email transfer with an attachment
> would work well too.
> Thanks.....Peter, VA3PK
>
>
I'm using the KCT/T here to operate digital SAT's. There are various
drivers,
windows, DOS and linux, on FTP sites. I'm using the windows driver with
WiSP.
You can get the drivers from Amsat at ftp.amsat.org or call Martha at
Amsat HQ.
I don't have there phone number handy but they are located in Silver
Spring, Md.
73 de John KE3SU

1993. RS-15 FREQS?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-06 00:00:00 UTC
From: litigate@mi.net
Message-ID: <537ak1$c10_001@ts2-fctn-02.mis.ca>
Source record: 21366

What are the uplink and downlink freqs for this bird? Are there any
web pages with complete freq listings for all living amateur birds? I have an
old list that I downloaded from the AMSAT web page 6 months ago, but it
seems to be old. Thanks. de Rick VE9HF.

1994. Seeing Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-10-06 00:00:00 UTC
From: drranu@holly.ColoState.EDU
Message-ID: <537li1$2ebm@yuma.ACNS.ColoState.EDU>
Source record: 21367

Around 0650MST 6-OCT-96 I went outside in the middle of the
city of Fort Collins, CO (home of WWV!) with my HT to listen
to MIR. Sure enough KC5TZQ (Blaha) was talking about the
Yankees and the Orioles wist someone. My prediction program
reported the maximum elevation during this pass would be 11
degrees. I thought there was no way I could see Mir since
it would be too low and the lights of the city would disallow
me. But, about 70 degrees inclination, I saw it! It was a
rectangular shape with an orangish glow, took maybe 20 seconds
to sweep across the area I could see (between two buildings).
Every satellite I have seen was like a small moving star, but
this thing was HUGE!
Blaha also spoke with a person in Minneapolis, mobile!

Neat experience! :)

--
-Emarit Ranu drranu@holly.ColoState.EDU
Electrical Engineering, Reason: The only absolute.
Colorado State University All generalizations are bad.
_·_ __· _____ _·_· __·_

1995. Re: logsat

Newsgroup: rec.radio.amateur.space
Date: 1996-10-06 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbb34d$3cb0e420$068067ce@miseno.netwide.net>
Source record: 21368

It's not as easy as you think. Suppose you're using Oscar 10 (cat #14129). The elements have become 15 days old, so you update them. The kep file you're using is different than the one you used previously. This one call the same satellite AO 10 (again cat #14129). What should the program do now?

1- Keep the satellite identified by #14129, and change the name from Oscar 10 to AO 10. But in this case, if you're used to tracking a satellite called Oscar 10, you see it disappear from the database.

2- Keep the satellite identified by #14129, and change the name of the satellite being read from AO 10 to Oscar 10. This way though, you will be stuck with whatever name is in the keps file the first time ever that keps are read.

3- Since the cat # is unique, it could insert the new name AO 10, and at the same time update the data for Oscar 10. This way you have both Oscar 10 and AO 10 in the database. But since the elements have the same age, you can not use the option to remove sats with older keps, and you will always have a double satellite in the database. This might be better and cause fewer problems for beginners, but once you figure out what's happening with the double name business, you'll get tired of having double sats in there. Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You would constantly have double, triple names in there everytime you update.

4- Leave the Oscar 10 with its older keps alone, and import the AO 10 with updated data. Now you have both satellites in there. You won't see your Oscar 10 being updated, but there is an AO 10 with fresh data. The old Oscar 10 will be erased if you select to remove older satellites. This is how things work now, but it is by no means a perfect choice. We had to choose between the four, and we selected this one.

We will not use the cat# to identify satellites, even though this uniquely identifies them, because names are much more clearer to humans than numbers. There is endeed the problem of different names for the same satellite, but this is a minor one compared to the one we'd be having if the satellites were identified by numbers. It's the same on the internet. The computer Logsat's home page is on is identified uniquely by 206.103.128.30. This number is meaningless to humans. So we assign it names. In this case it's www.logsat.com, but also florence.netwide.net. Here as well two names for the same number. Once you understand how it works, it's less of a pain than numbers.
--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<Dyst30.Bx@pe1chl.ampr.org>...
> In <01bbb210$4e6e6860$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >Different 2line keps files might refer to the same satellite using two
> >different names. If the file you used to update the keps 3 months ago
> >contained ao-10, and the one you used yesterday had oscar 10, Logsat is
> >going to have both names: ao-10 with 3 month old elements, and oscar 10
> >with the new elements.
>
> This is why you should use the object number, not the name, as the
> unique key to identify an element set.
> The name changes all the time. Some keps distributors edit the name to
> make it more appealing to their user community. But the object number
> stays the same.
>
> Rob
> --
>
+-------------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-------------------------------------+---------------------------------------
+
>

1996. Rejected by Custodian

Newsgroup: rec.radio.amateur.space
Date: 1996-10-06 00:00:00 UTC
From: OAKQM3@oakqm3.sps.mot.COM
Message-ID: <n1366750647.49760@oakqm3.sps.mot.com>
Source record: 21369

Mail*Link(r) SMTP Ham-Space Digest V96 #312

Ham-Space Digest Sun, 6 Oct 96 Volume 96 : Issue 312

Today's Topics:
(none)
Ham-Space Digest V96 #304
RS-15 FREQS?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 5 Oct 96 09:56:28 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally
syndicated radio program about space) and Amazon.com (the premiere
bookstore on the Internet) to add two new exceptional titles to their
already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally
syndicated radio program, StarDate provides a daily dose of fun
astronomical facts and figures. Check out the screen design #005#it#018#s out
of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are
published each day. Enjoy the convenience of having the Amazon staff
separate the wheat from the chaff. Only the highly recommended make
this list.

Coming Soon:

Vision X is very excited to announce the partnering with
Windows95.com. The first calendar, Steve Jenkins#018# Windows 95 Tips &
Tricks is due out October 15th. Steve#018#s Shareware of the Day WINner#018#s
will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know,
365 Days of MovieMania and 365 Days of What#018#s So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12

WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny

Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a
satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or
CUCme
server). Whenever anything interesting is happening, the poor web site at the

Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

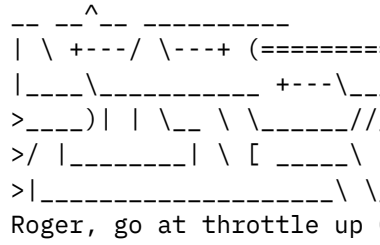
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)

Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software
are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.

30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17

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1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>

>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
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Date: Sun, 06 Oct 96 03:55:44 GMT
From: litigate@mi.net (Williams)
Subject: RS-15 FREQS?

What are the uplink and downlink freqs for this bird? Are there any
web pages with complete freq listings for all living amateur birds? I have an
old list that I downloaded from the AMSAT web page 6 months ago, but it
seems to be old. Thanks. de Rick VE9HF.

End of Ham-Space Digest V96 #312
****

1997. Re: VHF DX Opportunity

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: glennz@execpc.com
Message-ID: <539jt7$bap@newsops.execpc.com>
Source record: 21270
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.space,rec.radio.amateur.misc

robert colin newell <rnewell@castle.uvic.ca> wrote:

>Mark Gingrich wrote:
>>
>> On Thursday morning, 26 September, around 8:12 a.m. EDT (12:12 UTC), the
>> Space Shuttle Atlantis (STS-79) is expected to touch down at Kennedy Space
>This just arrived in my NEWS BOX! Sorry.
>A bit more notice next time would be great !
>I was up at those hours.. It would have been nice
>to know that this was going on..

>http://espresso.ts.uvic.ca
>The Worlds only Interactive SW WWW Site
So... does anybody have results to report?

73
Glenn

1998. ARLK072 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk072.1996@arrl.org>
Source record: 21271
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK072
ARLK072 Keplerian data

ZCZC SK72
QST de W1AW
Keplerian Bulletin 72 ARLK072
From ARRL Headquarters
Newington, CT October 5, 1996
To all radio amateurs

SB KEP ARL ARLK072
ARLK072 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96277.90190465 .00000042 00000-0 29799-4 0 02809
2 18129 82.9225 68.1747 0010405 209.5913 150.4653 13.72370084465085
UO-11
1 14781U 84021B 96278.08145906 .00000041 00000-0 14736-4 0 09205
2 14781 97.8083 264.0112 0012567 98.4019 261.8605 14.69484306673645
RS-12/13
1 21089U 91007A 96278.04812577 .00000016 00000-0 14201-5 0 09285
2 21089 82.9218 108.6213 0028336 292.9286 66.8880 13.74073687283985
AO-13
1 19216U 88051B 96278.51603468 .00089679 11703-5 59171-3 0 2902
2 19216 57.0927 87.3443 7424010 52.5246 354.4135 2.15547353 32153
UO-14
1 20437U 90005B 96278.13868436 .00000135 00000-0 69268-4 0 02370
2 20437 98.5397 359.0904 0010268 244.0182 115.9942 14.29934416349625
RS-15
1 23439U 94085A 96278.01450780 -.00000039 00000-0 10000-3 0 01847
2 23439 64.8168 207.0858 0158132 179.9110 180.1863 11.27528607073055
AO-16
1 20439U 90005D 96275.29356683 -.00000043 00000-0 20269-6 0 00166
2 20439 98.5551 358.7097 0010637 251.6283 108.3743 14.29984804349232
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DO-17
1 20440U 90005E 96278.17379872 .00000029 00000-0 28195-4 0 00249
2 20440 98.5573 2.2358 0010656 241.7907 118.2203 14.30127698349674
WO-18
1 20441U 90005F 96278.16597718 .00000009 00000-0 20168-4 0 00341
2 20441 98.5568 2.1557 0011330 243.7386 116.2631 14.30096977349670
LO-19
1 20442U 90005G 96278.22341375 -.00000010 00000-0 12900-4 0 130
2 20442 98.5585 2.7530 0011479 242.1666 117.8359 14.30206902349704
FO-20
1 20480U 90013C 96278.06808887 -.00000004 00000-0 69620-4 0 9109
2 20480 99.0223 282.2103 0540035 237.7069 117.0626 12.83234795311855
AO-21
1 21087U 91006A 96277.97706491 .00000093 00000-0 82657-4 0 07620
2 21087 82.9398 241.1792 0034137 264.8035 94.9223 13.74573391284951
UO-22
1 21575U 91050B 96278.15765526 .00000037 00000-0 26859-4 0 07255
2 21575 98.3405 341.2418 0007350 305.3235 54.7273 14.37038454273717
KO-23
1 22077U 92052B 96278.17986288 -.00000037 00000-0 10000-3 0 06225
2 22077 66.0792 321.2553 0015319 270.7702 89.1565 12.86298233194827
KO-25
1 22828U 93061F 96278.13836781 .00000007 00000-0 20088-4 0 04961
2 22828 98.5706 351.9350 0009598 259.3813 100.6263 14.28153513125668
IO-26
1 22826U 93061D 96278.11297219 .00000013 00000-0 22886-4 0 05140
2 22826 98.5728 351.8413 0008801 278.2196 81.7984 14.27814078157549
AO-27
1 22825U 93061C 96278.12495374 .00000040 00000-0 33841-4 0 05156
2 22825 98.5719 351.6657 0008264 278.5265 81.4979 14.27705463157536
FO-29
1 24278U 96046B 96278.13316962 -.00000043 00000-0 -10453-4 0 00325
2 24278 98.5768 347.8231 0351872 129.1956 234.0996 13.52625944006500
Mir
1 16609U 86017A 96278.34846611 .00003637 00000-0 46579-4 0 6978
2 16609 51.6517 293.9474 0012576 232.4367 127.5425 15.62110068607060

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
October 8, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
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1999. RS-12 KEPS problem?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: mbv@ti.com
Message-ID: <53b49r$b05@tilde.csc.ti.com>
Source record: 21272

RS-12 AOS and LOS seems to be about 10 minutes earlier than
my KEPS (TLE876) indicate. The computer clock is correct.
The old KEPS are about 10 minutes fast too.
Is there something wrong with the KEPS? What else could it
be?

Ken K5MBV

2000. Navstar GPS Constellation Status (96-10-07)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: Richard Langley <lang@unb.ca>
Message-ID: <Pine.SUN.3.95.961007130913.10921C-100000@jupiter.sun.csd.unb.ca>
Source record: 21273
Cross-posted to: comp.infosystems.gis,rec.aviation.misc,rec.boats.electronics,rec.radio.amateur.space,sci.electronics,sci.engr.surveying,sci.geo.satellite-nav,sci.space.news

```
Navstar GPS Constellation Status
(96-10-07)

Blk NORAD Orbit Launch
II PRN Internat. Catalog Plane Date
Seq SVN Code ID Number Pos'n (UT) Clock Available/Decommissioned
------------------------------------------------------------------------------
Block I
01 04 1978-020A 10684 78-02-22 78-03-29 85-07-17
02 07 1978-047A 10893 78-05-13 78-07-14 81-07-16
03 06 1978-093A 11054 78-10-06 78-11-13 92-05-18
04 08 1978-112A 11141 78-12-10 79-01-08 89-10-14
05 05 1980-011A 11690 80-02-09 80-02-27 83-11-28
06 09 1980-032A 11783 80-04-26 80-05-16 91-03-06
07 81-12-18 Launch failure
08 11 1983-072A 14189 83-07-14 83-08-10 93-05-04
09 13 1984-059A 15039 84-06-13 84-07-19 94-06-20
10 12 1984-097A 15271 84-09-08 84-10-03 95-11-18
11 03 1985-093A 16129 85-10-09 85-10-30 94-04-13

Block II
II-1 14 14 1989-013A 19802 E-1 89-02-14 Cs 89-04-15 05:02 UT
II-2 13 02 1989-044A 20061 B-3 89-06-10 Cs 89-08-10 20:46 UT
II-3 16 16 1989-064A 20185 E-5 89-08-18 Cs 89-10-14 20:21 UT
II-4 19 19 1989-085A 20302 A-4 89-10-21 Rb 89-11-23 03:13 UT
II-5 17 17 1989-097A 20361 D-3 89-12-11 Cs 90-01-06 03:30 UT
II-6 18 18 1990-008A 20452 F-3 90-01-24 Cs 90-02-14 22:26 UT
II-7 20 20 1990-025A 20533 90-03-26 90-04-18 96-05-10
II-8 21 21 1990-068A 20724 E-2 90-08-02 Cs 90-08-22 15:00 UT
II-9 15 15 1990-088A 20830 D-2 90-10-01 Cs 90-10-15 00:39 UT

Block IIA
II-10 23 23 1990-103A 20959 E-4 90-11-26 Cs 90-12-10 23:45 UT
II-11 24 24 1991-047A 21552 D-1 91-07-04 Rb 91-08-30 04:44 UT
II-12 25 25 1992-009A 21890 A-2 92-02-23 Cs 92-03-24 11:00 UT
II-13 28 28 1992-019A 21930 C-5 92-04-10 Cs 92-04-25 20:32 UT
II-14 26 26 1992-039A 22014 F-2 92-07-07 Cs 92-07-23 19:43 UT
II-15 27 27 1992-058A 22108 A-3 92-09-09 Cs 92-09-30 20:08 UT
II-16 32 01 1992-079A 22231 F-1 92-11-22 Cs 92-12-11 14:49 UT
II-17 29 29 1992-089A 22275 F-4 92-12-18 Cs 93-01-05 16:39 UT
II-18 22 22 1993-007A 22446 B-1 93-02-03 Cs 93-04-04 05:20 UT
II-19 31 31 1993-017A 22581 C-3 93-03-30 Rb 93-04-13 20:53 UT
II-20 37 07 1993-032A 22657 C-4 93-05-13 Cs 93-06-12 16:15 UT
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II-21 39 09 1993-042A 22700 A-1 93-06-26 Cs 93-07-20 12:54 UT
II-22 35 05 1993-054A 22779 B-4 93-08-30 Cs 93-09-28 19:29 UT
II-23 34 04 1993-068A 22877 D-4 93-10-26 Cs 93-11-22 18:20 UT
II-24 36 06 1994-016A 23027 C-1 94-03-10 Cs 94-03-28 14:20 UT
II-25 33 03 1996-019A 23833 C-2 96-03-28 Cs 96-04-09 21:17 UT
II-26 40 10 1996-041A 23953 E-3 96-07-16 Rb 96-08-15 15:05 UT
II-27 30 30 1996-056A 24320 B-2 96-09-12 Cs 96-10-01 15:28 UT
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Notes
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1. NORAD Catalog Number is also known as U.S. Space Command (USSPACECOM) object number and NASA catalog number.
2. No orbital plane position = satellite no longer operational.
3. Clock: Rb = Rubidium; Cs = Cesium.
4. Selective Availability (S/A) had been enabled on Block II satellites during part of 1990; S/A off between about 10 August 1990 and 1 July 1991 due to Gulf crisis; standard level re-implemented on 15 November 1991; occasionally off for test and other purposes. Currently, PRN15 and PRN28 appear to have little or no S/A imposed.
5. Anti-spoofing (A-S) was activated on 94-01-31 at 00:00 UT on all Block II satellites (ref. NANU 050-94042); occasionally off for test and other purposes. A-S was turned off on all satellites at 20:00 UT on 95-04-19 and back on on 95-05-10; off again between 95-06-19 and 95-07-10; and between 95-10-10 and 95-10-31. A-S has been off on PRN28 since 95-02-21.
6. PRN number of SVN32 was changed from 32 to 01 on 93-01-28.
7. The active clock on PRN01 was switched from a Rb to a Cs between 96-08-16 and 96-08-22 (ref. USNO and NANUs 134-96229 and 141-96234).
8. PRN05 and PRN06 are equipped with corner-cube reflectors for satellite laser ranging (SLR). SLR tracking of the satellites will permit onboard clock errors and satellite ephemeris errors in GPS tracking to be differentiated.
9. The decommissioning date for PRN06/SVN03 is the date of termination of operations of this satellite (ref. USNO) and is about 3 weeks later than other published dates for "deactivation".
10. PRN16 will be moved from the E-3 slot to the E-5 slot to make room for PRN10. An orbit maneouvre was carried out on 96-08-19 (ref. NANUs 120-96204, 137-96232).
11. PRN20 hs been unusable since 15:18 UT on 96-05-10 and will not return to service (ref. NANU 118-96204). Cause of failure: loss of 3-axis stabilisation. PRN20 was moved out of the B-2 slot to make room for PRN30 (ref. NANU 162-96256).
12. PRN28 has been moved from the C-2 slot to the C-5 slot, about 40 degrees away. This move, which was initiated on 96-03-06 by lowering the orbit of PRN28 by about 6 km, made way for PRN03. PRN03 is a backup for PRN28 which has some undisclosed equipment problem. PRN28 will remain on the air, with some subsystems shut down to conserve power (ref. NANUs 045-96066, NANU 068-96100, and GPS World Newsletter). The move was completed on 96-08-23 (ref. NANUs 127-96236 and 144-96236).
13. PRN30 (SVN30) was launched on 96-09-12 at 08:49 UT. It achieved initial usable status on 96-10-01 at 15:28 UT (ref. NANUs 162-96256 and 171-96275).

14. Announced date of next scheduled launch: 97-01-13 (first Block IIR satellite).
15. Compiled by Richard B. Langley, Dept. of Geodesy and Geomatics Engineering, University of New Brunswick.

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Fredericton? Where's that? See: http://degaulle.hil.unb.ca/NB/fredericton.html
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2001. Re: RS or OSCAR Output power on 10meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <53bmjh$49h@newsbf02.news.aol.com>
Source record: 21274

The output power of the RS 10 /11 and the RS12/13 satellites
on the 10m HF band is about 5 Watt PEP into a dipole.
(That's the total power of the transponder+beacon)

The beacons are 0.45 W in low and 1.2 W in high power mode.

As RS15 is concerned here is an info provided to me by RA3AT
one of the members of the RS-Group in Moscow:

>TX output power of RS-15 are 1.5 - 2 times lower then RS-10. You
>may try use more power on Earth side, but RS15 output power limited up to
>aprox. 0.4 watts per each 4kHz subpassband by AGC system (at present time
the
>beacon output is 1.2 wtts). Total output power is sum of beacon and ten
>subchannels of transponder (1.2w + 0.4w * 10 = 5.2w). RS-15 is small
satellite
>(70 kg) and have limited DC power supply. (RS-10/11; 12/13 - 2000 kg.)
>Our Congratulations to you, Best Wishes and Happy New Year with RS15!
>73, Leo, ra3at, RS-group, Moscow.

So far the RS satellite information.....

Good luck and enjoy satelliting !

73 de Oscar, DJ0MY
near Ulm, Germany

2002. Ham-Space Digest V96 #307

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610071542.AA112832978@relay2.geis.com>
Source record: 21275

GE Item Number: 996688
Original Msg Id: 392552
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #307
System: MARLBORO#
Date: Mon 7-Oct-96 15:01

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2003. Ham-Space Digest V96 #312

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610071637.AA266016271@relay2.geis.com>
Source record: 21276

GE Item Number: 3256568
Original Msg Id: 392812
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #312
System: MARLBORO#
Date: Mon 7-Oct-96 15:45

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2004. Ham-Space Digest V96 #310

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610071637.AA265306242@relay2.geis.com>
Source record: 21277

GE Item Number: 3215731
Original Msg Id: 392795
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #310
System: MARLBORO#
Date: Mon 7-Oct-96 15:45

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2005. Ham-Space Digest V96 #311

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610071638.AA267516315@relay2.geis.com>
Source record: 21278

GE Item Number: 3973396
Original Msg Id: 392796
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #311
System: MARLBORO#
Date: Mon 7-Oct-96 15:49

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2006. Ham-Space Digest V96 #308

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610071638.AA267386311@relay2.geis.com>
Source record: 21279

GE Item Number: 2583579
Original Msg Id: 392729
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #308
System: MARLBORO#
Date: Mon 7-Oct-96 15:41

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2007. Ham-Space Digest V96 #313

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610072133.VAA04308@relay2.geis.com>
Source record: 21280

GE Item Number: 2762371
Original Msg Id: 393289
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #313
System: MARLBORO#
Date: Mon 7-Oct-96 21:36

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2008. Ham-Space Digest V96 #309

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610072133.VAA04371@relay2.geis.com>
Source record: 21281

GE Item Number: 9685208
Original Msg Id: 392749
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #309
System: MARLBORO#
Date: Mon 7-Oct-96 21:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2009. Ham-Space Digest V96 #306

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610072134.VAA04558@relay2.geis.com>
Source record: 21282

GE Item Number: 9001029
Original Msg Id: 392411
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #306
System: MARLBORO#
Date: Mon 7-Oct-96 20:57

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2010. NORAD Two-Line Orbital Element Sets (TLE879)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-07 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <53c21d$m2v@blackbird.afit.af.mil>
Source record: 21283

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #879 -
Alouette 1
1 00424U 62049A 96280.18223113 .00000068 00000-0 69564-4 0 2336
2 00424 80.4610 174.2270 0023506 105.1205 255.2542 13.67877302697511
ATS 1
1 02608U 66110A 96275.53037873 -.00000228 00000-0 10000-3 0 9824
2 02608 14.5999 351.6930 0008772 102.8173 257.2862 1.00302163 25935
ATS 3
1 03029U 67111A 96280.31823618 -.00000119 00000-0 10000-3 0 5540
2 03029 14.9143 358.5976 0009250 261.2890 124.6631 1.00273056105884
Starlette
1 07646U 75010A 96278.86751142 -.00000129 00000-0 89244-5 0 22
2 07646 49.8290 75.8910 0205908 232.6861 125.5110 13.82191514 94136
LAGEOS
1 08820U 76039A 96280.09717548 .00000019 00000-0 00000+0 0 2294
2 08820 109.8497 64.0010 0043529 104.8630 255.6717 6.38664403220911
ETS-2
1 09852U 77014A 96273.27365078 -.00000255 00000-0 10000-3 0 772
2 09852 13.3582 31.6802 0005993 121.3906 238.6620 1.00003027 18689
GOES 2
1 10061U 77048A 96280.50608635 .00000052 00000-0 10000-3 0 7430
2 10061 12.5158 35.8017 0012212 122.6825 223.6953 1.00254191 15559
IUE
1 10637U 78012A 96273.40398247 -.00000269 00000-0 10000-3 0 2826
2 10637 35.9400 81.4733 1377839 59.6914 313.2754 1.00206519 20986
GOES 3
1 10953U 78062A 96280.27871252 -.00000128 00000-0 10000-3 0 7220
2 10953 11.5134 38.7418 0002461 115.9358 218.6854 1.00266886 20161

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SeaSat 1
1 10967U 78064A 96275.23263119 -.00000021 00000-0 37603-4 0 5199
2 10967 107.9930 34.1595 0002556 248.8645 111.2223 14.38124456956691
Nimbus 7
1 11080U 78098A 96278.17641197 -.00000040 00000-0 14874-5 0 6171
2 11080 98.9267 135.0332 0009772 35.0046 325.1750 13.83690471906249
GOES 5
1 12472U 81049A 96279.48911176 .00000090 00000-0 10000-3 0 9542
2 12472 8.3673 49.0684 0006999 70.4086 289.7145 1.00260332 14204
Cosmos 1383
1 13301U 82066A 96278.44531672 .00000025 00000-0 11647-4 0 5338
2 13301 82.9288 53.6834 0026747 301.8929 57.9619 13.68077186712312
LandSat 4
1 13367U 82072A 96280.54332625 .00000064 00000-0 23988-4 0 89
2 13367 98.0607 328.0081 0007649 145.3505 214.8194 14.57185211756757
DMSP B5D2-1
1 13736U 82118A 96281.15719766 .00000026 00000-0 29271-4 0 958
2 13736 98.6230 107.7419 0009446 62.0144 298.1990 14.25805509717023
IRAS
1 13777U 83004A 96281.05287262 -.00000257 00000-0 -14714-3 0 4539
2 13777 98.9677 104.1887 0012264 146.2682 213.9263 13.99258297369016
Cosmos 1447
1 13916U 83021A 96277.55012593 .00000083 00000-0 71678-4 0 6244
2 13916 82.9442 110.9032 0036625 209.0111 150.9010 13.74346073678626
TDRS 1
1 13969U 83026B 96281.06159219 -.00000299 00000-0 10000-3 0 6448
2 13969 9.1417 42.5639 0002457 146.1191 160.2472 1.00263922 22508
GOES 6
1 14050U 83041A 96279.39587940 -.00000188 00000-0 10000-3 0 5510
2 14050 7.2043 52.5656 0004170 76.3940 296.7735 1.00223900107305
AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 4571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649 72045
LandSat 5
1 14780U 84021A 96279.23271781 .00000029 00000-0 16820-4 0 5526
2 14780 98.3191 336.9814 0002170 335.1243 24.9839 14.57056790669985
UO-11
1 14781U 84021B 96277.53672070 .00000032 00000-0 13218-4 0 9171
2 14781 97.8083 263.4904 0012600 100.1769 260.0834 14.69484128673566
Cosmos 1574
1 15055U 84062A 96280.77060969 .00000058 00000-0 45223-4 0 8256
2 15055 82.9594 163.6572 0028949 32.8081 327.4863 13.73640343616302
Cosmos 1602
1 15331U 84105A 96278.36123769 .00000241 00000-0 25526-4 0 5076
2 15331 82.5344 10.7416 0019187 312.1940 47.7645 14.84790609649174
ERBS
1 15354U 84108B 96277.52339771 -.00000106 00000-0 12062-4 0 2207
2 15354 56.9974 305.3202 0008679 89.0181 271.1850 14.94981942653045
NOAA 9
1 15427U 84123A 96281.16838234 .00000037 00000-0 43366-4 0 8690
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2 15427 98.9359 346.0968 0015517 0.5082 359.6105 14.13808058609455
Mir
1 16609U 86017A 96281.22725441 .00001739 00000-0 25436-4 0 7023
2 16609 51.6536 279.4281 0012440 242.7535 117.2193 15.62121476607510
SPOT 1
1 16613U 86019A 96279.56190501 -.00000045 00000-0 00000+0 0 9912
2 16613 98.8263 347.3544 0000379 49.7286 310.3925 14.19986575235974
Cosmos 1766
1 16881U 86055A 96280.46398566 .00000123 00000-0 12011-4 0 4226
2 16881 82.5167 66.4526 0019078 334.9446 25.0838 14.83763939550348
EGP
1 16908U 86061A 96279.52338587 -.00000083 00000-0 10000-3 0 1212
2 16908 50.0070 17.7777 0011320 293.5148 66.4488 12.44414832130141
NOAA 10
1 16969U 86073A 96281.26406012 .00000003 00000-0 19584-4 0 8030
2 16969 98.5300 275.1532 0014098 29.9112 330.2871 14.25004380522560
MOS-1
1 17527U 87018A 96281.18325564 -.00000043 00000-0 00000+0 0 4707
2 17527 98.9352 340.6663 0017615 20.7402 339.4483 14.00450024490662
GOES 7
1 17561U 87022A 96281.29298801 -.00000161 00000-0 10000-3 0 897
2 17561 3.2834 68.6215 0004232 324.4810 352.8884 1.00261874 18425
Kvant-1
1 17845U 87030A 96280.77943078 .00007910 00000-0 94071-4 0 7779
2 17845 51.6515 281.6910 0012147 243.3536 116.5496 15.62125558541550
DMSP B5D2-3
1 18123U 87053A 96281.20661035 .00000021 00000-0 33137-4 0 6257
2 18123 98.7702 109.6617 0013585 298.1882 61.7916 14.15455393480349
RS-10/11
1 18129U 87054A 96279.94332102 .00000005 00000-0 -10775-4 0 2669
2 18129 82.9225 66.6652 0010444 203.5392 156.5286 13.72369728465364
Meteor 2-16
1 18312U 87068A 96279.49141302 .00000034 00000-0 16886-4 0 5133
2 18312 82.5507 264.5799 0010945 274.9343 85.0568 13.84085394461432
Meteor 2-17
1 18820U 88005A 96280.53137049 .00000061 00000-0 40650-4 0 613
2 18820 82.5425 318.5337 0017083 339.8866 20.1623 13.84763071438930
DMSP B5D2-4
1 18822U 88006A 96280.05545413 .00000005 00000-0 20282-4 0 3587
2 18822 98.3820 106.8278 0007203 43.3251 316.8493 14.23202353450340
Glonass 34
1 19163U 88043A 96275.11003125 .00000077 00000-0 10000-3 0 1197
2 19163 65.2734 82.2635 0007334 160.5263 199.5383 2.13103703 64496
Glonass 36
1 19165U 88043C 96277.51337087 .00000030 00000-0 10000-3 0 5241
2 19165 65.2834 82.1502 0003206 358.0671 1.9513 2.13102223 65164
METEOSAT 3
1 19215U 88051A 96270.64710632 -.00000153 00000-0 10000-3 0 2811
2 19215 3.4698 67.2082 0005012 113.0361 247.3889 0.96948582 18166
AO-13
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1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 2946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504 32191
OKEAN 1
1 19274U 88056A 96278.19255205 .00000239 00000-0 26607-4 0 1228
2 19274 82.5173 169.5653 0020814 121.4397 238.8856 14.82525961445521
Meteor 3-2
1 19336U 88064A 96277.87848654 .00000051 00000-0 10000-3 0 5164
2 19336 82.5376 89.5178 0016300 328.0613 31.9518 13.16979447393784
Glonass 39
1 19503U 88085C 96277.07456465 -.00000047 00000-0 10000-3 0 4053
2 19503 65.5579 321.0801 0009865 127.0740 233.0758 2.13101793 62644
NOAA 11
1 19531U 88089A 96281.24731253 .00000010 00000-0 30722-4 0 6867
2 19531 99.1826 302.2576 0011089 290.7105 69.2877 14.13105834414271
TDRS 3
1 19548U 88091B 96271.75599433 -.00000216 00000-0 10000-3 0 2350
2 19548 2.6988 71.3749 0005250 131.2538 161.6168 1.00277094 16554
Glonass 40
1 19749U 89001A 96276.64261327 .00000021 00000-0 10000-3 0 6252
2 19749 65.2543 81.7423 0005403 251.7845 108.1800 2.13101578 60143
Glonass 41
1 19750U 89001B 96278.57456794 .00000038 00000-0 10000-3 0 5349
2 19750 65.2614 81.7405 0006554 238.9431 121.0139 2.13101798 60200
GPS BII-01
1 19802U 89013A 96280.82683486 .00000044 00000-0 00000+0 0 3015
2 19802 55.3969 106.1830 0035033 103.7655 256.7442 2.00554500 55954
Akebono
1 19822U 89016A 96280.72346447 .00008021 00000-0 37914-3 0 7905
2 19822 75.0663 59.0764 3742528 21.9564 350.6476 7.93734511175532
Meteor 2-18
1 19851U 89018A 96280.21974419 .00000084 00000-0 61784-4 0 5114
2 19851 82.5217 192.5440 0015873 28.0326 332.1694 13.84417979384197
MOP-1
1 19876U 89020B 96277.60898096 -.00000127 00000-0 10000-3 0 2186
2 19876 2.2104 71.3333 0016830 289.8623 70.3641 0.97110240 7673
TDRS 4
1 19883U 89021B 96276.03271412 -.00000288 00000-0 00000+0 0 2608
2 19883 0.0973 90.3649 0017152 139.6898 111.6858 1.00266226200176
GPS BII-02
1 20061U 89044A 96277.17857089 -.00000016 00000-0 10000-3 0 2805
2 20061 54.1319 281.9389 0171012 220.7577 137.9710 2.00562586 53624
Nadezhda 1
1 20103U 89050A 96281.36690698 .00000031 00000-0 15966-4 0 9255
2 20103 82.9614 25.9422 0038849 100.2078 260.3462 13.73870161364083
GPS BII-03
1 20185U 89064A 96277.47544073 .00000007 00000-0 10000-3 0 3296
2 20185 55.1748 106.7719 0020092 320.7789 39.1187 2.00808039 52206
GMS 4
1 20217U 89070A 96281.16052199 -.00000377 00000-0 10000-3 0 4576
2 20217 2.0133 74.1816 0001140 206.5094 273.2217 1.00263745 26541
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INTERCOSMOS 24
1 20261U 89080A 96278.33338000 .00000052 00000-0 78565-5 0 5324
2 20261 82.5952 200.9970 1242561 153.4270 213.6413 12.47349423319512
GPS BII-04
1 20302U 89085A 96281.03750250 -.00000040 00000-0 10000-3 0 3033
2 20302 53.2189 221.5486 0045043 201.8034 157.6802 2.00569663 51078
Meteor 3-3
1 20305U 89086A 96278.88901162 .00000044 00000-0 10000-3 0 6593
2 20305 82.5316 48.7006 0009170 28.6916 331.4698 13.04420035332500
COBE
1 20322U 89089A 96278.52585138 .00000303 00000-0 22127-3 0 2482
2 20322 98.9397 291.9272 0009597 89.4003 270.8270 14.03464806352262
Kvant-2
1 20335U 89093A 96280.77943078 .00007910 00000-0 94071-4 0 7116
2 20335 51.6515 281.6910 0012147 243.3536 116.5496 15.62125558390561
GPS BII-05
1 20361U 89097A 96277.56414012 -.00000043 00000-0 10000-3 0 1230
2 20361 56.0734 48.9928 0089172 136.2636 224.4557 2.00565399 40487
COSMOS 2054 (Altair-1)
1 20391U 89101A 96278.80489172 -.00000148 00000-0 00000+0 0 4308
2 20391 4.0332 62.9810 0004885 124.8957 99.5609 1.00272468 25090
SPOT 2
1 20436U 90005A 96279.97382501 -.00000044 00000-0 00000+0 0 1335
2 20436 98.7559 351.8367 0001571 54.3428 305.7939 14.20013232347562
UO-14
1 20437U 90005B 96279.18828509 .00000072 00000-0 44712-4 0 2156
2 20437 98.5399 0.1201 0010257 240.7801 119.2340 14.29934077349778
AO-16
1 20439U 90005D 96274.80377024 -.00000038 00000-0 22913-5 0 121
2 20439 98.5551 358.2282 0010639 253.5541 106.4429 14.29984866349163
DO-17
1 20440U 90005E 96280.20275020 .00000026 00000-0 26999-4 0 142
2 20440 98.5570 4.2299 0010704 235.3679 124.6502 14.30127938349968
WO-18
1 20441U 90005F 96278.79566575 -.00000009 00000-0 13343-4 0 187
2 20441 98.5567 2.7746 0011324 241.8180 118.1858 14.30096838349767
LO-19
1 20442U 90005G 96278.22341375 -.00000010 00000-0 12900-4 0 130
2 20442 98.5585 2.7530 0011479 242.1666 117.8359 14.30206902349704
GPS BII-06
1 20452U 90008A 96277.95448039 -.00000033 00000-0 10000-3 0 2234
2 20452 54.0320 162.3372 0063160 89.5930 270.9661 2.00549592 48990
MOS-1B
1 20478U 90013A 96278.80563661 .00000088 00000-0 10000-3 0 9812
2 20478 99.1165 346.9034 0005877 320.6039 39.4695 13.93967671259827
DEBUT
1 20479U 90013B 96280.51742076 -.00000014 00000-0 45681-4 0 133
2 20479 99.0234 284.4158 0539898 231.5311 123.6175 12.83344330312182
FO-20
1 20480U 90013C 96278.06808887 -.00000004 00000-0 69620-4 0 9109
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2 20480 99.0223 282.2103 0540035 237.7069 117.0626 12.83234795311855
MOS-1B R/B
1 20491U 90013D 96280.24962284 -.00000015 00000-0 33733-4 0 2804
2 20491 99.0732 352.6406 0470629 34.4866 328.5851 13.03002365316323
LACE
1 20496U 90015A 96277.51429459 .00000952 00000-0 34830-4 0 6913
2 20496 43.1041 304.8735 0010287 29.8208 330.3233 15.35937101370487
Nadezhda 2
1 20508U 90017A 96281.30997521 .00000020 00000-0 43107-5 0 9266
2 20508 82.9557 160.4776 0045982 54.5822 305.9614 13.73512524331286
OKEAN 2
1 20510U 90018A 96277.65550104 .00000174 00000-0 20606-4 0 5304
2 20510 82.5247 125.0458 0018692 327.9804 32.0267 14.78632972355701
GPS BII-07
1 20533U 90025A 96275.35144963 .00000000 00000-0 10000-3 0 2642
2 20533 54.4763 282.8161 0049199 74.4793 286.0968 2.00665619 47801
PegSat
1 20546U 90028A 96277.86148209 .00005280 00000-0 94232-4 0 9736
2 20546 94.1180 54.2789 0056771 306.4245 53.1813 15.48353171361815
HST
1 20580U 90037B 96280.90038663 .00000438 00000-0 28044-4 0 8709
2 20580 28.4689 220.4261 0005948 260.1242 99.8674 14.91107035155278
MACSAT 2
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Glonass 58
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UFO F2
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RESURS 1-3
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Glonass 73
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Spektr
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2 23579 51.6515 281.6910 0012147 243.3536 116.5496 15.62125558 78871
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1 23581U 95025A 96279.61083966 .00000070 00000-0 10000-3 0 2615
2 23581 0.1883 266.0888 0002529 315.0900 237.8771 1.00273843 5036
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1 23605U 95033A 96278.85352886 .00000141 00000-0 36114-4 0 3262
2 23605 98.1275 213.0130 0001185 48.7923 311.3396 14.63839901 66606
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1 23606U 95033B 96280.20192336 .00000170 00000-0 38708-4 0 2191
2 23606 98.1098 215.7597 0007205 184.8671 175.2476 14.67288719 66994
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2 23607 98.1092 214.7970 0005587 189.1369 170.9733 14.66966367 66894
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1 23613U 95035B 96280.37466458 .00000082 00000-0 00000+0 0 2256
2 23613 0.9063 82.2037 0002815 148.3528 108.2288 1.00271806 4495
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1 23620U 95037A 96279.25255405 -.00000030 00000-0 00000+0 0 1881
2 23620 64.8159 200.2890 0018616 170.0100 190.0474 2.13102838 9350
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1 23621U 95037B 96279.43013438 -.00000031 00000-0 00000+0 0 1982
2 23621 64.8263 200.2884 0018324 180.8489 179.1678 2.13102123 9356
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2 23622 64.8216 200.2392 0036726 166.3290 193.7896 2.13102557 9382
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2 23632 70.2580 249.2490 8016528 323.6230 17.8860 0.26347100 1148
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1 23657U 95046A 96279.82104633 .00000110 00000-0 13318-4 0 1137
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XTE
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Polar
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2 23802 86.2224 24.9013 6559124 281.0260 16.5218 1.36676528 3034
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1 23824U 96010E 96280.33915048 .00022069 00000-0 13204-1 0 1108
2 23824 47.6512 222.8339 7306162 54.6894 353.3159 2.22945445 5085
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1 23833U 96019A 96281.07910212 -.00000081 00000-0 00000+0 0 879
2 23833 54.6713 343.4801 0038912 148.4340 211.8533 2.00565041 3927
Priroda
1 23848U 96023A 96280.77943078 .00007910 00000-0 94071-4 0 1528
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1 23851U 96024A 96280.49673755 -.00000045 00000-0 10000-5 0 1045
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2 23857 3.9623 61.0378 0011442 62.8037 297.3710 14.91655839 23233
MSTI 3
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2 23868 97.1226 109.0651 0013434 122.3179 237.9371 15.46341015 22026
TOMS-EP
1 23940U 96037A 96281.25469045 .00001931 00000-0 89178-4 0 468
2 23940 97.4318 185.3172 0012721 318.3271 41.6991 15.21347998 14674
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FO-29
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2 24278 98.5771 349.8127 0352171 123.2700 240.2716 13.52625393 6816
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1 24286U 96049B 96281.18924616 .00001467 00000-0 14354-3 0 251
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1 24291U 96050A 96281.01037297 .00033438 60953-5 21765-3 0 335
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1 24294U 96050D 96280.23163495 .00048723 64933-5 28339-3 0 396
2 24294 62.7611 244.7071 0594532 112.6863 253.8188 14.72839759 5595
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1 24295U 96050E 96280.99417352 .00119880 60836-5 36964-3 0 501
2 24295 62.8168 242.7909 0630652 113.5445 253.3064 14.73074583 5698
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1 24298U 96051B 96278.89466729 -.00000047 00000-0 00000+0 0 182
2 24298 71.0174 101.8977 0013532 346.5073 13.5683 14.12407505 4315
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2 24300 71.0243 102.6881 0199332 50.6928 311.1653 13.72071780 4438
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1 24303U 96051G 96280.00075363 -.00000046 00000-0 00000+0 0 94
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MO-30
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2 24317 82.9924 157.1660 2199447 81.4177 302.8104 10.81454147 2817
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2 24321 35.0167 260.5426 6031870 217.9096 78.4743 4.08416388 1017
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2 24325 82.9871 156.6020 2190879 79.1157 304.7040 10.86672749 3134
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1 24435U 96058A 96280.92680192 -.00000132 00000-0 00000+0 0 232
2 24435 0.2424 292.7554 0006059 176.0679 320.7498 1.00173988 103
1996058B
1 24436U 96058B 96273.42259432 .09269389 12720-4 11511-3 0 169
2 24436 51.6361 268.0057 0007631 300.3536 59.6839 16.49186939 442
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1 24437U 96058C 96271.59134398 .25242040 12693-4 30003-3 0 146
2 24437 51.6231 278.3198 0001631 39.3230 320.7852 16.49906500 141
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1 24438U 96058D 96271.42903887 -.00000244 00000-0 00000+0 0 20
2 24438 0.2950 290.3227 0008812 316.7620 4.5723 1.00168228 07
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1 24454U 96058E 96280.49330957 .00000531 00000-0 40914-3 0 50
2 24454 47.5923 280.1601 7265862 2.5372 359.7706 2.26882485 219
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2011. Re: SPACE FREQUENCY QUESTION

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <53ceha$c0c@paperboy.ids.net>
Source record: 21284

>In article <32537567.1F36@midusa.net>, sgross@midusa.net says...
>>
>>Hi everyone,
>>
>> My name is Jeff and I have a Pro-2026 100 channel scanner at
>>home. I hear a lot about the frequencies used by the MIR station and the
>>ham guys up there. I know one of the frequencies is 145.55 MHz. I have
>>that and about 5 other nationwide "space" frequencies programmed into my
>>scanner. My question is: why don't I ever hear anything on my scanner
>>on those frequencies? Do they talk in the middle of the night or what?

pretty good guess. As a normal rule the Mir cosmonauts keep Moscow time
(GMT + 3 hours). So if you're in the Western hemisphere, more often than
not they'll be asleep while you're awake. However there is a fair amount
of overlap.

Also remember that Mir's radio is only in voice mode when a cosmonaut is
available. If they're busy doing an experiment, doing maintenance on
Mir, or something else, then they probably aren't using the radio.

You will occasionally here packet from Mir when the crew's otherwise
occupied or asleep.

In any case you're very likely to hear John Blaha KC5TZQ whenever he's
awake, it's a reasonable hour on the ground, and Mir is in range of
Houston Texas. He's probably talking to W5RRR, the Johnson Space Center
ham shack.

Or you'll hear him during the weekends chatting with hams around the
country - and asking everybody how the Dallas Cowboys did!

In article <534jrt$hl6@news.ptd.net> George F., georgef@prolog.net writes:

>I've tried the same thing without receiving any hams during a SAREX Mission
>or from MIR. But I have (just about every orbit) heard the Voice DownLink
>from MIR (non-ham) the only problem, its in russian. The frequency is
>143.625MHz (fm).

This is one of the Mir 'official' communications frequencies - not a ham
frequency. So it isn't likely that you'll hear much in English.

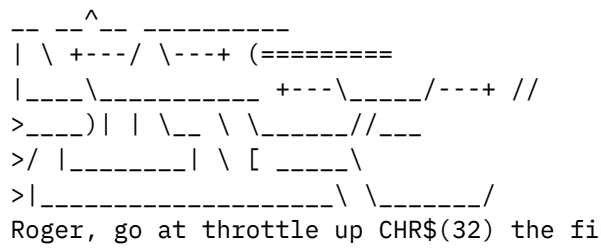
>What is really neat, when my tracking software says MIR is
>about 13degrees over the horizon, I start picking up the signal, and when MIR
>is to be 13 degrees over the horizon on the decent, I stop hearing the
>signal. You can almost set your watch by it!

You haven't told me where you're located, George, but I could probably calculate your location based on that information. What you're hearing is Mir communicating with one of its "ground" stations. I put "ground" in quotes, because it's actually a NASA installation! Several NASA installations, including Edwards and Wallops are now using off-the-shelf equipment for Mir communications. They're linked by international phone lines with the Russian control center, and give the Russians additional communications capabilities, when they would normally be out of range.

So what you're hearing when Mir is over 13 degrees above your horizon is Mir passing above the horizon for the ground station, and likewise when you loose the signal they're actually going out of range with that ground station. The fact that you're hearing it is incidental. As a guess - since the 13 degrees is symetrical you're either on a roughly straight line normal to the 51.6 degree flight path (either ascending or decending node) for either Wallops or Edwards. A bit more calculations with Mir's altitude and the diameter of the Earth would give your location a bit more accurately.

Set up your tracking software to show you when Mir is passing within range of Wallops or Edwards, and I'd suspect that it would match your AOS/LOS times fairly accurately.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

2012. Conference: Low Cost Access to Space in Education - Ottawa, Nov.12.96

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: Dave Marsden <marsden@conveyor.com>
Message-ID: <53co35$p45@loki.tor.hookup.net>
Source record: 21285

Please find below, the Conference Program for "Low Cost Access to Space in Education '96" (LCASE). LCASE is organized by the Canadian Alumni of the International Space University. It takes place in conjunction with the CASI 9th Astronautics Conference in Ottawa on November 12, 1996.

A number of invited speakers will cover microsat-related topics including Rick Fleeter from AeroAstro, Mark Allery of Surrey Satellite Technologies and Prof. Robert Twiggs of Stanford's Satellite Systems Development Lab.

Registration is $30 (CAN) for students and $75 others, seating is limited. Please register by contacting:

9th Conference on Astronautics - Space Education Workshop
CASI, 130 Slater Street, Suite 818
Ottawa, Ontario K1P 6E3
Tel: 613-234-0191
Fax: 613-234-9039
e-mail: casi@casi.ca

For more information, check the conference web site at

http://www.caisu.ca/

or contact either of the conference co-chairs:

John Criswick criswick@conveyor.com or
Jean-Francois Simard jf.simard@dreo.dnd.ca

Low-Cost Access to Space in Education ï¿½96
TUESDAY, November 12, Westin Convention Centre
Ottawa, Canada

Organized by the Canadian Alumni of the International Space University (CAISU)

Co-sponsors: Canadian Foundation for the International Space University
Canadian Aeronautics and Space Institute
Canadian Space Agency

07:30 Registration

08:45 Welcome and Opening Remarks
Mr. John Criswick, Chair LCASE ï¿½96; Mr. Jean-Francois Simard, Co-chair LCASE ï¿½96

09:00-17:00 Parallel Poster Session

09:00 Lessons Learned in Low-Cost Access to Space at Stanford University
Prof. Robert Twiggs, Director, Satellite Systems Development Lab,
Stanford University

09:40 Lessons Learned in Low-Cost Access to Space in Education
Dr. Mark Allery, Surrey Satellite Technology Ltd.

10:15 Break (Poster Session)

10:30 Low-Cost Microspacecraft Design
Dr. Rick Fleeter, President, AeroAstro Corporation

11:10 Small Payload Opportunities in the CSA Long-term Space Plan
Dr. David Kendall, Program Scientist, Canadian Space Agency

11:40 Graduate Student Presentation

12:00 Light Lunch (Poster Session)

13:00 SILA: A Student Microsatellite Project
Prof. Doug Staley, Department of Mechanical and Aerospace
Engineering, Carleton University (tentative)

13:30 Using the University Satellite-Development Model in Industry
Mr. George Tyc, Project Manager, Bristol Aerospace Ltd.

14:00 Building Space-Qualified Hardware in Universities
Prof. Gethyn Timothy, Centre for Space Research, Department of
Physics, University of New Brunswick (tentative)

15:00 Break (Poster Session)

15:30 Graduate Student Presentation

16:00 Panel Discussion (Moderator: Jean-Francois Simard, CAISU)
Low-Cost Access to Space in Canada: How to Make it Happen

17:00 Reception (Poster Session)

A poster session will run in parallel, giving students, student groups,
universities and other organizations an opportunity to present their
work. Program information may be obtained from CAISU's Web site at

http://www.caisu.ca/

or contact either of the conference co-chairs:

John Criswick criswick@conveyor.com Tel.ï¿½613-562-2816
Jean-Francois Simard jf.simard@dreo.dnd.ca

2013. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610080855.BAA11153@UCSD.EDU>
Source record: 21286

```
From smtp Wed Oct 2 12:10 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 2 Oct 96 12:10 PDT
Received: by mail.ucsd.edu; id EAA02956
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA02943
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:36 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 19837
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610021130.EAA02943@mail.ucsd.edu>
Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #304
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
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Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#

Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also

transmit amateur television.

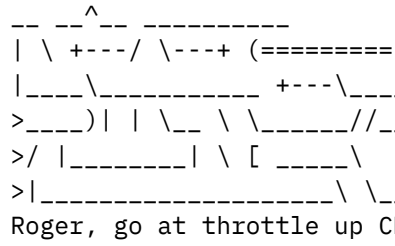
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433

```
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************

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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

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```

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

2014. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610080859.BAA11226@UCSD.EDU>
Source record: 21287

```
From smtp Thu Oct 3 08:48 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 3 Oct 96 08:48 PDT
Received: by mail.ucsd.edu; id EAA17872
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:44 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17857
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:42 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2876
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610031130.EAA17857@mail.ucsd.edu>
Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #305
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?
```

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

2015. Need 9600 mod for FT-780R

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: Bob Watson <kn4hh@america.net>
Message-ID: <325A2C7C.5F05@america.net>
Source record: 21288

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2
for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

2016. John's Ham Page

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: john fleenor <jlfleenor@why.net>
Message-ID: <325B2EE8.A28@why.net>
Source record: 21289

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

2017. Weather Sat. Info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Message-ID: <325B27EB.CB9@expert.cc.purdue.edu>
Source record: 21290

I'm looking for information on weather sats (NOAA 12 & 14). I've looked at NOAA's pages and didn't find them real handy. Does anyone know of any web pages or other sources of info on the net where I could find out more about these satellites? I am wanting to know what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

2018. Info on Mir crew activities?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <325B1443.3A5C@ix.netcom.com>
Source record: 21291

Does anybody on the group know, or know where I can obtain an indication of the daily schedule of the Mir crew? What I am trying to determine is the times that would be likely and/or unlikely for a voice QSO, corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a 7-11, the doors are never locked :-), or do they all sleep and eat at the same time each day. Do they operate on a 24 hour rotating schedule, or is their day shorter or longer? In other words, a couple of weeks ago, I heard John Blaha telling somebody in a QSO that he was having a lunch break, at about 07:15 EDT (my time.) Is it safe to assume that their lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

2019. Ham-Space Digest V96 #315

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610081833.SAA01410@relay2.geis.com>
Source record: 21292

GE Item Number: 1506395
Original Msg Id: 394123
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #315
System: MARLBORO#
Date: Tue 8-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2020. ARLK073 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk073.1996@arrl.org>
Source record: 21293
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073
From ARRL Headquarters
Newington, CT October 8, 1996
To all radio amateurs

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
```

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DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

2021. Re: MIR QSL manager

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.961008172531.532G-100000@spork.callamer.com>
Source record: 21294

Would the person that just obtained the appointment as the MIR QSL manager repeat his call and address? As I remember, it was a W6 here on the West coast. I'd like to put your info on the AMSAT 75 meter net. Cliff K7RR

2022. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610080902.CAA11399@UCSD.EDU>
Source record: 21295

```
From smtp Tue Oct 1 13:06 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 1 Oct 96 13:06 PDT
Received: by mail.ucsd.edu; id EAA28784
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28754
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 23335
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610011130.EAA28754@mail.ucsd.edu>
Date: Tue, 1 Oct 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #303
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 1 Oct 96 Volume 96 : Issue 303

Today's Topics:
(I think) that I finally made a Mir packet contact.
(none)
DX and Satellite Cyberscheds available at http://www.sarrio
Ham-Space Digest V96 #297
Ham-Space Digest V96 #302
HELP! Is shuttle audio available in Seattle?
Just heard Mir on voice again
questions from a beginner

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 28 Sep 1996 10:28:36 GMT
From: dhend@cyberportal.net
Subject: (I think) that I finally made a Mir packet contact.

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)
>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.

> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 1 Oct 96 10:01:12 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Sun, 29 Sep 1996 23:17:53 -0700
From: wb6siv@cyberg8t.com (Raymond Sarrio)
Subject: DX and Satellite Cyberscheds available at http://www.sarrio

Posting Cyberscheds on the WWW can benefit ham radio operators throughout
the world with their DX and Satellite schedules.I already have a couple of
operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and
easily by using the WWW and e-mail.I have set aside a section of my web
site for hams to post their request for over-the-air schedules. Included
in the posting is a place to list the posters specific ham radio contact
needs (countries, zones,IOTA, grid squares ect...). The postings will also
include an e-mail link that will allow hams that read the posts, to easily
request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

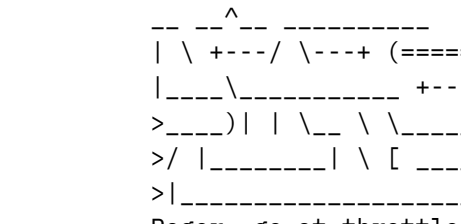
The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also
transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot
satellite dish (a real one, not one of the wimpy little dishes which
doesn't have NASA TV available). Any decent techie can scrounge together
the parts for a simple C-Band dish, recevier, and other components for a
couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225

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2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
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Date: 30 Sep 96 16:28:07 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #302

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message
```

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Mon, 30 Sep 1996 20:26:46 -0600
From: Jonathan Griffitts <jcg@qadas.com>
Subject: HELP! Is shuttle audio available in Seattle?

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

Date: Sun, 29 Sep 96 02:51:08 GMT
From: trandall@mhv.net
Subject: Just heard Mir on voice again

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 30 Sep 1996 18:24:36 GMT
From: chapman@cedar.eng.auburn.edu (Richard Chapman)
Subject: questions from a beginner

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB
--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

End of Ham-Space Digest V96 #303
****

2023. Ham-Space Digest V96 #314

Newsgroup: rec.radio.amateur.space
Date: 1996-10-08 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610081737.RAA17927@relay2.geis.com>
Source record: 21296

GE Item Number: 4533751
Original Msg Id: 394069
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #314
System: MARLBORO#
Date: Tue 8-Oct-96 17:57

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2024. Re: Weather Sat. Info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <53fgv0$3t2@bbcnews.rd.bbc.co.uk>
Source record: 21297

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

2025. KC5TZQ active on MIR tonight

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: BJ Arts <bjarts@uslink.net>
Message-ID: <01bbb5b3$147e1000$15bc92ce@bjarts.uslink.net>
Source record: 21298

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

2026. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610090900.CAA03913@UCSD.EDU>
Source record: 21299

```
From smtp Thu Oct 3 08:48 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 3 Oct 96 08:48 PDT
Received: by mail.ucsd.edu; id EAA17872
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:44 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17857
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:42 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2876
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610031130.EAA17857@mail.ucsd.edu>
Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #305
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?
```

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

2027. Re: Info on Mir crew activities?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <53fv2u$1om@news.monad.net>
Source record: 21300

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

2028. TCP/IP Telecomunications

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: irucal@mail.cccis.ro
Message-ID: <53g36s$7r2@ghost.sorosis.ro>
Source record: 21301

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

2029. Re: Weather Sat. Info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: Rolf Mathison <rolf_mathison@hp.com>
Message-ID: <325BC479.3729@hp.com>
Source record: 21302

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

2030. Visual MIR sighting

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: "Brian E. Oakley" <boakley@imagin.net>
Message-ID: <325AF750.45B4@imagin.net>
Source record: 21303

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

2031. Ham-Space Digest V96 #316

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610091937.TAA24076@relay2.geis.com>
Source record: 21304

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2032. Phase III D- When??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: philbada@aol.com
Message-ID: <53hds4$74i@newsbf02.news.aol.com>
Source record: 21305

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

2033. Re: TCP/IP Telecomunications

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: ka8okh@som-uky.campus.mci.net
Message-ID: <53ho13$qh0@news.campus.mci.net>
Source record: 21306

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

2034. Ham-Space Digest V96 #317

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610092035.UAA07942@relay2.geis.com>
Source record: 21307

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2035. Re: Phase III D- When??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <325C4258.2B3E@amsat.org>
Source record: 21308

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

2036. Cellular Motorola /CarKit for old large Handhleld cellphone FOR SALE

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: Scott Smith <smitties@ix.netcom.com>
Message-ID: <325B8E6A.8D9@ix.netcom.com>
Source record: 21309
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateurm.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

For the original Motorola hand held cellphones. Probably could be converted to newer models.
New in the box never used. All packing/accesories/etc. Mounts handleld in car.
Was $500 when new. I'll accept any reasonable/best offer. How about $100???
N2CQQ Scott
smitties@ix.netcom.com

2037. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610090855.BAA03617@UCSD.EDU>
Source record: 21310

```
From smtp Wed Oct 2 12:10 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 2 Oct 96 12:10 PDT
Received: by mail.ucsd.edu; id EAA02956
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA02943
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:36 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 19837
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610021130.EAA02943@mail.ucsd.edu>
Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #304
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#

Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also

transmit amateur television.

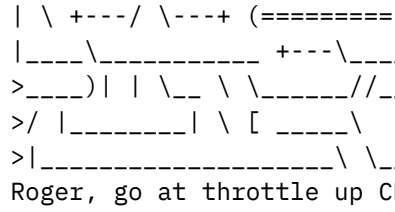
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433

```
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************

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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

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Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

2038. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-09 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610090910.CAA06032@UCSD.EDU>
Source record: 21311

```
From smtp Tue Oct 1 13:06 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Tue, 1 Oct 96 13:06 PDT
Received: by mail.ucsd.edu; id EAA28784
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:37 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA28754
sendmail 8.6.12/UCSD-2.2-sun
Tue, 1 Oct 1996 04:30:32 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 23335
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610011130.EAA28754@mail.ucsd.edu>
Date: Tue, 1 Oct 96 04:30:30 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #303
To: Ham-Space@ucsd.edu

Ham-Space Digest Tue, 1 Oct 96 Volume 96 : Issue 303

Today's Topics:
(I think) that I finally made a Mir packet contact.
(none)
DX and Satellite Cyberscheds available at http://www.sarrio
Ham-Space Digest V96 #297
Ham-Space Digest V96 #302
HELP! Is shuttle audio available in Seattle?
Just heard Mir on voice again
questions from a beginner

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 28 Sep 1996 10:28:36 GMT
From: dhend@cyberportal.net
Subject: (I think) that I finally made a Mir packet contact.

Message-ID: <30977@N6QMY> (15988@WA1WOK)
From: N6JLH@N6QMY
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH
Dave Now would like a green stamp to help cover postage even with a sase, but a small cost for a great card... should be two tone this time..
congrats on your contact I don't know if it qualifies, but give it a shot, I guess Dave makes the rules about that..
John and Valery certainly have been active, keep trying and I am sure you will get your voice contact, please urge everyone to keep the freq
uncluttered for those whose callsigns they hear and answer.. in other words try not to interfere with transmissions that are going on..the
cosmonauts are enjoying the amateur radio, lets try to keep it this way, if they hear nothing but interference they are apt to shut if off, like they
have in the past and no one will make contacts. Try to have some news or information to pass them that they would like and they will more likely
remember you and catch your call quicker the next time...
my friend Jay WB9AWX works Mir regullarly with 20 watts and a 4 element beam...so keep trying, and enjoy....

I didn't hear a peep from the docked pair so your friend was very lucky..

73
DAVE N1PPP

>KD1YV <jimkd1yv@ix.netcom.com> writes:
> Tonight I finally made my first Mir contact (have been trying for nearly 3 years, since
> I was first licensed and found out about Mir.)
>
> Anyway, I connected to R0MIR, which I assume is like a keyboard-to-keyboard connect, and
> not to the R0MIR-1 mailbox. I sent a couple of short lines of text, then disconnected.

> Does anybody know if this type of connect qualifies me for a QSL card? This is the one
> card that I am dying to get, more so than any of the other HF DX contacts I have made.
>
> On a similar topic, who was that QSL manager for Mir, I think it was
> N6-something-or-other. Is he still the manager?
>
> Regarding the earlier question about Mir on amateur radio, I think that they have been
> more active in the last couple of days than they were in the last 6 months. Two days in
> a row, I was able to hear them calling CQ on voice, including John Blaha using his own
> call, then handing the mike over to the Mir crew, who used R0MIR. Unfortunately, I
> wasn't able to bust the pileups for that, but I will keep trying :-) I heard from
> another local ham that he made a contact with John Blaha on the Mir radio while the
> Shuttle was still docked :-)
>
> Looks like Mir is back, and QRV more than ever :-)
>
> --
> 73 de Jim, KD1YV
>
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 1 Oct 96 10:01:12 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Sun, 29 Sep 1996 23:17:53 -0700
From: wb6siv@cyberg8t.com (Raymond Sarrio)
Subject: DX and Satellite Cyberscheds available at http://www.sarrio

Posting Cyberscheds on the WWW can benefit ham radio operators throughout
the world with their DX and Satellite schedules.I already have a couple of
operators looking for scheds via ham sats.

You can now schedule contacts with hams all over the world simply and
easily by using the WWW and e-mail.I have set aside a section of my web
site for hams to post their request for over-the-air schedules. Included
in the posting is a place to list the posters specific ham radio contact
needs (countries, zones,IOTA, grid squares ect...). The postings will also
include an e-mail link that will allow hams that read the posts, to easily
request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

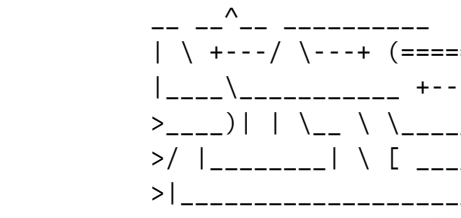
The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also
transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot
satellite dish (a real one, not one of the wimpy little dishes which
doesn't have NASA TV available). Any decent techie can scrounge together
the parts for a simple C-Band dish, recevier, and other components for a
couple of hundred dollars. Add a phone patch with a remote controller
and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been
transmitting NASA audio continiously from start of countdown through
landing on his 146.94 Mhz repeater for every mission since STS-7 in June
1983. (other than hardware problems, local nets, or other technical
issues).

LISATS, the local amateur television group has an amateur television
repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225

```
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

------------------------------

End of Ham-Space Digest V96 #297
******************************

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Date: 30 Sep 96 16:28:07 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #302

GE Item Number: 2649666
Original Msg Id: 390171
shipco-postmaster response to your message
```

Subject: Ham-Space Digest V96 #302
System: MARLBORO#
Date: Mon 30-Sep-96 17:00

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Mon, 30 Sep 1996 20:26:46 -0600
From: Jonathan Griffitts <jcg@qadas.com>
Subject: HELP! Is shuttle audio available in Seattle?

In article <52e83d$htk@post.gsfc.nasa.gov>, rjones <william.r.jones.1@gs
fc.nasa.gov> writes
>See the WA3NAN Web site at:
>
>http://garc.nasa.gov/www/garc-home-page.html

This URL does not exist. The correct URL appears to be:

http://garc.gsfc.nasa.gov/www/garc-home-page.html

--
Jonathan Griffitts
AnyWare Engineering Boulder, CO, USA
voice/fax: 303 442-0556 email jcg@qadas.com

Date: Sun, 29 Sep 96 02:51:08 GMT
From: trandall@mhv.net
Subject: Just heard Mir on voice again

In article <324CBDDC.6B2F@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>They just passed by, and one of the crew was calling CQ from R0MIR. I
>tried to get them, but it wasn't a very close pass for me, and I guess
>that they could not hear me. However, I did listen to them making
>several other contacts.
>
>Good luck working Mir !
>
>--
>73 de Jim, KD1YV

I hear them on a LOT now that the new crew is onboard. What power are you
using?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 30 Sep 1996 18:24:36 GMT
From: chapman@cedar.eng.auburn.edu (Richard Chapman)
Subject: questions from a beginner

Hello all,
I hope someone can answer a few question from a beginner at
using amateur radio satellites. The sum total of my previous
experience was listening to AO-21 on 2m (j-pole antenna) back in
1992-3 (I used a program called sattrack on a Sun workstation to
predict the satellite's location). I've read the AMSAT homepage, which
mentions AO-21, but read on another web page that it ceased to be
operational in 1994. Is this correct? I recently ported sattrack to
run under linux, and got a new set of elements from ftp.afit.af.mil,
but I may have made errors and may not be listening at the right time --
I have been unable to receive AO-21 this time.

I'd like to get started, but am not sure in practical terms what to do
first. The equipment I have is:
2m handheld (FM only)
2m 45W mobile (FM only)
2m 5/8 wave ground plane antenna
440Mhz 5/8 ground plane antenna
2m j-pole antenna
2m quad antenna
Drake TR4C HF rig and various dipole antennas
scanner that receives the 440Mhz band.
Baycom packet modem, computer and software
sattrack satellite tracking program

I'm reasonably handy at building antennas if I have instructions, but
don't know enough to design them from scratch. I've done terrestrial
packet before. I have no experience in having a computer control a directional
antenna's direction.

Now, the easiest thing would seem to me to be to try to work some of
the mode JA or JD satellites, since I have a 2m transmitter and a 70cm
receiver. But which one? I understand that AO-27 has a very weak
downlink, so I guess my first step is to build a good directional
antenna for 440Mhz. I'm also planning on listening for MIR on simplex,
and perhaps packet if I can get my setup to receive any packets from
MIR. Another option is FO-20, but it seems to require antennas more
complex than anything I've used (switchable polarization crossed yagi)
and seems in general rather complex to use. Can anyone recommend a
satellite to start out with?

Also, if I were to buy/make some more equipment, what would be the
most productive things to add.
Thanks,
73 de KC4IFB
--
Richard Chapman
Assistant Professor Department of Computer Science and Engineering
Auburn University

End of Ham-Space Digest V96 #303
****

2039. Re: The idiot ham trade.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: kevink@apple.com
Message-ID: <kevink-1010961532310001@klopke.apple.com>
Source record: 21221
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.cb,rec.radio.noncomm,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,

Guys, could you be a little more careful about which newsgroups you're posting to? I removed all the non-radio ones from the header, but couldn't figure out which of the radio groups was the "originating" one. My apologies to all the non-involved radio newsgroups.

-- Kevin --

--
Death is not a problem. Fear of death is.

2040. Re: Weather Sat. Info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <53i6fr$7j1@bbcnews.rd.bbc.co.uk>
Source record: 21312

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :
: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

2041. Re: Weather Sat. Info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: Rolf Mathison <rolf_mathison@hp.com>
Message-ID: <325D13DD.227A@hp.com>
Source record: 21313

> Rolf Mathison (rolf_mathison@hp.com) wrote:
> : John Boyer wrote:
> : >

> : >
> : > Try http://www.rig.org.uk/index.html
> : >
> : > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
> :
> : Regards,
> : Rolf
>
> Hi Rolf,
>
> Isn't that what I said?....
> Anyhow as the guy who maintains the RIG web pages I ought to know what
> the URL is, but you did get me worried about typos.
> ...
> Regards J.John,

You are ABSOLUTLY RIGHT...I should know better than to read the
newsgroups before I've had my first cup of coffee...
Sorry about the mixup.

Regarding the RIG web pages, it would be nice to have an index of
the articles in the RIG Journal. There is a lot of good info there.

Regards,
Rolf

2042. sarex freqs on mir ?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <53irt7$1f3@faatcrl.faa.gov>
Source record: 21314

The other night, 10/8 about 3am est, a MIR post was read over the air discussing a 9600 baud paket frequency set. The frequency's mentioned were 437.975/435.775, and 437.925/435.725 with a pl 141.3 (which I monitor every pass and have heard nothing). I know about the later but not the former. Anybody know anything about this ? If anyone hears anything on either set let me know.

73 Jeff kb2wqm@juno.com

2043. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610100900.CAA14983@UCSD.EDU>
Source record: 21315

```
From smtp Thu Oct 3 08:48 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 3 Oct 96 08:48 PDT
Received: by mail.ucsd.edu; id EAA17872
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:44 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17857
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:42 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2876
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610031130.EAA17857@mail.ucsd.edu>
Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #305
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?
```

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

2044. unsubscribe

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: ea1rup@arrakis.ES
Message-ID: <325D6A20.7887@arrakis.es>
Source record: 21316

```
unsub ea1rup@arrakis.es ham-space
```

2045. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610100855.BAA14811@UCSD.EDU>
Source record: 21317

```
From smtp Wed Oct 2 12:10 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 2 Oct 96 12:10 PDT
Received: by mail.ucsd.edu; id EAA02956
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA02943
sendmail 8.6.12/UCSD-2.2-sun
Wed, 2 Oct 1996 04:30:36 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 19837
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610021130.EAA02943@mail.ucsd.edu>
Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #304
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#

Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny
Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite
dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme
server). Whenever anything interesting is happening, the poor web site at the
Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero,
rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

The best thing to do is get a local amateur radio club to retransmit the
shuttle audio via a local repeater, and even better would be to also

transmit amateur television.

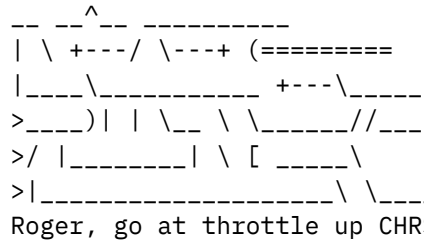
As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM
Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433

```
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #297
******************************

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Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

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```

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking that this fellow has fallen from his rocker and can't get up. Nope, it's time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on all the analog birds, especially AO-13. It will be held the third weekend of this month starting at 0001 Saturday going until 2359 Sunday. All times are local and there will be some activity starting Friday afternoon and finishing Monday morning because of DX. If you want more info or set a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer running Windows95. On my piece of antique I was using STSOrbit and Traksat for my modest satellite activity (RS satellites and NOAA reception). With my new machine I'd like to use a satellite tracking program that works under Windows. I've been told about Logsat and WISP. Has anyone out there had any experience with them? Do you have any others you can suggest? I'm looking for either shareware programs or commercial ones (if they are worth the price). Any comments are welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the 0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ was busy with an experiment at the time. Alexander told me the conditions are nice and warm on MIR. Temp between 70 and 75 degrees F and they have having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

2046. Ham-Space Digest V96 #318

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610101832.SAA15048@relay2.geis.com>
Source record: 21318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2047. Re: logsat

Newsgroup: rec.radio.amateur.space
Date: 1996-10-10 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbb670$1c01e820$068067ce@miseno.netwide.net>
Source record: 21319

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not made to be understandable by man, that's why we also assign NAMES to the satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 & ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01 & gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in telecommunications and you're tracking Gorizon-14 & Intelsat-601 & Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not going to know the satellites by catalog number, you're going to recognize them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object
number for identification of data. Don't look at the names, but just
write the names in the keplerset file just as the other data is written.
You will never have a double name because each object number can be present
only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.
>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This

is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>
> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

2048. Ham-Space Digest V96 #319

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610110133.BAA08864@relay2.geis.com>
Source record: 21222

GE Item Number: 9865682
Original Msg Id: 395705
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #319
System: MARLBORO#
Date: Fri 11-Oct-96 1:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2049. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610110856.BAA19300@UCSD.EDU>
Source record: 21223

```
From smtp Thu Oct 3 08:48 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 3 Oct 96 08:48 PDT
Received: by mail.ucsd.edu; id EAA17872
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:44 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA17857
sendmail 8.6.12/UCSD-2.2-sun
Thu, 3 Oct 1996 04:30:42 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 2876
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610031130.EAA17857@mail.ucsd.edu>
Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #305
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?
```

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

2050. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610110856.BAA19309@UCSD.EDU>
Source record: 21224

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)

Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2051. Re: Visual MIR sighting

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: ken.thompson_at_symbios.com@no.spam
Message-ID: <ken.thompson_at_symbios.com.1417.000E37E1@no.spam>
Source record: 21225

In article <325AF750.45B4@imagin.net> "Brian E. Oakley" <boakley@imagin.net> writes:
>From: "Brian E. Oakley" <boakley@imagin.net>
>Subject: Visual MIR sighting
>Date: Wed, 9 Oct 1996 00:52:32 GMT

>Had very good visual MIR sighting in early twinight in DFW area, passing
>from S to NW.

I do not think so. MIR does not track that way. It moves toward the East
around the world, not West.

2052. Ham-Space Digest V96 #320

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610112333.XAA02453@relay2.geis.com>
Source record: 21226

GE Item Number: 77032
Original Msg Id: 395972
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #320
System: MARLBORO#
Date: Fri 11-Oct-96 23:26

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2053. About KPC-3 TNC ???

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: petronet@sovam.com
Message-ID: <53m80m$6na@news.sovam.com>
Source record: 21227

Hello!
I am need information about KPC-3 TNC.
E-mail, please.
Thanks
73! Konstantin, RK1NA ex UN1CD

2054. Re: RS-12 KEPS problem ? *repeat* (no answers)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-11 00:00:00 UTC
From: mbv@flash.net
Message-ID: <53mhnm$fcl@excelsior.flash.net>
Source record: 21228

In article <53b49r$b05@tilde.csc.ti.com>, mbv@ti.com says...
>
> RS-12 AOS and LOS seems to be about 10 minutes earlier than
>my KEPS (TLE876) indicate. The computer clock is correct.
>The old KEPS are about 10 minutes fast too.
> Is there something wrong with the KEPS? What else could it
>be?
>
>Ken K5MBV
>

2055. Ham-Space Digest V96 #321

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610120531.FAA26034@relay2.geis.com>
Source record: 21229

GE Item Number: 1544075
Original Msg Id: 396299
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #321
System: MARLBORO#
Date: Sat 12-Oct-96 5:34

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2056. Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: marty@trucom.com
Message-ID: <53ncln$6jg@thepit.trucom.com>
Source record: 21230
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Hello, Folks:

I have just put up my new home page and invite all to drop in for a look. Included at the site are the following areas:

Ham Radio -- Mostly packet, mostly high speed

Pipe Smokers -- Very, very much still under construction

Astronomy -- Mostly Amateur Radio Astronomy (good 2nd interest for Hams!)

Mapping -- Mostly about elevation maps

Heartland Internet Services -- Lots of Web Presence information

The URL to use is:

http://www.trucom.com/ppages/marty

Thanks!

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
If you're making too much money, don't go here!
http://www.adgrafix.com/info/calbertjr/sales.html
****

2057. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610120856.BAA01580@UCSD.EDU>
Source record: 21231

```
From smtp Thu Oct 10 11:03 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 10 Oct 96 11:03 PDT
Received: by mail.ucsd.edu; id GAA21005
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 06:10:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11518
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 04:32:55 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15006
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610101132.EAA11518@mail.ucsd.edu>
Date: Thu, 10 Oct 96 04:32:54 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #318
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 318

Today's Topics:
ARLK073 Keplerian data
Ham-Space Digest V96 #316
Ham-Space Digest V96 #317
Info on Mir crew activities? (2 msgs)
KC5TZQ active on MIR tonight
Phase III D- When?? (2 msgs)
TCP/IP Telecomunications (2 msgs)
Visual MIR sighting
Weather Sat. Info (3 msgs)

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 8 Oct 1996 18:31:30 -0400
From: w1aw@arrl.org
Subject: ARLK073 Keplerian data

SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073

Date: 9 Oct 96 19:32:15 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #316

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 9 Oct 96 20:27:54 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #317

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 08 Oct 1996 23:56:03 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Info on Mir crew activities?

Does anybody on the group know, or know where I can obtain an indication
of the daily schedule of the Mir crew? What I am trying to determine is
the times that would be likely and/or unlikely for a voice QSO,
corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a
7-11, the doors are never locked :-), or do they all sleep and eat at the
same time each day. Do they operate on a 24 hour rotating schedule, or
is their day shorter or longer? In other words, a couple of weeks ago, I
heard John Blaha telling somebody in a QSO that he was having a lunch
break, at about 07:15 EDT (my time.) Is it safe to assume that their
lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

Date: 9 Oct 1996 10:34:06 GMT
From: dhend@cyberportal.net
Subject: Info on Mir crew activities?

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up
late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill
about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do
exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio
while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six

people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 9 Oct 1996 07:24:48 GMT
From: "BJ Arts" <bjarts@uslink.net>
Subject: KC5TZQ active on MIR tonight

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

Date: 9 Oct 1996 19:52:36 -0400
From: philbada@aol.com (PhilBada)
Subject: Phase III D- When??

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

Date: Wed, 09 Oct 1996 19:24:56 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: Phase III D- When??

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

Date: Wed, 09 Oct 96 10:45:48 GMT
From: irucal@mail.cccis.ro (Alexandru Liviu Iruc)
Subject: TCP/IP Telecomunications

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

Date: Wed, 09 Oct 1996 22:44:11 GMT
From: ka8okh@som-uky.campus.mci.net (Rich Dailey, KA8OKH)
Subject: TCP/IP Telecomunications

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

Date: Wed, 9 Oct 1996 00:52:32 GMT
From: "Brian E. Oakley" <boakley@imagin.net>
Subject: Visual MIR sighting

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

Date: Tue, 08 Oct 1996 23:19:56 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Weather Sat. Info

I'm looking for information on weather sats (NOAA 12 & 14). I've
looked at NOAA's pages and didn't find them real handy. Does anyone
know of any web pages or other sources of info on the net where I
could find out more about these satellites? I am wanting to know
what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

Date: Wed, 09 Oct 1996 08:27:53 -0700
From: Rolf Mathison <rolf_mathison@hp.com>
Subject: Weather Sat. Info

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

Date: 10 Oct 1996 06:52:43 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :

: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

Date: (null)
From: (null)

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631

```
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
```

```
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #318
******************************
```

2058. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610120857.BAA01622@UCSD.EDU>
Source record: 21232

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

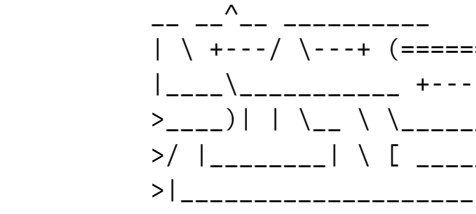
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2059. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610120858.BAA01646@UCSD.EDU>
Source record: 21233

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)

Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

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From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2060. Re: KC5TZQ active on MIR tonight

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: scederas@intercenter.net
Message-ID: <325f1a69.1253520@news.intercenter.net>
Source record: 21234

On 9 Oct 1996 07:24:48 GMT, "BJ Arts" <bjarts@uslink.net> wrote:

>John was very active during the tow passes i listened to. I worked him on
>the 0700utc pass over North America. I was using and FT-736 and a 160 2
>meter brick into a 1/4 wave vert. John likes to talk about baseball and
>astronomy. The passes seem to be very active over the US and Canada during
>the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during
>these time periods. 73 de BJ Arts WT0N
>
Thanks for posting his call. I was not sure what it was. I
heard him talking about his daughter in Indiana or something like that
during a pass early Friday A.M. around 2:40am EST

Who is John? I guess he is an american onboard MIR???

Also ... what is the QSL information for MIR....I connected and left a
hello message via packet on ROMIR.

Also what is the UHF frequencies for MIR and what are they supposed to
be used for.

2061. Accepted Ham-Space Digest V96 #323

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: REQSVR@gw.ab6qv.ampr.ORG
Message-ID: <10245@gw.ab6qv.ampr.org>
Source record: 21235

```
Welcome to the TNOS Request Server (REQSVR) release 1.01b1

The current version of REQSVR is a sub-set of the standard REQDBF commands
with extensions to support group message distribution. You send a command
to REQSVR by sending a message to REQSVR@gw.ab6qv.ampr.org. The desired
command is given as the subject for the message. Only the Upload command
has any data, so all other types have a blank body for the message.
The response from the server will return the same subject line, following
a status description. If no errors are found, this will be "Accepted",
followed by your REQSVR command.
The valid commands are:

H[elp] (or I[nfo]) Returns this document.

W[hat] [dir|file] Returns a directory of the desired directory
or files. Wildcards are allowed. If no dir/filesp
is given, the root directory is used. You must have
permission to view the dir/files requested.

D[ownload] filename Retrieves (Downloads) a copy of the file named
'filename' from the server. You must have
permission to read that file.

U[pload] filename Sends (Uploads) a file named 'filename' to
the server. You must have permission to write
that file.

V[ersion] Returns the current version of TNOS running on
the server system.

INFOR[m] dir|file This command asks REQSVR on the server to
inform you of all changes made to the specified
file. This will not send you the file but rather a
message telling you that the file has been changed.
You can then decide if you wish to request a new
copy of that file from the server. You must have
permission to read that file. You may also request
to be informed of all changes to any file in a
directory by giving a directory name.

To cancel an INFORM use UNINFORM.

UNI[nform] dir|file This command cancels an existing INFORM request
on the server. This command will be accepted
by any server that has accepted the INFORM request.
(Be sure to send this to the server that is sending
you the INFORM notices)
```

S[ubscribe] dir|file This command asks REQSVR on the server to send
you a copy of 'filenm' each time it is changed by
REQSVR. You must have permission to read that file.
You may also request to be sent a copy of all files
changes in a directory by giving a directory name.

Subscribe's may be cancelled with the UNSUBSCRIBE
request.

UNS[ubscribe] dir|file This command cancels an existing SUBSCRIBE request
on the server. This command will be accepted by
any server that has accepted the SUBSCRIBE request.
(Be sure to send this to the server that is sending
you the INFORM notices)

G[roup] action [name] This command supports the TNOS function of
distribution groups. A distribution group works
like an alias, or more accurately, like an Internet
mail-group. The group "action" is executed on the
destination server. All users are permitted the
following actions:

G[roup] S[ubscribe] groupname
Adds yourself to the mail group, "groupname"

G[roup] U[nsubscribe] groupname
Removes yourself from mail group, "groupname"

G[roup] L[ist]
Send you a message back with a listing of the
current mail groups on the destination server.

The following actions are available only to those
who have SYSOP permissions on the destination server:

G[roup] I[nform] groupname
Allows you to be informed of new members to
the mail group, "groupname"

G[roup] UNI[nform] groupname
Stops informing you of new members to the
mail group, "groupname"

G[roup] A[dd] groupname
Creates a new mail group, "groupname"

G[roup] D[elete] groupname
Deletes an existing mail group, "groupname"

Q[th] callsign Returns callbook infomation for the ham call
"callsign".

ERROR STATUS DESCRIPTIONS:

Not Found xxxx The HELP/INFO file was not found on the server's
system.

Denied xxxx You do not have proper permission on the server's
system to complete the desired action. This can
come in response to a W, D, or U command.

IO Error xxxx There was an IO error on the server's system. This
is most probably caused by an invalid filename.
This can come in response to a W, D, or U command.

Unknown xxxx This comes back to you if you requested a command
that the server's system does not recognize.

If one of the above Error Status Descriptions are generated, the Mail Daemon
sends the original message back to the requestor and a message is send to
the SYSOP of the server system. The original message is stored on the server
system for the SYSOP's examination.

2062. want:UT-10 for TS-790A

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: Mark Hammond <hammond@camel.campbell.edu>
Message-ID: <325F8DA2.6AE3@camel.campbell.edu>
Source record: 21236
Cross-posted to: rec.radio.swap,rec.radio.amateur.space,rec.radio.amateur.equipment

Hi all,

I'm interested in purchasing the UT-10 1.2GHz module for the Kenwood TS-790A. If you have one you'd like to sell, please contact me directly.

Thanks,

Mark, KC4EBR

hammond@camel.campbell.edu

2063. Re: sarex freqs on mir ?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <53o26l$r3b@news.mhv.net>
Source record: 21237

In article <53irt7$1f3@faatcrl.faa.gov>, Jeff Griffin <griffinj@admin.tc.faa.gov> wrote:
>The other night, 10/8 about 3am est, a MIR post was read over
>the air discussing a 9600 baud paket frequency set. The
>frequency's mentioned were 437.975/435.775, and 437.925/435.725
> with a pl 141.3 (which I monitor every pass and have heard
>nothing). I know about the later but not the former. Anybody
>know anything about this ? If anyone hears anything on either
>set let me know.
>
>73 Jeff kb2wqm@juno.com

The first set of freqs is Mir packet. There's a 2.2 gig split.
The second set of freqs is voice mode with a 2.2 gig split and 141.3 tone.
I haven't used either yet but I hear the voice repeater has been active.

73 De Tom - KB2SMS

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2064. Ham-Space Digest V96 #323

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610121334.NAA24089@relay2.geis.com>
Source record: 21238

GE Item Number: 6184605
Original Msg Id: 396400
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #323
System: MARLBORO#
Date: Sat 12-Oct-96 13:33

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2065. Re: Phase III D- When??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: philbada@aol.com
Message-ID: <53o72q$egh@newsbf02.news.aol.com>
Source record: 21239

No, I figured that the loss of that spacecraft put a kink in the plans, but I didn't know to what extent. Does anyone know if the satellite is ready to go and just waiting to improve the Ariane 5, or are they still finishing up details on the satellite?
Thanks!
Phil -N8QDK

2066. subscribe

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: PhilBada@aol.COM
Message-ID: <961012094746_124913278@emout02.mail.aol.com>
Source record: 21240

```
subscribe
```

2067. Ham-Space Digest V96 #322

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610121431.OAA04891@relay2.geis.com>
Source record: 21241

GE Item Number: 2007808
Original Msg Id: 396404
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #322
System: MARLBORO#
Date: Sat 12-Oct-96 14:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2068. Ham-Space Digest V96 #324

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610121631.QAA27069@relay2.geis.com>
Source record: 21242

GE Item Number: 3361665
Original Msg Id: 396434
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #324
System: MARLBORO#
Date: Sat 12-Oct-96 16:33

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2069. ARLK074 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-12 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk074.1996@arrl.org>
Source record: 21243
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK074
ARLK074 Keplerian data

ZCZC SK74
QST de W1AW
Keplerian Bulletin 74 ARLK074
From ARRL Headquarters
Newington, CT October 12, 1996
To all radio amateurs

SB KEP ARL ARLK074
ARLK074 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96284.90104406 .00000030 00000-0 16044-4 0 02702
2 18129 82.9230 62.9998 0010672 188.2892 171.8089 13.72370055466041
UO-11
1 14781U 84021B 96284.95877100 .00000129 00000-0 29538-4 0 09399
2 14781 97.8085 270.5897 0012724 77.7175 282.5455 14.69486570674657
RS-12/13
1 21089U 91007A 96285.54830064 .00000047 00000-0 33926-4 0 9243
2 21089 82.9212 103.0571 0027921 270.8991 88.8964 13.74073952285010
AO-13
1 19216U 88051B 96285.45458926 .00109163 -10848-5 54824-3 0 2990
2 19216 57.0827 85.8225 7414740 53.0081 354.3254 2.16883497 32306
UO-14
1 20437U 90005B 96284.71618517 -.00000039 00000-0 15825-5 0 02234
2 20437 98.5395 5.5398 0010376 221.0340 139.0073 14.29933044350567
RS-15
1 23439U 94085A 96284.84391887 -.00000039 00000-0 10000-3 0 01746
2 23439 64.8170 196.0442 0157903 178.6239 181.5096 11.27528661073825
AO-16
1 20439U 90005D 96285.29938898 -.00000007 00000-0 14295-4 0 149
2 20439 98.5511 8.5354 0010836 220.2956 139.7421 14.29986208350664
```

```
DO-17
1 20440U 90005E 96284.82036320 -.00000016 00000-0 10714-4 0 00151
2 20440 98.5571 8.7697 0010829 220.6586 139.3759 14.30128100350626
WO-18
1 20441U 90005F 96282.78369204 -.00000043 00000-0 10573-7 0 00364
2 20441 98.5566 6.6950 0011351 227.7229 132.2992 14.30096654350330
LO-19
1 20442U 90005G 96284.72968984 -.00000020 00000-0 92565-5 0 00264
2 20442 98.5593 9.1534 0011603 222.6999 137.3292 14.30207388350635
FO-20
1 20480U 90013C 96285.08529588 -.00000022 00000-0 27140-4 0 09298
2 20480 99.0231 287.8936 0540306 221.7717 134.0928 12.83234408312758
AO-21
1 21087U 91006A 96284.96500213 .00000093 00000-0 82657-4 0 07496
2 21087 82.9390 236.0047 0033771 244.5373 115.2286 13.74573573285917
UO-22
1 21575U 91050B 96285.12043752 -.00000033 00000-0 32427-5 0 07414
2 21575 98.3401 347.9888 0007000 281.9086 78.1309 14.37038536274714
KO-23
1 22077U 92052B 96285.09963822 -.00000037 00000-0 10000-3 0 06469
2 22077 66.0787 306.7669 0015413 269.7412 90.1838 12.86298274195717
KO-25
1 22828U 93061F 96284.72404871 -.00000001 00000-0 17073-4 0 04868
2 22828 98.5683 358.3906 0009524 236.9137 123.1128 14.28154441126605
IO-26
1 22826U 93061D 96285.12067800 -.00000051 00000-0 -32019-5 0 05065
2 22826 98.5707 358.7110 0008386 257.0749 102.9472 14.27814261158546
AO-27
1 22825U 93061C 96285.20327765 -.00000036 00000-0 28895-5 0 5072
2 22825 98.5718 358.6083 0007941 255.5687 104.4614 14.27705312158546
FO-29
1 24278U 96046B 96284.71658461 -.00000026 00000-0 71080-5 0 00233
2 24278 98.5767 353.5335 0352082 112.1662 251.7225 13.52625965007389
Mir
1 16609U 86017A 96285.38545830 .00002536 00000-0 34275-4 0 7124
2 16609 51.6544 258.4609 0012412 261.1976 98.7580 15.62145120608160

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
October 15, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

2070. Re: Info on Mir crew activities?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: g3vzv <hj37@dial.pipex.com>
Message-ID: <3260C77A.558@dial.pipex.com>
Source record: 21244

dhend@cyberportal.net wrote:
>
> > KD1YV <jimkd1yv@ix.netcom.com> writes:
> > Does anybody on the group know, or know where I can obtain an indication

Overhearing the AMSTA UK net today it was reported that a message from
MIR stated that they now work on GMT(UTC) and go to bed at 22.00GMT

not sure what time they get up though.

73's

Graham G3VZV

2071. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610130903.CAA20301@UCSD.EDU>
Source record: 21245

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)

Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2072. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610130857.BAA20129@UCSD.EDU>
Source record: 21246

```
From smtp Thu Oct 10 11:03 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 10 Oct 96 11:03 PDT
Received: by mail.ucsd.edu; id GAA21005
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 06:10:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11518
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 04:32:55 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15006
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610101132.EAA11518@mail.ucsd.edu>
Date: Thu, 10 Oct 96 04:32:54 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #318
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 318

Today's Topics:
ARLK073 Keplerian data
Ham-Space Digest V96 #316
Ham-Space Digest V96 #317
Info on Mir crew activities? (2 msgs)
KC5TZQ active on MIR tonight
Phase III D- When?? (2 msgs)
TCP/IP Telecomunications (2 msgs)
Visual MIR sighting
Weather Sat. Info (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 8 Oct 1996 18:31:30 -0400
From: w1aw@arrl.org
Subject: ARLK073 Keplerian data

SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073

Date: 9 Oct 96 19:32:15 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #316

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 9 Oct 96 20:27:54 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #317

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 08 Oct 1996 23:56:03 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Info on Mir crew activities?

Does anybody on the group know, or know where I can obtain an indication
of the daily schedule of the Mir crew? What I am trying to determine is
the times that would be likely and/or unlikely for a voice QSO,
corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a
7-11, the doors are never locked :-), or do they all sleep and eat at the
same time each day. Do they operate on a 24 hour rotating schedule, or
is their day shorter or longer? In other words, a couple of weeks ago, I
heard John Blaha telling somebody in a QSO that he was having a lunch
break, at about 07:15 EDT (my time.) Is it safe to assume that their
lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

Date: 9 Oct 1996 10:34:06 GMT
From: dhend@cyberportal.net
Subject: Info on Mir crew activities?

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up
late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill
about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do
exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio
while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six

people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 9 Oct 1996 07:24:48 GMT
From: "BJ Arts" <bjarts@uslink.net>
Subject: KC5TZQ active on MIR tonight

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

Date: 9 Oct 1996 19:52:36 -0400
From: philbada@aol.com (PhilBada)
Subject: Phase III D- When??

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

Date: Wed, 09 Oct 1996 19:24:56 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: Phase III D- When??

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

Date: Wed, 09 Oct 96 10:45:48 GMT
From: irucal@mail.cccis.ro (Alexandru Liviu Iruc)
Subject: TCP/IP Telecomunications

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

Date: Wed, 09 Oct 1996 22:44:11 GMT
From: ka8okh@som-uky.campus.mci.net (Rich Dailey, KA8OKH)
Subject: TCP/IP Telecomunications

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

Date: Wed, 9 Oct 1996 00:52:32 GMT
From: "Brian E. Oakley" <boakley@imagin.net>
Subject: Visual MIR sighting

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

Date: Tue, 08 Oct 1996 23:19:56 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Weather Sat. Info

I'm looking for information on weather sats (NOAA 12 & 14). I've
looked at NOAA's pages and didn't find them real handy. Does anyone
know of any web pages or other sources of info on the net where I
could find out more about these satellites? I am wanting to know
what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

Date: Wed, 09 Oct 1996 08:27:53 -0700
From: Rolf Mathison <rolf_mathison@hp.com>
Subject: Weather Sat. Info

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

Date: 10 Oct 1996 06:52:43 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :

: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

Date: (null)
From: (null)

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631

```
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
```

```
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #318
******************************
```

2073. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610130900.CAA20262@UCSD.EDU>
Source record: 21247

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

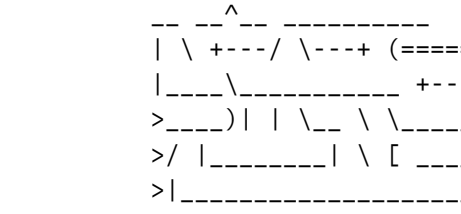
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2074. Ham-Space Digest V96 #325

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610131531.PAA05820@relay2.geis.com>
Source record: 21248

GE Item Number: 7535088
Original Msg Id: 396579
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #325
System: MARLBORO#
Date: Sun 13-Oct-96 15:33

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2075. Phase IIID Timing

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: Jon Niehof <jnieho38@Calvin.EDU>
Message-ID: <Pine.GSO.3.94.961013161304.7069A-100000@ursa>
Source record: 21249

When Ariane 501 went bang, Intelsat (I think), who
had 502, swapped with us (on 503), so we're on
502 in spring of '97. I heard that Amsat was using the
extra time well....
At any rate, we'll be on the first successful launch of
an Ariane 5. They pretty much figured out the prob with 501.

--Jon, N9RUJ
jnieho38@calvin.edu www.calvin.edu/~jnieho38

2076. What is polarization of Mir antenna?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: Bill VanRemmen <billy@frontiernet.net>
Message-ID: <3261AC0B.6A3E@frontiernet.net>
Source record: 21250

Does Mir use circular polarization or linear? If circular, which sense,
right-hand or left-hand? If linear, is there any particular orientation to the
antenna or does it vary?

--

-Bill VanRemmen, KA2WFJ
billy@frontiernet.net
http://www.frontiernet.net/~billy/

My opinions. No one in their right mind would claim otherwise.
==========
"Experience should teach us to be most on our guard to protect liberty
when the government's purposes are beneficient . . . the greatest
dangers to liberty lurk in insidious encroachment by men of zeal, well
meaning but without understanding."
Justice Louis Brandeis
Olmstead vs. United States,
United States Supreme Court, 1928
==========

2077. Re: sarex freqs on mir ?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <53qsfl$608@news.mhv.net>
Source record: 21251

In article <53o26l$r3b@news.mhv.net>, trandall@mhv.net wrote:

>
> The first set of freqs is Mir packet. There's a 2.2 gig split.
>The second set of freqs is voice mode with a 2.2 gig split and 141.3 tone.
>I haven't used either yet but I hear the voice repeater has been active.
>
>73 De Tom - KB2SMS

I of coarse meant a 2.2 MEG split..... (whoops!)

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2078. packet and Mir (help)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: baack@monet.umecut.maine.edu
Message-ID: <53pqi5$r7@service-2.agate.net>
Source record: 21252

What is trhe proper proceedure for contacting Mir utilizing Packet.
Currently, I am only getting the chanceto work Mir (evenings) when packet is running and not voice.
I have gotten a few "busy from R0MIR" messages..however I have seen Hams slip throught and connect with ease to the packet station.(looking in my monitor window)

What am I doing wrong? Or rather what is the trick that I am missing..:-)

Jason N1RWY
baack@midcoast.com

2079. Ham-Space Digest V96 #326

Newsgroup: rec.radio.amateur.space
Date: 1996-10-13 00:00:00 UTC
From: shipco-postmaster@geis.COM
Message-ID: <199610131832.SAA13614@relay2.geis.com>
Source record: 21253

GE Item Number: 533753
Original Msg Id: 396593
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #326
System: MARLBORO#
Date: Sun 13-Oct-96 18:35

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

2080. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610140902.CAA15098@UCSD.EDU>
Source record: 21254

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

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Any info on JAS-2?
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Subject: Any info on JAS-2?

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: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
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J.

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-Ralph Broom-

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kaleida@mbox.vol.it
tnx 73 -.-

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Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2081. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610140857.BAA14869@UCSD.EDU>
Source record: 21255

```
From smtp Thu Oct 10 11:03 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 10 Oct 96 11:03 PDT
Received: by mail.ucsd.edu; id GAA21005
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 06:10:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11518
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 04:32:55 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15006
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610101132.EAA11518@mail.ucsd.edu>
Date: Thu, 10 Oct 96 04:32:54 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #318
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 318

Today's Topics:
ARLK073 Keplerian data
Ham-Space Digest V96 #316
Ham-Space Digest V96 #317
Info on Mir crew activities? (2 msgs)
KC5TZQ active on MIR tonight
Phase III D- When?? (2 msgs)
TCP/IP Telecomunications (2 msgs)
Visual MIR sighting
Weather Sat. Info (3 msgs)

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 8 Oct 1996 18:31:30 -0400
From: w1aw@arrl.org
Subject: ARLK073 Keplerian data

SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073

Date: 9 Oct 96 19:32:15 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #316

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 9 Oct 96 20:27:54 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #317

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 08 Oct 1996 23:56:03 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Info on Mir crew activities?

Does anybody on the group know, or know where I can obtain an indication
of the daily schedule of the Mir crew? What I am trying to determine is
the times that would be likely and/or unlikely for a voice QSO,
corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a
7-11, the doors are never locked :-), or do they all sleep and eat at the
same time each day. Do they operate on a 24 hour rotating schedule, or
is their day shorter or longer? In other words, a couple of weeks ago, I
heard John Blaha telling somebody in a QSO that he was having a lunch
break, at about 07:15 EDT (my time.) Is it safe to assume that their
lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

Date: 9 Oct 1996 10:34:06 GMT
From: dhend@cyberportal.net
Subject: Info on Mir crew activities?

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up
late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill
about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do
exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio
while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six

people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 9 Oct 1996 07:24:48 GMT
From: "BJ Arts" <bjarts@uslink.net>
Subject: KC5TZQ active on MIR tonight

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

Date: 9 Oct 1996 19:52:36 -0400
From: philbada@aol.com (PhilBada)
Subject: Phase III D- When??

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

Date: Wed, 09 Oct 1996 19:24:56 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: Phase III D- When??

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

Date: Wed, 09 Oct 96 10:45:48 GMT
From: irucal@mail.cccis.ro (Alexandru Liviu Iruc)
Subject: TCP/IP Telecomunications

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

Date: Wed, 09 Oct 1996 22:44:11 GMT
From: ka8okh@som-uky.campus.mci.net (Rich Dailey, KA8OKH)
Subject: TCP/IP Telecomunications

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

Date: Wed, 9 Oct 1996 00:52:32 GMT
From: "Brian E. Oakley" <boakley@imagin.net>
Subject: Visual MIR sighting

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

Date: Tue, 08 Oct 1996 23:19:56 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Weather Sat. Info

I'm looking for information on weather sats (NOAA 12 & 14). I've
looked at NOAA's pages and didn't find them real handy. Does anyone
know of any web pages or other sources of info on the net where I
could find out more about these satellites? I am wanting to know
what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

Date: Wed, 09 Oct 1996 08:27:53 -0700
From: Rolf Mathison <rolf_mathison@hp.com>
Subject: Weather Sat. Info

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

Date: 10 Oct 1996 06:52:43 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :

: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

Date: (null)
From: (null)

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631

```
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
```

```
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #318
******************************
```

2082. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610140900.CAA14968@UCSD.EDU>
Source record: 21256

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

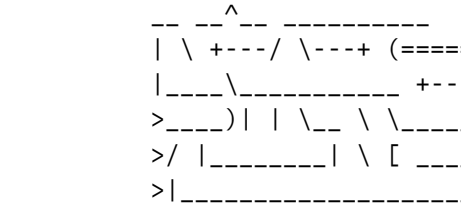
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2083. Re: packet and Mir (help)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <53tcaj$72a@news.monad.net>
Source record: 21257

> baack@monet.umecut.maine.edu (Jason Baack) writes:
> What is trhe proper proceedure for contacting Mir utilizing Packet.
> Currently, I am only getting the chanceto work Mir (evenings) when packet is
> running and not voice.
> I have gotten a few "busy from R0MIR" messages..however I have seen Hams slip
> throught and connect with ease to the packet station.(looking in my monitor
> window)
>
> What am I doing wrong? Or rather what is the trick that I am missing..:-)
>
> Jason N1RWY
> baack@midcoast.com
>
>
>>>>
You are asking for a long, long dissertation.
it is possible, it is not easy.
Most of the time that people get connected they simply blow the pass for other people.

first it is possible to connect with five watts and decent settings on your tnc
second it is not possible to (most of the time) to continue the connection due to
qrm(m=manmade).
third if you get connected and can't get an acknowledgement packet back you time out the
tnc making it
impossible for anyone else to connect usually for the rest of the pass. (The way the
cosmonauts have the
tnc set now it times out in about 90 seconds) allowing 3 to four timeouts per pass.
fourth the cosmonauts use the tnc to communicate with people on the ground (so jamming up
the tnc with messages to
your neighbor next door constantly becomes a problem for them). Please remember it is their
tnc how would you
like your mailbox filled with junk for your neighbor.
fifth when the packet is running and Mir is over the US is the only time anyone has a
chance to work Mir, so
obviously the limited availability is a problem for everyone..
sixth when someone is connected to the PMS sending constant requests to connect or jamming
up the frequency with
constant beacons or calling on voice (while the cosmonauts are asleep) or digipeating to
your next door neighbor
or beaconing aprs info constantly, IS CAUSING INTERFERENCE BY THE FCC DEFINITION.
seventh Everyone is entitled to contact the Mir space station's Personal Message Service.
and the Cosmonauts and
the astronauts love to hear from everyone, and it would be possible for all to leave
messages, EXCEPT FOR THE

CONSTANT INTERFERENCE.
eighth WITHOUT CONSTANT INTERFERENCE anyone with 50 watts and a ringo ranger would be able to connect, leave
a message, get a listing, and perhaps even get a message from an extra terrestrial..
ninth since the availability of the space station's pms is so short. please respect other people's wishes and make your
connect quick, and get it over with (it isn't always possible due to shifting polarization, qrn, etc) but don't list the pms
several times, read and reread the same message several times over, read everything in the box, get the Mheard listing
several times, etc (I know some of you hams aren't as nasty as the newsgroups imply)
tenth Operate wisely.. watch for someone to disconnect, (log out), timeout, before trying to connect, (you can't connect while
someone is in the mailbox) and be quick when the opportunity arises. Try to get others you see causing interference to stop.
Try to use your radio responsibly.
Learn how packet operates and make sure your station is set up to receive and transmit to weak stations, find a
distant packet node and improve your station until it can reliably use it, then find one more distant and try it..
eleventh On voice don't call unless you can hear. I constantly hear people calling for R0MIR when he is busy talking to
someone.. there is no better way of making sure your call will not be called.. The cosmonauts hate interference with
conversations they are having and several crews have shut the radio off because of just such INTERFERENCE.

twelfth Polish up that lucky charm.. because even if you are the best operator in the world and have the best station with the
most power, and have important news for our friends up there, luck still has to be with you.. many many extenuating
circumstances and external factors cause things to happen and you might not make it when you feel you have to.
Right now I have a message from Alex and I couldn't get connected to get it (I was a nice guy and let someone
with "traffic" go first) and didn't have enough time to read it after I sent my "traffic", and it may be killed before
I get a chance to read it, but that is the the nature of the beast. Don't get angry just have eternal patience..
Finally

I know from experience only 4 of 10 people will read 50% of this, and of them only 1 will listen to what I have said, so that
will leave 9 who continue operating badly, causing interference and so keeping many people from getting the chance to contact
the cosmonauts, the only way I know to help is to personally contact anyone who is causing interference and nicely tell them
that there is a better way to operate, give them assistance, help them to understand that is is only themselves and the
cosmonauts they are hurting..
Check out my Web page for further information Particularly the Mir files and information

link
Best Regards to you all
Good Luck
Dave N1PPP

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743 (FN33TJ)
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

2084. Space mail list kf9thdon@aol.com

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: dweast@most.fw.hac.COM
Message-ID: <9610141717.AA03005@ss2.uiv>
Source record: 21258

Please add me to your mailing list. Thanks. kf9thdon@aol.com (Don Easterday)

2085. sat. mods for mobiles?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: jdawdy@juno.com
Message-ID: <326294f0.0@206.103.128.3>
Source record: 21259

Does anyone have any information on useing dualband mobile
radios with the Uosat/Kitsat series of FM downlink sats?

I am particularly interested in mods for the TM-733 or FT-8500
that would aloow for compensation of doppler shift.

Please email reply to

jdawdy@juno.com

73
jim

2086. Re: sarex freqs on mir ?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: tkenny@qsun.ho.att.com
Message-ID: <32679486.18287598@nntpa.cb.lucent.com>
Source record: 21260

>In article <53irt7$1f3@faatcrl.faa.gov>, Jeff Griffin <griffinj@admin.tc.faa.gov> wrote:
>>The other night, 10/8 about 3am est, a MIR post was read over
>>the air discussing a 9600 baud paket frequency set. The
>>frequency's mentioned were 437.975/435.775, and 437.925/435.725
>> with a pl 141.3 (which I monitor every pass and have heard
>>nothing). I know about the later but not the former. Anybody
>>know anything about this ? If anyone hears anything on either
>>set let me know.
>>
>>73 Jeff kb2wqm@juno.com

Which frequency is the uplink and which is the downlink?

73, Tom Kenny KB2GLO

2087. WTB: LANDWEHR 70CM PREAMP

Newsgroup: rec.radio.amateur.space
Date: 1996-10-14 00:00:00 UTC
From: litigate@mi.net
Message-ID: <53udhc$em8_002@ts1-fctn-17.mis.ca>
Source record: 21261

Anyone have one of these they want to sell? de Rick VE9HF.

2088. ARLK075 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk075.1996@arrl.org>
Source record: 21171
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK075
ARLK075 Keplerian data

ZCZC SK75
QST de W1AW
Keplerian Bulletin 75 ARLK075
From ARRL Headquarters
Newington, CT October 15, 1996
To all radio amateurs

SB KEP ARL ARLK075
ARLK075 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96288.40061369 .00000018 00000-0 30543-5 0 2731
2 18129 82.9235 60.4132 0011062 177.3296 182.7921 13.72370007466526
UO-11
1 14781U 84021B 96287.95482330 .00000103 00000-0 25225-4 0 09334
2 14781 97.8089 273.4562 0012840 69.8078 290.4511 14.69487400675098
RS-12/13
1 21089U 91007A 96288.02408758 .00000068 00000-0 56187-4 0 09382
2 21089 82.9211 101.2206 0027853 263.8171 95.9811 13.74074327285354
AO-13
1 19216U 88051B 96285.91519983 .00101596 -11773-5 46851-3 0 03006
2 19216 57.0894 85.7391 7414631 53.2764 353.9857 2.16959022032315
UO-14
1 20437U 90005B 96288.07490662 -.00000020 00000-0 90511-5 0 02185
2 20437 98.5385 8.8317 0010454 209.5904 150.4673 14.29933627351041
RS-15
1 23439U 94085A 96287.85950412 -.00000039 00000-0 10000-3 0 01723
2 23439 64.8170 191.1684 0158016 178.0588 182.0968 11.27528668074165
AO-16
1 20439U 90005D 96287.74836621 .00000004 00000-0 18486-4 0 00256
2 20439 98.5514 10.9413 0010848 212.8937 147.1569 14.29986530351013
```

```
DO-17
1 20440U 90005E 96287.75884420 .00000017 00000-0 23354-4 0 00310
2 20440 98.5569 11.6580 0010871 211.9885 148.0635 14.30128682351041
WO-18
1 20441U 90005F 96287.75123211 -.00000000 00000-0 16628-4 0 00280
2 20441 98.5538 11.5764 0011484 212.1540 147.8944 14.30097485351049
LO-19
1 20442U 90005G 96288.08776696 .00000011 00000-0 21015-4 0 00220
2 20442 98.5584 12.4538 0011703 210.4424 149.6055 14.30207984351114
FO-20
1 20480U 90013C 96288.04813823 .00000047 00000-0 18035-3 0 09215
2 20480 99.0234 290.2932 0540366 215.0501 141.3895 12.83235340313131
AO-21
1 21087U 91006A 96287.94943979 .00000093 00000-0 82657-4 0 7497
2 21087 82.9384 233.7951 0033319 235.7768 124.0229 13.74573334286322
UO-22
1 21575U 91050B 96288.11443327 -.00000006 00000-0 12158-4 0 07359
2 21575 98.3396 350.8890 0006895 270.1372 89.9029 14.37039021275149
KO-23
1 22077U 92052B 96288.13189879 -.00000037 00000-0 10000-3 0 06324
2 22077 66.0783 300.4174 0015511 268.7364 91.1869 12.86298272196106
KO-25
1 22828U 93061F 96287.73664767 -.00000021 00000-0 88589-5 0 05026
2 22828 98.5685 1.3475 0009503 228.3945 131.6420 14.28154378127038
IO-26
1 22826U 93061D 96288.06391535 -.00000048 00000-0 -20495-5 0 05214
2 22826 98.5713 1.6002 0008321 248.4325 111.5956 14.27814218158961
AO-27
1 22825U 93061C 96288.07665627 -.00000015 00000-0 11319-4 0 05217
2 22825 98.5718 1.4269 0007851 246.9413 113.0940 14.27705621158952
FO-29
1 24278U 96046B 96288.11922209 -.00000036 00000-0 -32626-5 0 00421
2 24278 98.5765 356.4847 0352228 103.3957 260.6696 13.52625771007845
Mir
1 16609U 86017A 96288.52005873 .00002434 00000-0 33125-4 0 7176
2 16609 51.6552 242.6444 0012238 272.9642 86.9915 15.62164769608652

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 19, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

2089. microwave EME

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: craigivey@aol.com
Message-ID: <541936$q19@newsbf02.news.aol.com>
Source record: 21172

I'd like to get some info on working microwave EME. (Yeah, I know, EME is not as easy as it sounds.)

What would it take to use the microwave band(s) with EME?
How much power would I need?
Is the equipment readily avalible?

Please reply via e-mail.

Thanks,

Craig

CraigIvey@aol.com
KC5UMA

http://users.aol.com/craigivey/homepage.html
http://www2.apple.com/whymac/
http://www.evangelist.macaddict.com/

E-mail checked once daily at ~0100 UTC.

Do you believe in Macintosh? Join "EvangeList," for good news about Apple, Macintosh, and its third-party developers. To subscribe, email to: <listproc@solutions.apple.com> and in the body: Subscribe Macway <Your Name>

2090. NG Bloat thanks to "Daily Digest"

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.565.39@anjo.com>
Source record: 21173

It looks like some ninny at UCSD has decided to do us all the favour of preparing a "Daily Digest" of this NG. While such a digest may be useful to those who don't actually gt th NG, the digest is actually beeing posted back to r.r.a.s!

This mans that all NG articles re-appear a few days later in the "daily digest" and now, the digests themselves are apparing in later digests!

I've sent several pieces of e-mail to various addresses @ucsd.edu to no avail. True, I could just stick an entry in the kill-file, but surely there's a better way?

Does anyone have any suggestions?

73, de Gus 8P6SM
Barbados - The easternmost isle.

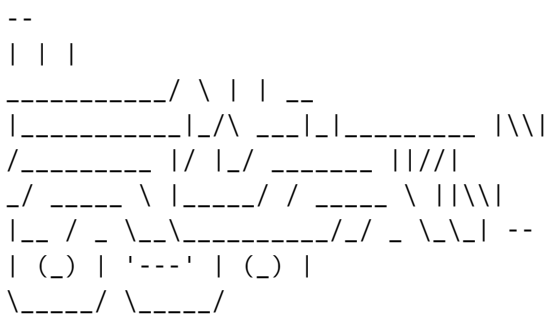
-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

2091. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: Larry Makoski <n2elw@worldnet.att.net>
Message-ID: <32645788.1C78@worldnet.att.net>
Source record: 21174

It seems that mode KT is in use with downlinks on both 2 meters and 10 meters. The transponder is always on as I have had lots of successful RS-12 contact over the weekends.

73 de N2ELW



"There's only one Jeep!"

n2elw@worldnet.att.net

2092. Re: KC5TZQ active on MIR tonight

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <53umfi$go5@paperboy.ids.net>
Source record: 21262

In article <325f1a69.1253520@news.intercenter.net> Sam Cederas,
scederas@intercenter.net writes:
> Thanks for posting his call. I was not sure what it was. I
>heard him talking about his daughter in Indiana or something like that
>during a pass early Friday A.M. around 2:40am EST

John's daughter goes to Purdue University in Indiana.

> Who is John? I guess he is an american onboard MIR???

John Blaha is an extremely experienced astronaut with four previous
shuttle missions, plus his ongoing stay aboard Mir. He's been there
about a month now. In January he is scheduled to be replaced by
astronaut Jerry Linenger.

>Also ... what is the QSL information for MIR....I connected and left a
>hello message via packet on ROMIR.

Dave Larsen, N6JLH, is the US Mir QSL manager for contacts made with Mir
crew members. QSL cards must include date, time, and mode of contact.
Cards
for SWL reports will not be handled by Dave. If a contact is made with
the
Mir packet radio personal message system (PMS), then the message number
issued by the PMS should be included on the QSL card.

QSLs must be sent along with a business-sized self-addressed stamped
envelope (the card will not fit in a regular-sized envelope).

QSLs should be sent to:
David G. Larsen, N6JLH
PO Box 1501
Pine Grove, CA 95665
USA

>Also what is the UHF frequencies for MIR and what are they supposed to
>be used for.

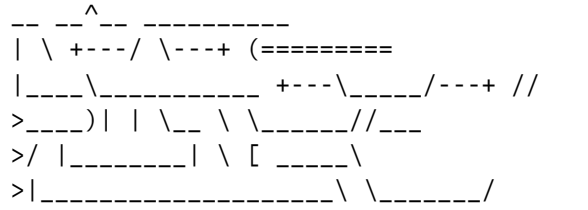
The following are the SAFEX 70 cm frequencies for the three SAFEX
operating Modes.

Mode 1: FM repeater with CTCSS subtone 141.3 Hz.
Downlink 437.950 MHz
Uplink 435.750 MHz
CTCSS

Mode 2: 9600 Baud (G3RUH compatible) Packet Operation.
Downlink 437.975 MHz

Uplink 435.775 Mhz
No CTCSS

Mode 3: Pre-recorded digital voice beacon, and may be used for contacts
with the Mir crew.
Downlink 437.925
Uplink 435.725
CTCSS

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

2093. APT Satellite recv.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: cloud78572@aol.com
Message-ID: <53v5ml$390@newsbf02.news.aol.com>
Source record: 21263

Does anyone know of any APT Shareware that actually works? I've tried SBDSP,FTV,and Channelx. They're supposed to work through the soundblaster (yeah,right).No luck...Not even close..JVFAX7.1 looks promising, but you have to build an interface that's more complicated than NOAA-14 itself ! Any ideas? I have AEAFAX2 with it's interface.I was thinking of building a simple op-amp 1800hz tone generator, and frequency modulating it with the audio from the satellite.This would fool the software into thinking it was decoding HF Fax. Is this possible? Any ideas for a schematic? Thanks.

2094. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610150858.BAA28556@UCSD.EDU>
Source record: 21264

```
From smtp Thu Oct 10 11:03 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 10 Oct 96 11:03 PDT
Received: by mail.ucsd.edu; id GAA21005
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 06:10:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11518
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 04:32:55 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15006
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610101132.EAA11518@mail.ucsd.edu>
Date: Thu, 10 Oct 96 04:32:54 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #318
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 318

Today's Topics:
ARLK073 Keplerian data
Ham-Space Digest V96 #316
Ham-Space Digest V96 #317
Info on Mir crew activities? (2 msgs)
KC5TZQ active on MIR tonight
Phase III D- When?? (2 msgs)
TCP/IP Telecomunications (2 msgs)
Visual MIR sighting
Weather Sat. Info (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 8 Oct 1996 18:31:30 -0400
From: w1aw@arrl.org
Subject: ARLK073 Keplerian data

SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073

Date: 9 Oct 96 19:32:15 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #316

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 9 Oct 96 20:27:54 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #317

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 08 Oct 1996 23:56:03 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Info on Mir crew activities?

Does anybody on the group know, or know where I can obtain an indication
of the daily schedule of the Mir crew? What I am trying to determine is
the times that would be likely and/or unlikely for a voice QSO,
corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a
7-11, the doors are never locked :-), or do they all sleep and eat at the
same time each day. Do they operate on a 24 hour rotating schedule, or
is their day shorter or longer? In other words, a couple of weeks ago, I
heard John Blaha telling somebody in a QSO that he was having a lunch
break, at about 07:15 EDT (my time.) Is it safe to assume that their
lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

Date: 9 Oct 1996 10:34:06 GMT
From: dhend@cyberportal.net
Subject: Info on Mir crew activities?

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up
late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill
about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do
exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio
while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six

people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 9 Oct 1996 07:24:48 GMT
From: "BJ Arts" <bjarts@uslink.net>
Subject: KC5TZQ active on MIR tonight

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

Date: 9 Oct 1996 19:52:36 -0400
From: philbada@aol.com (PhilBada)
Subject: Phase III D- When??

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

Date: Wed, 09 Oct 1996 19:24:56 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: Phase III D- When??

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

Date: Wed, 09 Oct 96 10:45:48 GMT
From: irucal@mail.cccis.ro (Alexandru Liviu Iruc)
Subject: TCP/IP Telecomunications

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

Date: Wed, 09 Oct 1996 22:44:11 GMT
From: ka8okh@som-uky.campus.mci.net (Rich Dailey, KA8OKH)
Subject: TCP/IP Telecomunications

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

Date: Wed, 9 Oct 1996 00:52:32 GMT
From: "Brian E. Oakley" <boakley@imagin.net>
Subject: Visual MIR sighting

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

Date: Tue, 08 Oct 1996 23:19:56 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Weather Sat. Info

I'm looking for information on weather sats (NOAA 12 & 14). I've
looked at NOAA's pages and didn't find them real handy. Does anyone
know of any web pages or other sources of info on the net where I
could find out more about these satellites? I am wanting to know
what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

Date: Wed, 09 Oct 1996 08:27:53 -0700
From: Rolf Mathison <rolf_mathison@hp.com>
Subject: Weather Sat. Info

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

Date: 10 Oct 1996 06:52:43 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :

: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

Date: (null)
From: (null)

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631

```
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
```

```
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #318
******************************
```

2095. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610150901.CAA28747@UCSD.EDU>
Source record: 21265

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

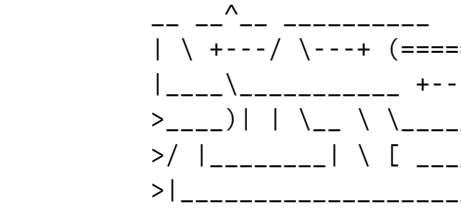
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2096. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610150904.CAA28772@UCSD.EDU>
Source record: 21266

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

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policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

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Date: 2 Oct 1996 10:01:49 GMT
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: think this is because of bad keps. At any rate, when I have heard it,
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:

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tnx 73 -.-

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From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2097. Re: APT Satellite recv.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <5407kd$j1r@service3.uky.edu>
Source record: 21267

In article <53v5ml$390@newsbf02.news.aol.com>, cloud78572@aol.com (Cloud78572) says:
>
> Does anyone know of any APT Shareware that actually works? I've tried
>SBDSP,FTV,and Channelx. They're supposed to work through the soundblaster
>(yeah,right).No luck...Not even close..JVFAX7.1 looks promising, but you
>have to build an interface that's more complicated than NOAA-14 itself !
>Any ideas? I have AEAFAX2 with it's interface.I was thinking of building a
>simple op-amp 1800hz tone generator, and frequency modulating it with the
>audio from the satellite.This would fool the software into thinking it was
>decoding HF Fax. Is this possible? Any ideas for a schematic? Thanks.

I have used FTV and had good results through an 8bit "value" SoundBlaster.
Currently I use WXSat(by Christian Bock). WXSat is a windows based program.
you can find it at "http://www.ourworld.compuserve.com/homepages/hffax"
(I think the WWW belongs in there).
JVFAX 7.0 has a "simple" front vco front end for the uA741 "converter".
It has been awhile since I built it but I think it used the EXAR 2201
ic. The "front end" has an isolation transformer, a full wave bridge
and the vco. Worked pretty good. But regardless of what demodulator
program (either hardware or software) you have to have a good clean signal
(ie good antenna with a preamp) and the reciever should have the proper
IF bandwidth. While I got results that were good enough to keep me going
with a diskcone, and a stock Pro2004 (in the wfm mode), adding an antenna
designed for 137.5(with an ancient but good MOSFET preamp) and adding
and outboard IF strip (to get the proper bw) made the difference between
day and night. Even with a good clean signal, if the BW is too wide, your
signal still has a poor signal to noise ratio. (this shows up as "grain"
and compressed grey scale).
If JVFAX 7.1 does not have the VCO front end, email me and I will try to dig
the diagram out of my archive(a fancy name for the mess that passes as my
"library") and send it to you via email. JVFAX 7.0 has a transfer curve for
the front end and it is pretty linear. I did not expect it to work, but it
was so simple that I had to try. By adding a DPDT swith to the output of
bridge I had a way to instantly invert the "video".
BTW a proper antenna need not be expensive. My first 137.5 antenna
consisted of 2 dipoles (mounted at right angles) connected directly to the
preamp. (with no phasing harness) The phasing harness helped reduce the
"nulls" in the overhad pass.
Terry
As always, your mileage may varry.....

2098. Catalogs for Satelite equipment

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: tkenny@qsun.ho.att.com
Message-ID: <326aa5b6.88232293@nntpa.cb.lucent.com>
Source record: 21268

```
I'm a sat. newbie. Is there a FAQ or info some where containing a list
of dealers and distributors of amateur satelite equipment?

Thanks and 73, Tom Kenny KB2GLO

vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv
Tom Kenny KB2GLO Voice: 908-949-9704
EMail: tek@webspan.net URL: http://webspan.net/~tek
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

2099. Re: APT Satellite recv.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-15 00:00:00 UTC
From: Glenn Hansen <grhansen@worldnet.att.net>
Message-ID: <01bbbabf$9b679f80$fb8d93cf@ghansen.accesone.com>
Source record: 21269

Terry Fugate <Tfugate@pop.uky.edu> wrote=20

> I have used FTV and had good results through an 8bit "value" =
SoundBlaster.
> Currently I use WXSat(by Christian Bock). WXSat is a windows based =
program.
> you can find it at =
"http://www.ourworld.compuserve.com/homepages/hffax"
> (I think the WWW belongs in there).
Think again pal! :-) http://ourworld.compuserve.com/homepages/hffax=20
works better. Thanks for the info.

Glenn

2100. RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: elewis@dsp.com
Message-ID: <32644aad.2890642@news.wco.com>
Source record: 21175

What modes are used by RS-12 besides K mode, is KA or KT in use. Is the transponder on all the time, or is it limited to tuesday through friday.

2101. NORAD Two-Line Orbital Element Sets (TLE884)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <541amq$s5@blackbird.afit.af.mil>
Source record: 21176

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #884 -
Alouette 1
1 00424U 62049A 96288.59381460 .00000068 00000-0 69564-4 0 2351
2 00424 80.4630 165.9294 0023962 84.9107 275.4773 13.67878045698669
ATS 1
1 02608U 66110A 96275.53037873 -.00000228 00000-0 10000-3 0 9824
2 02608 14.5999 351.6930 0008772 102.8173 257.2862 1.00302163 25935
ATS 3
1 03029U 67111A 96286.36934699 -.00000111 00000-0 10000-3 0 5567
2 03029 14.9140 358.5315 0008547 259.8809 150.5214 1.00273173105941
Starlette
1 07646U 75010A 96283.49470908 -.00000129 00000-0 87447-5 0 39
2 07646 49.8295 57.6314 0205950 247.9720 109.9178 13.82191555 94772
LAGEOS
1 08820U 76039A 96284.79491113 .00000010 00000-0 00000+0 0 2305
2 08820 109.8477 65.6082 0043514 103.5246 257.0091 6.38664562221219
ETS-2
1 09852U 77014A 96286.27300028 -.00000169 00000-0 10000-3 0 796
2 09852 13.3738 31.5486 0006065 121.7303 238.3234 0.99999643 18813
GOES 2
1 10061U 77048A 96288.25741215 .00000058 00000-0 10000-3 0 7494
2 10061 12.5255 35.7154 0012091 122.2890 141.8356 1.00257015 15636
IUE
1 10637U 78012A 96287.39581903 -.00000183 00000-0 10000-3 0 2872
2 10637 35.6490 81.6627 1333407 60.9441 313.5935 1.00065795 21129
GOES 3
1 10953U 78062A 96288.18621080 -.00000118 00000-0 10000-3 0 7285
2 10953 11.5238 38.6555 0002241 143.3183 165.7140 1.00266710 20249

```
SeaSat 1
1 10967U 78064A 96287.40537830 -.00000028 00000-0 35344-4 0 5226
2 10967 107.9940 59.3450 0002525 244.7445 115.3435 14.38126752958446
Nimbus 7
1 11080U 78098A 96286.63662853 -.00000030 00000-0 10021-4 0 6193
2 11080 98.9237 143.0648 0009583 13.6414 346.4997 13.83690430907410
GOES 5
1 12472U 81049A 96285.47315102 .00000102 00000-0 10000-3 0 9550
2 12472 8.3768 49.0119 0006611 75.4945 284.6060 1.00262769 14264
Cosmos 1383
1 13301U 82066A 96286.85597338 .00000020 00000-0 69267-5 0 5352
2 13301 82.9295 47.5165 0026260 277.6132 82.2038 13.68077278713460
LandSat 4
1 13367U 82072A 96286.58596064 .00000007 00000-0 11410-4 0 105
2 13367 98.0604 333.8568 0007802 127.3545 232.8366 14.57185278757635
DMSP B5D2-1
1 13736U 82118A 96288.52563226 .00000045 00000-0 37404-4 0 1010
2 13736 98.6223 114.9915 0009374 42.8908 317.3001 14.25806885718071
IRAS
1 13777U 83004A 96289.06152415 -.00000262 00000-0 -15037-3 0 4613
2 13777 98.9676 112.0284 0012726 124.0683 236.1690 13.99254449370133
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AO-13
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S80/T
1 22078U 92052C 96287.09756763 -.00000037 00000-0 10000-3 0 6095
2 22078 66.0814 300.9653 0016871 267.9978 91.9104 12.86582594196069
GPS BIIA-15
1 22108U 92058A 96288.06128863 .00000005 00000-0 10000-3 0 7924
2 22108 53.9853 222.6290 0120113 164.6476 195.7224 2.00568816 29976
FREJA
1 22161U 92064A 96286.11464956 .00000188 00000-0 99930-4 0 6561
2 22161 62.9829 304.4144 0850391 27.7734 336.6116 13.21913135193880
LAGEOS II
1 22195U 92070B 96286.12347594 -.00000009 00000-0 10000-3 0 5320
2 22195 52.6538 277.7538 0137161 127.8279 233.4782 6.47293997 93843
GPS BIIA-16
1 22231U 92079A 96287.74423748 .00000048 00000-0 00000+0 0 8112
2 22231 54.6771 164.9871 0036517 282.0604 77.6096 2.00567070 28543
GPS BIIA-17
1 22275U 92089A 96287.86534009 .00000050 00000-0 00000+0 0 8097
2 22275 54.6580 162.4459 0053487 252.3390 107.1978 2.00587212 27953
TDRS 6
1 22314U 93003B 96284.39984551 -.00000288 00000-0 10000-3 0 6653
2 22314 0.0110 4.4171 0000752 184.6854 286.9873 1.00264102 13736
GPS BIIA-18
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1 22446U 93007A 96287.96524897 -.00000008 00000-0 10000-3 0 7934
2 22446 54.1270 282.3410 0091274 3.7344 356.3345 2.00577128 26945
Glonass 59
1 22512U 93010A 96284.20347660 .00000039 00000-0 10000-3 0 8289
2 22512 65.2030 80.3313 0008488 179.7063 180.3098 2.13102230 28147
Glonass 60
1 22513U 93010B 96285.54931562 .00000036 00000-0 00000+0 0 9797
2 22513 65.2011 80.2929 0007469 183.8576 176.1471 2.13102747 28367
Glonass 61
1 22514U 93010C 96285.84335759 .00000036 00000-0 00000+0 0 9764
2 22514 65.2221 80.2797 0011013 180.5068 179.5019 2.13102049 28375
ASTRO-D
1 22521U 93011A 96285.49836710 .00000981 00000-0 62034-4 0 5290
2 22521 31.1042 43.4059 0055997 241.7948 117.7027 15.03096811199985
UFO F1
1 22563U 93015A 96288.00000000 -.00000051 00000-0 00000+0 0 5328
2 22563 25.1001 286.7452 0010526 269.1279 205.5315 0.99252209 17257
GPS BIIA-19
1 22581U 93017A 96287.11287443 -.00000049 00000-0 10000-3 0 5916
2 22581 55.1755 343.2503 0068579 43.1116 317.4954 2.00552212 25985
GPS BIIA-20
1 22657U 93032A 96288.23905872 -.00000048 00000-0 10000-3 0 7409
2 22657 55.1680 343.0343 0127115 274.1918 84.3936 2.00566759 21330
RADCAL
1 22698U 93041A 96285.95903161 .00000015 00000-0 12258-5 0 5241
2 22698 89.5376 265.3019 0090666 307.3966 51.8969 14.21380754171017
GPS BIIA-21
1 22700U 93042A 96284.21680468 -.00000028 00000-0 10000-3 0 5972
2 22700 54.1636 223.6273 0052550 0.1517 359.8340 2.00561121 24055
NOAA 13
1 22739U 93050A 96288.90179636 .00000005 00000-0 28140-4 0 1743
2 22739 99.0563 245.0192 0009080 246.0786 113.9422 14.10973988163934
GPS BIIA-22
1 22779U 93054A 96288.28787649 -.00000006 00000-0 10000-3 0 6620
2 22779 54.2780 282.4037 0015934 274.5149 85.3044 2.00547623 22899
Meteor 2-21
1 22782U 93055A 96289.22158010 .00000110 00000-0 86712-4 0 5194
2 22782 82.5444 251.9957 0023168 5.2110 354.9292 13.83062396157724
UFO F2
1 22787U 93056A 96289.15016204 -.00000067 00000-0 00000+0 0 6835
2 22787 4.0121 327.5592 0003836 233.3644 308.4107 1.00274939 10036
SPOT 3
1 22823U 93061A 96286.56784603 -.00000044 00000-0 00000+0 0 6047
2 22823 98.7552 358.5113 0001220 74.3861 285.7450 14.20014319157891
STELLA
1 22824U 93061B 96289.20932613 -.00000074 00000-0 -12431-4 0 5069
2 22824 98.5698 1.8435 0005547 243.4535 116.6079 14.27105298159052
AO-27
1 22825U 93061C 96285.20327765 -.00000036 00000-0 28895-5 0 5072
2 22825 98.5718 358.6083 0007941 255.5687 104.4614 14.27705312158546
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IO-26
1 22826U 93061D 96288.76468623 -.00000041 00000-0 11108-5 0 5060
2 22826 98.5715 2.2886 0008320 245.6432 114.3882 14.27814246159069
HEATHSAT
1 22827U 93061E 96289.23170180 .00000012 00000-0 22389-4 0 5689
2 22827 98.5711 2.6473 0008388 228.8400 131.2052 14.27952090159140
KO-25
1 22828U 93061F 96288.71749374 -.00000023 00000-0 82576-5 0 4855
2 22828 98.5686 2.3102 0009481 225.6188 134.4209 14.28154395127171
POSAT
1 22829U 93061G 96285.23262406 -.00000005 00000-0 15616-4 0 4991
2 22829 98.5706 358.9623 0009437 235.8775 124.1511 14.28135841158596
GPS BIIA-23
1 22877U 93068A 96284.35235998 -.00000051 00000-0 10000-3 0 4878
2 22877 55.7320 44.5699 0039478 301.7822 57.8297 2.00567433 21709
METEOSAT 6
1 22912U 93073B 96287.14899074 -.00000083 00000-0 00000+0 0 5674
2 22912 0.2037 55.4790 0002654 153.8034 216.7160 1.00274817 9047
HST Array
1 22920U 90037C 96285.88812572 .00004857 00000-0 31640-3 0 5262
2 22920 28.4648 88.1381 0004255 321.1675 38.8642 15.05643720157028
Meteor 3-6
1 22969U 94003A 96286.77033520 .00000051 00000-0 10000-3 0 2906
2 22969 82.5638 177.5398 0015447 310.6494 49.3253 13.16738894130527
TUBSAT-B
1 22970U 94003B 96287.23030041 .00000051 00000-0 10000-3 0 2815
2 22970 82.5597 177.1018 0015267 305.3112 54.6578 13.16827757130599
GPS BIIA-24
1 23027U 94016A 96287.42667750 -.00000050 00000-0 10000-3 0 4189
2 23027 55.0582 345.0774 0069470 202.4751 157.2914 2.00563297 19078
Glonass 62
1 23043U 94021A 96287.32828720 -.00000002 00000-0 00000+0 0 4113
2 23043 64.6053 319.7773 0007583 201.9935 158.0448 2.13103219 19526
Glonass 63
1 23044U 94021B 96288.61850031 -.00000004 00000-0 00000+0 0 3826
2 23044 64.5947 319.7269 0031931 205.9426 153.9596 2.13103242 19558
Glonass 64
1 23045U 94021C 96286.44986403 -.00000001 00000-0 00000+0 0 3871
2 23045 64.5880 319.8075 0009939 28.3453 331.7824 2.13102290 19508
GOES 8
1 23051U 94022A 96287.14206965 -.00000256 00000-0 10000-3 0 5931
2 23051 0.2564 87.4209 0004639 114.3504 156.9794 1.00271246 16540
MSTI 2
1 23101U 94028A 96287.15703077 .00004862 00000-0 73866-4 0 3620
2 23101 97.0778 119.3532 0009331 243.0581 116.9715 15.55001045137625
STRV-1A
1 23125U 94034B 96278.87937598 .00003202 00000-0 11637-2 0 3363
2 23125 7.0590 190.0586 7240654 156.2502 269.6185 2.32833651 18676
STRV-1B
1 23126U 94034C 96282.80057012 .00001915 00000-0 64684-3 0 2983
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2 23126 7.0727 188.2210 7242652 159.7171 258.9490 2.32925801 18806
Nadezhda 4
1 23179U 94041A 96285.70303825 .00000036 00000-0 21377-4 0 2253
2 23179 82.9481 150.2542 0036454 155.7323 204.5556 13.75685420112814
Glonass 65
1 23203U 94050A 96287.05646792 .00000024 00000-0 00000+0 0 3482
2 23203 64.7609 200.1595 0006743 148.1644 211.9182 2.13102206 16912
Glonass 66
1 23204U 94050B 96288.22856463 .00000031 00000-0 00000+0 0 3658
2 23204 64.7474 200.1472 0015062 346.7716 13.2412 2.13102521 16938
Glonass 67
1 23205U 94050C 96286.23396550 .00000016 00000-0 00000+0 0 3501
2 23205 64.7522 200.2045 0002006 295.3420 64.6738 2.13102837 16891
DMSP B5D2-7
1 23233U 94057A 96288.77382819 .00000035 00000-0 42364-4 0 9582
2 23233 98.8173 345.7294 0011678 199.1310 160.9425 14.12742076109711
OKEAN 1-7
1 23317U 94066A 96288.57636924 .00000096 00000-0 11044-4 0 1908
2 23317 82.5436 309.1981 0027901 52.9983 307.3775 14.74047217108123
ELEKTRO
1 23327U 94069A 96288.71524516 -.00000104 00000-0 00000+0 0 2054
2 23327 0.2728 109.8250 0002814 46.2940 201.0992 1.00273288 7194
RESURS 1-3
1 23342U 94074A 96286.50843605 .00000060 00000-0 17995-4 0 5919
2 23342 97.9540 340.6955 0001494 64.4960 295.6397 14.69866934104045
Glonass 68
1 23396U 94076A 96285.60859847 .00000036 00000-0 00000+0 0 3280
2 23396 65.1360 80.3279 0029879 188.3711 171.5896 2.13102665 14726
Glonass 69
1 23397U 94076B 96288.13115719 .00000036 00000-0 00000+0 0 3128
2 23397 65.1257 80.2532 0010766 320.3302 39.5902 2.13102173 14772
Glonass 70
1 23398U 94076C 96285.66858957 .00000036 00000-0 00000+0 0 3335
2 23398 65.1130 80.3104 0001779 263.4760 96.5160 2.13102104 14737
LUCH (Altair-2)
1 23426U 94082A 96288.21920825 -.00000275 00000-0 00000+0 0 4069
2 23426 1.1952 266.2450 0003025 324.2969 326.5200 1.00264058 6692
RS-15
1 23439U 94085A 96287.23864848 -.00000039 00000-0 10000-3 0 1687
2 23439 64.8170 192.1727 0158085 178.1862 181.9667 11.27528669 74093
NOAA 14
1 23455U 94089A 96288.86015860 .00000071 00000-0 63568-4 0 7815
2 23455 98.9564 234.0378 0008565 267.7790 92.2400 14.11617142 92333
Glonass 71
1 23511U 95009A 96286.09614175 -.00000001 00000-0 00000+0 0 2454
2 23511 64.6221 320.0922 0008303 222.9290 137.0774 2.13103945 12463
Glonass 72
1 23512U 95009B 96287.15459850 -.00000002 00000-0 00000+0 0 2552
2 23512 64.6077 320.0581 0006524 300.4993 59.5077 2.13101727 12481
Glonass 73
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2 23513 64.6164 320.1292 0014908 207.6848 152.3086 2.13103275 12450
GMS 5
1 23522U 95011B 96287.53515824 -.00000286 00000-0 10000-3 0 1628
2 23522 0.4334 14.1289 0000767 188.5225 152.4401 1.00272802 5639
DMSP B5D2-8
1 23533U 95015A 96288.91543880 .00000025 00000-0 37098-4 0 7083
2 23533 98.8449 289.8603 0008385 74.6510 285.5594 14.12757038 80535
OSC 1
1 23545U 95017A 96287.02126488 .00000250 00000-0 88115-4 0 1709
2 23545 69.9712 256.7226 0012025 6.8616 353.2663 14.45407429 80682
OSC 2
1 23546U 95017B 96287.88615647 .00000247 00000-0 87244-4 0 2040
2 23546 69.9786 254.8730 0012126 356.5600 3.5450 14.45414607 80813
Microlab 1
1 23547U 95017C 96287.00079672 .00000189 00000-0 70565-4 0 1410
2 23547 69.9783 256.6510 0011848 0.6907 359.4242 14.45594828 80696
OFEQ 3
1 23549U 95018A 96288.97271520 .00016377 00000-0 39679-3 0 3458
2 23549 143.3656 239.5407 0213101 68.6797 293.6538 15.18469443 84546
GFZ-1
1 23558U 86017JE 96286.89898153 .00003213 00000-0 40679-4 0 1640
2 23558 51.6543 239.2567 0004477 315.6429 44.4338 15.62893405608413
ERS-2
1 23560U 95021A 96287.83344669 -.00000031 00000-0 46224-5 0 2876
2 23560 98.5490 0.1953 0001358 98.1464 261.9873 14.32249152 77553
Spektr
1 23579U 95024A 96287.94431100 .00005230 00000-0 64173-4 0 4697
2 23579 51.6518 245.5509 0012520 271.8757 88.0368 15.62163937 79991
GOES 9
1 23581U 95025A 96287.46543038 .00000084 00000-0 10000-3 0 2635
2 23581 0.1725 265.8840 0002758 319.2697 189.3954 1.00276752 5114
Helios 1A
1 23605U 95033A 96288.21805670 .00000074 00000-0 23167-4 0 3312
2 23605 98.1284 222.2528 0001348 62.8297 297.3043 14.63841744 67972
UPM SAT 1
1 23606U 95033B 96288.24878301 .00000165 00000-0 37913-4 0 2210
2 23606 98.1098 223.7234 0007520 158.3278 201.8245 14.67291821 68170
CERISE
1 23607U 95033C 96288.20268298 .00000086 00000-0 23999-4 0 1248
2 23607 98.1095 223.5001 0006237 158.8015 201.3487 14.66968449 68186
TDRS 7
1 23613U 95035B 96287.45299564 .00000096 00000-0 00000+0 0 2327
2 23613 0.9218 82.2159 0003022 151.4163 140.3645 1.00274586 4574
Glonass 74
1 23620U 95037A 96287.22996235 .00000025 00000-0 00000+0 0 1917
2 23620 64.8186 200.0148 0018208 168.4804 191.6004 2.13103076 9523
Glonass 75
1 23621U 95037B 96285.99977972 .00000014 00000-0 00000+0 0 2006
2 23621 64.8257 200.0694 0018206 180.5935 179.4396 2.13102375 9492
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1 23622U 95037C 96287.46567761 .00000027 00000-0 00000+0 0 2039
2 23622 64.8219 200.0158 0036740 165.9134 194.2310 2.13102601 9524
Prognoz-M2
1 23632U 95039A 96290.18305820 -.00001108 00000-0 00000+0 0 873
2 23632 70.9250 248.7170 8007090 323.9620 335.7460 0.26373400 1160
SICH-1
1 23657U 95046A 96288.03779865 .00000160 00000-0 21136-4 0 1159
2 23657 82.5302 91.1669 0029238 26.2826 333.9848 14.73499878 60337
RADARSAT
1 23710U 95059A 96288.56990403 -.00000044 00000-0 00000+0 0 1945
2 23710 98.5812 293.5685 0000956 52.2303 307.8965 14.29982865 49309
Glonass 79
1 23734U 95068A 96288.99137218 .00000032 00000-0 00000+0 0 1750
2 23734 64.8215 199.8810 0018163 323.1635 36.7642 2.13102160 6522
Glonass 78
1 23735U 95068B 96288.25277662 .00000031 00000-0 00000+0 0 1724
2 23735 64.8174 199.8963 0007074 215.9661 144.0329 2.13125374 6507
Glonass 77
1 23736U 95068C 96286.41026196 .00000018 00000-0 00000+0 0 1483
2 23736 64.8121 199.9731 0007626 199.8747 160.1319 2.13102217 6466
XTE
1 23757U 95074A 96287.50487509 .00000454 00000-0 90901-5 0 920
2 23757 22.9837 326.3516 0013529 35.5003 324.6382 14.97704256 43223
Polar
1 23802U 96013A 96287.58009990 .00000152 00000-0 00000+0 0 646
2 23802 86.2621 24.8118 6578969 280.2510 16.6934 1.36678222 3171
1996010E
1 23824U 96010E 96287.95833164 .00023216 00000-0 12545-1 0 1158
2 23824 47.6368 220.7432 7306003 56.5991 352.9675 2.23276041 5255
GPS BIIA-25
1 23833U 96019A 96285.06774082 -.00000056 00000-0 00000+0 0 901
2 23833 54.6809 343.3282 0039138 150.1944 210.0944 2.00564745 4003
Priroda
1 23848U 96023A 96287.94431100 .00005230 00000-0 64173-4 0 1581
2 23848 51.6518 245.5509 0012520 271.8757 88.0368 15.62163937 27083
MSX
1 23851U 96024A 96288.08550355 -.00000047 00000-0 00000+0 0 1100
2 23851 99.3902 269.9037 0005692 185.2635 174.8422 13.97558105 24100
SAX
1 23857U 96027A 96286.52342141 .00001205 00000-0 43769-4 0 365
2 23857 3.9566 341.1805 0014471 245.5471 114.3102 14.91624982 24692
MSTI 3
1 23868U 96031A 96287.60569640 .00000947 00000-0 20858-4 0 644
2 23868 97.1221 115.9959 0013969 99.2298 261.0527 15.46356072 23116
TOMS-EP
1 23940U 96037A 96289.21317376 .00001964 00000-0 90596-4 0 485
2 23940 97.4328 193.1762 0011772 287.2723 72.7236 15.21377370 15886
GPS BIIA-26
1 23953U 96041A 96287.47560308 .00000048 00000-0 00000+0 0 573
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2 23953 55.0704 103.5521 0018125 337.0966 22.8544 2.00567670 1844
Progress M-32
1 24071U 96043A 96287.94431100 .00005230 00000-0 64173-4 0 794
2 24071 51.6518 245.5509 0012520 271.8757 88.0368 15.62163937 11603
ADEOS
1 24277U 96046A 96286.36099190 -.00000044 00000-0 00000+0 0 938
2 24277 98.6224 1.5823 0001886 111.1097 249.0319 14.27632061 8005
FO-29
1 24278U 96046B 96289.22877302 -.00000021 00000-0 11589-4 0 244
2 24278 98.5765 357.4474 0352225 100.5259 263.5759 13.52625922 8002
Soyuz TM-24
1 24280U 96047A 96287.94431100 .00005230 00000-0 64173-4 0 622
2 24280 51.6518 245.5509 0012520 271.8757 88.0368 15.62163937 8982
FAST
1 24286U 96049B 96288.58918350 .00001514 00000-0 14800-3 0 271
2 24286 82.9848 153.1999 2208253 66.3087 315.3498 10.81501526 5852
MO-30
1 24305U 96052B 96288.21324477 .00000204 00000-0 20364-3 0 321
2 24305 82.9383 176.3554 0030486 167.1665 193.0271 13.73084006 5306
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1 24320U 96056A 96280.36061430 -.00000005 00000-0 00000+0 0 216
2 24320 54.7135 283.9796 0047431 100.2518 260.3795 2.00564149 360
1996056B
1 24323U 96056B 96287.77865567 .00000322 00000-0 21203-4 0 106
2 24323 35.5390 63.1668 0099862 31.6264 329.0408 15.08654376 4361
1996049F
1 24325U 96049F 96288.63117842 .00058670 00000-0 52439-2 0 317
2 24325 82.9864 153.0733 2189281 65.6718 315.6565 10.87519770 3954
1996058A
1 24435U 96058A 96288.67869264 -.00000144 00000-0 00000+0 0 313
2 24435 0.1848 290.4397 0001752 203.6207 213.9400 1.00275505 172
1996058B
1 24436U 96058B 96273.42259432 .09269389 12720-4 11511-3 0 169
2 24436 51.6361 268.0057 0007631 300.3536 59.6839 16.49186939 442
1996058C
1 24437U 96058C 96271.59134398 .25242040 12693-4 30003-3 0 146
2 24437 51.6231 278.3198 0001631 39.3230 320.7852 16.49906500 141
1996058D
1 24438U 96058D 96271.42903887 -.00000244 00000-0 00000+0 0 20
2 24438 0.2950 290.3227 0008812 316.7620 4.5723 1.00168228 07
1996058E
1 24454U 96058E 96284.45993829 .00000502 00000-0 38998-3 0 94
2 24454 47.5850 279.0854 7266752 3.5999 359.6160 2.26886162 309
1996058F
1 24503U 96058F 96287.06787221 .00002801 00000-0 60501-3 0 73
2 24503 47.5170 278.2805 7291949 4.3588 359.4891 2.27439580 112
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2102. ICOM IC-970H

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: jeffrey_austin@juno.COM
Message-ID: <19961015.215500.6367.2.jeffrey_austin@juno.com>
Source record: 21177

I'ld like to start an ICOM 970 users' group via an e-mail newsletter.
Would you put the word out that those with a 970 are invited to write me.

-73's de Jeff n8vna@amsat.org

2103. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: Erik Skovgaard <Erik.Skovgaard@bc.sympatico.ca>
Message-ID: <01bbbb1b$368f6960$60c56cce@default>
Source record: 21178

Ed,

I have worked RS-12 a fair bit during September. It used 15 m up and both 2 m and 10 down. I used a 10 m receiver, but people that picked me up on 2 m generally reported a better signal.

BTW - the beacon will usually tell you what mode the bird is in. try 29.408 (+/- doppler)

73 de VE7MDL ....Erik.

Edward Lewis <elewis@dsp.com> wrote in article <32644aad.2890642@news.wco.com>...
> What modes are used by RS-12 besides K mode, is KA or KT in use. Is
> the transponder on all the time, or is it limited to tuesday through
> friday.
>

2104. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610160856.BAA07211@UCSD.EDU>
Source record: 21179

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From smtp Thu Oct 10 11:03 PDT 1996 remote from caoesgis
Received: from UCSD.EDU by caoesgis.oes.ca.gov; Thu, 10 Oct 96 11:03 PDT
Received: by mail.ucsd.edu; id GAA21005
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 06:10:39 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA11518
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 04:32:55 -0700 for ham-space-ddist
Errors-To: owner-ham-space@UCSD.EDU
Content-Length: 15006
Content-Type: text
Sender: owner-ham-space@UCSD.EDU
Precedence: List
Message-Id: <199610101132.EAA11518@mail.ucsd.edu>
Date: Thu, 10 Oct 96 04:32:54 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Ham-Space-Errors@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #318
To: Ham-Space@UCSD.EDU

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 318

Today's Topics:
ARLK073 Keplerian data
Ham-Space Digest V96 #316
Ham-Space Digest V96 #317
Info on Mir crew activities? (2 msgs)
KC5TZQ active on MIR tonight
Phase III D- When?? (2 msgs)
TCP/IP Telecomunications (2 msgs)
Visual MIR sighting
Weather Sat. Info (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 8 Oct 1996 18:31:30 -0400
From: w1aw@arrl.org
Subject: ARLK073 Keplerian data

SB KEP @ ARL $ARLK073
ARLK073 Keplerian data

ZCZC SK73
QST de W1AW
Keplerian Bulletin 73 ARLK073

Date: 9 Oct 96 19:32:15 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #316

GE Item Number: 1458832
Original Msg Id: 394468
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #316
System: MARLBORO#
Date: Wed 9-Oct-96 13:38

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 9 Oct 96 20:27:54 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #317

GE Item Number: 9528915
Original Msg Id: 394620
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #317
System: MARLBORO#
Date: Wed 9-Oct-96 20:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: Tue, 08 Oct 1996 23:56:03 -0300
From: KD1YV <jimkd1yv@ix.netcom.com>
Subject: Info on Mir crew activities?

Does anybody on the group know, or know where I can obtain an indication
of the daily schedule of the Mir crew? What I am trying to determine is
the times that would be likely and/or unlikely for a voice QSO,
corresponding their free time with the available passes in my area.

Is the Mir crew large enough that somebody is on duty 24 hours (like a
7-11, the doors are never locked :-), or do they all sleep and eat at the
same time each day. Do they operate on a 24 hour rotating schedule, or
is their day shorter or longer? In other words, a couple of weeks ago, I
heard John Blaha telling somebody in a QSO that he was having a lunch
break, at about 07:15 EDT (my time.) Is it safe to assume that their
lunch break is always going to be about 07:15 EDT or equivalent? Etc.

--
73 de Jim, KD1YV

Date: 9 Oct 1996 10:34:06 GMT
From: dhend@cyberportal.net
Subject: Info on Mir crew activities?

> KD1YV <jimkd1yv@ix.netcom.com> writes:
> Does anybody on the group know, or know where I can obtain an indication
> of the daily schedule of the Mir crew? What I am trying to determine is
> the times that would be likely and/or unlikely for a voice QSO,
> corresponding their free time with the available passes in my area.
The crew lives on Moscow time and all sleep at eat togeather. They do at times stay up
late.. sometimes for a purpose sometime
because of inability to sleep I think.. they sleep from approximately 3:30-4:00 edt untill
about midnight edt. I have heard them on
voice at 7:00 PM edt though . the best time to catch them is in the morning, they do
exercises and they were able to talk on the
radio while munching and doing exercises.. Aleksander Serebrov used to talk on the radio
while riding the exercycle..

>
> Is the Mir crew large enough that somebody is on duty 24 hours (like a
> 7-11, the doors are never locked :-), or do they all sleep and eat at the
> same time each day. Do they operate on a 24 hour rotating schedule, or
> is their day shorter or longer? In other words, a couple of weeks ago, I
> heard John Blaha telling somebody in a QSO that he was having a lunch
> break, at about 07:15 EDT (my time.) Is it safe to assume that their
> lunch break is always going to be about 07:15 EDT or equivalent? Etc.
>
> --
> 73 de Jim, KD1YV
>
There are only three on board at this time though I have been told Mir would hold up to six

people comfortably..
their schedules are apt to be dictated by ongoing experiments, and communications schedules, from my understanding..
Have fun//
73 DAVE N1PPP
>>>>

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

Date: 9 Oct 1996 07:24:48 GMT
From: "BJ Arts" <bjarts@uslink.net>
Subject: KC5TZQ active on MIR tonight

John was very active during the tow passes i listened to. I worked him on the 0700utc pass over North America. I was using and FT-736 and a 160 2 meter brick into a 1/4 wave vert. John likes to talk about baseball and astronomy. The passes seem to be very active over the US and Canada during the 0400and 0700utc time frame. I have worked both R0MIR and KC5TZQ during these time periods. 73 de BJ Arts WT0N

Date: 9 Oct 1996 19:52:36 -0400
From: philbada@aol.com (PhilBada)
Subject: Phase III D- When??

Can anyone tell us the most recent launch plans or if they have encountered any problems as of late. I was under the impression that the launch was scheduled for late 1996. Thanks!

Date: Wed, 09 Oct 1996 19:24:56 -0500
From: Mark Fossum <n0nsv@amsat.org>
Subject: Phase III D- When??

PhilBada wrote:
>
> Can anyone tell us the most recent launch plans or if they have
> encountered any problems as of late. I was under the impression that the
> launch was scheduled for late 1996. Thanks!

Hi Phil!

The latest news that I have is April of 1997 for launch. Hope so anyway!

73 Mark

Date: Wed, 09 Oct 96 10:45:48 GMT
From: irucal@mail.cccis.ro (Alexandru Liviu Iruc)
Subject: TCP/IP Telecomunications

It's possible to conetc two or more computers over TCP/IP using Ham
Radio fequences???

Alexandru

e-mail: airuc@umfiasi.ro

Date: Wed, 09 Oct 1996 22:44:11 GMT
From: ka8okh@som-uky.campus.mci.net (Rich Dailey, KA8OKH)
Subject: TCP/IP Telecomunications

irucal@mail.cccis.ro (Alexandru Liviu Iruc) wrote:

> It's possible to conetc two or more computers over TCP/IP using Ham
>Radio fequences???

Certainly. Many amateur radio ops use tcp/ip over packet. But you
might want to post this question to the digital group, or subscribe
to the nos-bbs list (nos-bbs-request@hydra.carleton.ca, I think).

... rich

Rich Dailey - KA8OKH <ka8okh@som-uky.campus.mci.net>
Somerset Electronics Co. - Somerset, KY
Expert repair on all major brands of CATV line/headend, & TVRO equipment.
Opinions expressed here are of my own unique design.

Date: Wed, 9 Oct 1996 00:52:32 GMT
From: "Brian E. Oakley" <boakley@imagin.net>
Subject: Visual MIR sighting

Had very good visual MIR sighting in early twinight in DFW area, passing
from S to NW. Easily visible to naked eye. Heard packet very strong on
145.55. Max elevation above the horizion was about 23 degrees. 73.
--
****
* Brian Oakley http://www.imagin.net/~boakley *
* *
* WB5KXW@imagin.net *
****

Date: Tue, 08 Oct 1996 23:19:56 -0500
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Subject: Weather Sat. Info

I'm looking for information on weather sats (NOAA 12 & 14). I've
looked at NOAA's pages and didn't find them real handy. Does anyone
know of any web pages or other sources of info on the net where I
could find out more about these satellites? I am wanting to know
what equipment it would take to receive images from these birds.

Thanks

Mark <KB9KHM>

Date: Wed, 09 Oct 1996 08:27:53 -0700
From: Rolf Mathison <rolf_mathison@hp.com>
Subject: Weather Sat. Info

John Boyer wrote:
>
> Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
> : I'm looking for information on weather sats (NOAA 12 & 14). I've
> : looked at NOAA's pages and didn't find them real handy. Does anyone
> : know of any web pages or other sources of info on the net where I
> : could find out more about these satellites? I am wanting to know
> : what equipment it would take to receive images from these birds.
> :
> : Thanks
> :
> : Mark <KB9KHM>
>
> Try http://www.rig.org.uk/index.html
>
> J.RIG's URL has changed to: http://www.rig.org.uk/index.html

Regards,
Rolf

Date: 10 Oct 1996 06:52:43 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Rolf Mathison (rolf_mathison@hp.com) wrote:
: John Boyer wrote:
: >
: > Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: > : I'm looking for information on weather sats (NOAA 12 & 14). I've
: > : looked at NOAA's pages and didn't find them real handy. Does anyone
: > : know of any web pages or other sources of info on the net where I
: > : could find out more about these satellites? I am wanting to know
: > : what equipment it would take to receive images from these birds.
: > :
: > : Thanks
: > :

: > : Mark <KB9KHM>
: >
: > Try http://www.rig.org.uk/index.html
: >
: > J.RIG's URL has changed to: http://www.rig.org.uk/index.html
:
: Regards,
: Rolf

Hi Rolf,

Isn't that what I said?
You had me quite worried for a moment. I know the URL went out wrong in the last journal, but I did type it correctly here. The journal error was because someone else thought that .org.uk must have been a mistake and consequently all occurance of www.rig.org.uk got changed to www.rig.org.

Anyhow as the guy who maintains the RIG web pages I ought to know what the URL is, but you did get me worried about typos.

Whilst we are on the subject I am looking at a serious update of the RIG web pages and am learning Java in the hope of writing an online wx sat reception demo.

If anyone has ideas about what they'd like to see on the RIG web pages then drop me a line. We won't hold more pictues as we feel that there is an abundance of sites carrying images.

If I ignore emails over the next week it's because I won't be here.

Regards J.

Date: (null)
From: (null)

SB KEP ARL ARLK073
ARLK073 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96274.83271966 .00000061 00000-0 10000-3 0 04571
2 14129 25.9142 186.7455 6045033 53.3722 348.1805 2.05880649072045
RS-10/11
1 18129U 87054A 96281.91182833 .00000027 00000-0 13250-4 0 02702
2 18129 82.9231 65.2105 0010519 197.6255 162.4536 13.72369984465631

```
UO-11
1 14781U 84021B 96282.03080827 .00000059 00000-0 17731-4 0 09202
2 14781 97.8089 267.7901 0012646 86.5455 273.7177 14.69485130674224
RS-12/13
1 21089U 91007A 96282.12589032 -.00000004 00000-0 -19489-4 0 09298
2 21089 82.9216 105.5964 0028012 280.8084 78.9920 13.74073430284543
AO-13
1 19216U 88051B 96280.37006189 .00080191 10676-5 49873-3 0 02946
2 19216 57.0907 86.9492 7421858 52.7735 354.1070 2.15855504032191
UO-14
1 20437U 90005B 96281.77730295 -.00000071 00000-0 -10879-4 0 02325
2 20437 98.5397 2.6579 0010285 230.7486 129.2784 14.29932774350148
RS-15
1 23439U 94085A 96281.91702855 -.00000039 00000-0 10000-3 0 01797
2 23439 64.8173 200.7770 0158078 179.1921 180.9284 11.27528677073495
AO-16
1 20439U 90005D 96281.24108714 -.00000043 00000-0 20269-6 0 135
2 20439 98.5521 4.5504 0010880 231.5123 128.5270 14.29985382350084
DO-17
1 20440U 90005E 96281.74195469 .00000014 00000-0 22127-4 0 00236
2 20440 98.5569 5.7428 0010734 230.2487 129.7750 14.30128013350182
WO-18
1 20441U 90005F 96281.73421093 -.00000013 00000-0 11646-4 0 00314
2 20441 98.5564 5.6624 0011268 232.8835 127.1321 14.30097011350182
LO-19
1 20442U 90005G 96282.28109004 .00000041 00000-0 32514-4 0 149
2 20442 98.5585 6.7436 0011533 230.0000 130.0168 14.30207809350289
FO-20
1 20480U 90013C 96282.51230962 -.00000089 00000-0 -12376-3 0 9117
2 20480 99.0229 285.8095 0540187 227.6197 127.7886 12.83233839312426
AO-21
1 21087U 91006A 96281.98057063 .00000093 00000-0 82657-4 0 07507
2 21087 82.9391 238.2141 0033901 253.1749 106.5687 13.74573412285500
UO-22
1 21575U 91050B 96282.12643953 .00000053 00000-0 32021-4 0 07241
2 21575 98.3402 345.0877 0007044 291.7673 68.2759 14.37039231274285
KO-23
1 22077U 92052B 96282.14512731 -.00000037 00000-0 10000-3 0 06247
2 22077 66.0789 312.9528 0015446 270.3158 89.6083 12.86298255195335
KO-25
1 22828U 93061F 96282.13181307 .00000002 00000-0 18335-4 0 04971
2 22828 98.5702 355.8530 0009506 247.2164 112.8014 14.28153986126238
IO-26
1 22826U 93061D 96282.10736385 .00000045 00000-0 35660-4 0 05123
2 22826 98.5682 355.7491 0008563 268.5045 91.5148 14.27815338158112
AO-27
1 22825U 93061C 96282.11965138 -.00000022 00000-0 86407-5 0 05114
2 22825 98.5716 355.5841 0008032 265.9152 94.1093 14.27705240158104
FO-29
1 24278U 96046B 96282.12760971 -.00000032 00000-0 61412-6 0 00287
```

```
2 24278 98.5771 351.2883 0352013 118.8583 244.8365 13.52625813007049
Mir
1 16609U 86017A 96282.18684433 .00001464 00000-0 22377-4 0 7031
2 16609 51.6534 274.5896 0012336 246.4483 113.5140 15.62124924607661

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 12, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

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End of Ham-Space Digest V96 #318
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2105. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610160858.BAA07245@UCSD.EDU>
Source record: 21180

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

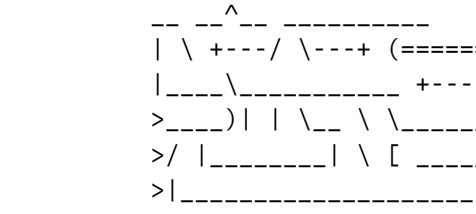
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2106. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610160900.CAA07406@UCSD.EDU>
Source record: 21181

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)

Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2107. NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: mdim@intranet.GR
Message-ID: <9610160909.AA05286@lotos>
Source record: 21182

Dear Amateurs

I am planning to buy a new sat. software tracking program and I need your opinions.
I 've seen the adver. of" Micro Orbiter 3.0" from Precision Software Solutions for 49.95 $ plus 4.00 for S & H, in the Satellite Times Magazine and I have also seen the adver.of" Nova" for $ 50.00 for AMSAT MEMBERS (that I am) in the Amsat Journal that I receive every 2 month.
C
I am currently using the "Instant Track" with a 486 at 100MHz.
I need the pros and cons for those two software from any possible users.

My warmest thanks to all of my fellow hams that will take the time to respond and help me out with my decision.

73 Michael SV1CVY

Electrical Engineer
Intracom SA
R & D Dept.
email mdim@intranet.gr

2108. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: BJ Arts <bjarts@uslink.net>
Message-ID: <01bbbb4c$8afbffa0$16bc92ce@bjarts.uslink.net>
Source record: 21183

I am trying a demo copy of NOVA and I like some of the features, but don't like other when I compare it to Instant Track.
Likes:
1. I like the multiple sat tracking and also you can pick the groups of SATs that you want to track.
2. Set up is very easy and it works nicely with the Win95 OS.
3. Kep updates are as easy as Instant Track., even easier since it is point and click.

Dislikes.
1. No doppler shift readout.
2. Readout on screen is too small to read easily, unless you sit at the computer. Instant Track has uses much bigger fonts.

Other things.
I like NOVA and with the demo it seems to setup for my Yaesu 5400b az./el rotor and work under Win95. Very easy setup. Instant Track seems to have some problems with WIN95 for rotor control setup.

I'm not sure if this program will be able to use the tuning controls to tune radio for doppler. I do not see any input setting for beacon freq. and no doppler readout. If this is the case, might be I've missed it, then the program might not be all that useful for PacSats.

With the readout so small, If you are across the room form the monitor, you might miss information if you are doing a manual track with rotor.

I hope this helps some 73
-- B.J. Arts
WT0N in EN-37
Hibbing,MN U.S.A.

Mixalis Dimitrakakis <mdim@intranet.GR> wrote in article
<9610160909.AA05286@lotos>...
> Dear Amateurs
>
> I am planning to buy a new sat. software tracking program and I need
your
> opinions.
> I 've seen the adver. of" Micro Orbiter 3.0" from Precision Software
Solutions
> for 49.95 $ plus 4.00 for S & H, in the Satellite Times Magazine and I
have
> also seen the adver.of" Nova" for $ 50.00 for AMSAT MEMBERS (that I am)
in the
> Amsat Journal that I receive every 2 month.

> C
> I am currently using the "Instant Track" with a 486 at 100MHz.
> I need the pros and cons for those two software from any possible
users.
>
> My warmest thanks to all of my fellow hams that will take the time to
> respond and help me out with my decision.
>
> 73 Michael SV1CVY
>
> Electrical Engineer
> Intracom SA
> R & D Dept.
> email mdim@intranet.gr
>
>

2109. Mobile antenna info

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: JBOWES@CEU
Message-ID: <JBOWES.3.000DBE4A@CEU>
Source record: 21184

Dear all,

PLease if anyone knows of any info in web pages, ftp sites etc etc that is relevant to mobile antenna construction for MIR monitoring I would be most pleased to hear from them. I have 2 books on antennas but more towards HF amateur band antennas. English amateur books are almost non-existant here too. I'm thinking of some alternative design to 1/4 wave construction. Any ideas people ????? Also thinking about constructing some kind of 10m mobile whip.

Thanks alot for time.

2110. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <3264EAA9.67FD@amsat.org>
Source record: 21185

Hi Michael:

I've been running Nova for a few months now. I use it with Win95 on a 66Mhz machine. The Windows version of Nova hasn't got any tuner in it yet. They tell me there will be an add-on for it later.

I really like the multiple satellite tracking and scripting. I could think of a few little bells for it, but if there was one thing that I would like to see, it would be larger fonts for manual tracking. (Maybe some color behind certain numbers to break things up and make it quicker to find what you're looking for.) Since I do lots of manual tracking, it's a little tough.

Setup was easy and you can get ahold of the authors by email anytime. They are helpful and patient. (Major plus)

Good luck on your decision!

Mark Fossum - N0NSV

2111. Welcome To The European Microwave News

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: Simon Lewis <slewis@pacsat.demon.co.uk>
Message-ID: <Su1FoLA3NEZyEwZs@pacsat.demon.co.uk>
Source record: 21186

Interested in microwaves? Operate on frequencies above 1 GHz?

Want to know more about the SHF bands?

Then point your web browser at: http://www.pacsat.demon.co.uk

The European Microwave News is published on a regular basis and is
dedicated to microwave operations across Europe.

The newsletter is available by email subscription or the web.
It carries news, letters of interest, band reports, operating
information, sales and wants and much more.

Its free to everyone by simply accessing the url or
by sending an email to: emn@pacsat.demon.co.uk
with the words 'subscribe' in the text.

The web site also carries much more information about the bands above
1 GHz and is being continuously updated.

Interested?

Send me your subscribe message now and I will send you the latest
issue, or alternatively, point your browser to www.pacsat.demon.co.uk
and download the web version!

73 Simon GM4PLM
European Microwave News Editor

```
+-----------------------------------------------------------------+
| *** THE EUROPEAN MICROWAVE NEWSLETTER *** |
| Supporting Microwave Operators Across Europe |
| Editor - Simon Lewis GM4PLM |
| Email: emn@pacsat.demon.co.uk Packet: GM4PLM @ GB7SAN |
| Web Homepage & Microwave Resource Center - www.pacsat.demon.co.uk |
+-----------------------------------------------------------------+
```

2112. FS: KCTracker/Tuner & InstantTrack

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: Dale Conrad <dconrad@nauticom.net>
Message-ID: <326580C1.41BF@nauticom.net>
Source record: 21187

Have a KCTracker/Tuner Board w/manual and official copy
of InstantTrack software. Includes specific directions for
controlling Yaesu az/el rotors and Yaesu 736/26, Kenwood and
Icom xcvrs. Also works with other sat software. This unit
was purchased new for $320 but never used. Make offer.
Thanx for reading this. Dale W3IXR

2113. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: tkenny@qsun.ho.att.com
Message-ID: <326afdd2.176335394@nntpa.cb.lucent.com>
Source record: 21188

I've been comparing LogSat and WinOrbit. I really liked WinOrbit until
I discovered LogSat. It seems that LogSat has anything you might
possbily need.

The cost is $49.95 USD + $3.50 shipping and the URL to get a demo copy
is http://www.logsat.com/

I'm in no way connected to them other than a potential customer...

73, Tom KB2GLO

vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv
Tom Kenny KB2GLO Voice: 908-949-9704
EMail: tek@webspan.net URL: http://webspan.net/~tek
^^

2114. Meteor Scatter Sked

Newsgroup: rec.radio.amateur.space
Date: 1996-10-16 00:00:00 UTC
From: rwham@aol.com
Message-ID: <5447jn$1s5@newsbf02.news.aol.com>
Source record: 21189

Is there anyone in ND that would be interested in running a 2mtr MS sked with me during the (2nd peak, 21 October) Orionids? The best path to ND is between 1100 & 1300 UTC (6 to 8am CDST) this coming Monday. If you have at least 150w ssb on 2mtr, with a 15' or longer yagi, please send me an email to setup a sked.

Thanks,
Robert WB4AXQ
RWHam@aol.com

2115. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610170856.BAA11412@UCSD.EDU>
Source record: 21190

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

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policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

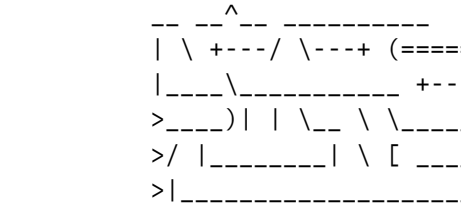
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2116. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610170859.BAA11447@UCSD.EDU>
Source record: 21191

```
From smtp Wed Oct 9 08:46 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Wed, 9 Oct 96 08:46 PDT
Received: from mail.ucsd.edu (ucsd.edu) by nic.teale.ca.gov (4.1/SMI-4.1)
id AA06533; Wed, 9 Oct 96 08:57:25 PDT
Received: by mail.ucsd.edu; id EAA25658
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:40 -0700 for ham-space-list
Received: by mail.ucsd.edu; id EAA25645
sendmail 8.6.12/UCSD-2.2-sun
Wed, 9 Oct 1996 04:30:38 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 5468
Content-Type: text
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610091130.EAA25645@mail.ucsd.edu>
Date: Wed, 9 Oct 96 04:30:37 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #317
To: Ham-Space@ucsd.edu

Ham-Space Digest Wed, 9 Oct 96 Volume 96 : Issue 317

Today's Topics:
(none)
Ham-Space Digest V96 #305
John's Ham Page
Need 9600 mod for FT-780R
Weather Sat. Info

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 9 Oct 96 10:01:21 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

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KANSAS CITY TRACKER

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policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

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: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
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: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
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:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

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From: broom@acm.org (Ralph Broom)

Subject: DC/MD/VA RA Enthusiasts?

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already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: Tue, 08 Oct 1996 21:49:44 -0700
From: john fleenor <jlfleenor@why.net>
Subject: John's Ham Page

visit john's ham page at http://www.why.net/home/jlfleenor for
electronic projects, ham links, ham software and more!

Date: Tue, 08 Oct 1996 06:27:08 -0400
From: Bob Watson <kn4hh@america.net>
Subject: Need 9600 mod for FT-780R

Thanks for reading this. I need the modification details for 9600 baud
receive for the Yaesu FT-780R transceiver. I have found a point on D2

for feeding to the modem but the output appears to be quite low.
If you have the info or can point me to it, please contact me at
kn4hh@avana.net

Thanks and 73, Bob Watson KN4HH near Atlanta

Date: 9 Oct 1996 06:33:04 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Weather Sat. Info

Mark McGregor (kb9khm@expert.cc.purdue.edu) wrote:
: I'm looking for information on weather sats (NOAA 12 & 14). I've
: looked at NOAA's pages and didn't find them real handy. Does anyone
: know of any web pages or other sources of info on the net where I
: could find out more about these satellites? I am wanting to know
: what equipment it would take to receive images from these birds.
:
: Thanks
:
: Mark <KB9KHM>

Try http://www.rig.org.uk/index.html

J.

End of Ham-Space Digest V96 #317
****

2117. Re: ICOM IC-970H

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: we8n@co.warren.oh.US
Message-ID: <Pine.LNX.3.91.961017090947.9451A-100000@co.warren.oh.us>
Source record: 21192

Sure John, I would like learning more about my rig.
Like how well the 1.2 add on works. Or should I get
a coverter. Tnx.

On Wed, 16 Oct 1996 jeffrey_austin@juno.com wrote:

>
> I'ld like to start an ICOM 970 users' group via an e-mail newsletter.
> Would you put the word out that those with a 970 are invited to write me.
>
> -73's de Jeff n8vna@amsat.org
>

2118. Connecting to Mir packet

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: "John T. Young" <jtyoung@u.washington.edu>
Message-ID: <Pine.PTX.3.95c.961017082001.19640A-100000@carson.u.washington.edu>
Source record: 21193

Could someone please tell me the exact commands and protocols for connecting up to the automated MIR packet system? Do you type "C R0MIR" and then give a signal report if MIR responds to you? I simply wish to make a real quick QSO with MIR. Not interested in digipeating or leaving lengthy messages. Also, exactly how do you sign off? A simple "d" or "bye"? Thanks for answering my basic questions. I'd like to try a MIR contact but don't want to get on until I know the right procedures. There's enough QRM already I guess. 73 de John, KI7JB.

2119. Picture of Station Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: "Jean Philippe P." <jpp@pacwan.mm-soft.fr>
Message-ID: <32664943.64E9@pacwan.mm-soft.fr>
Source record: 21194

Hello

I loocking for a picture of the station Mir, if you know a URL address I
can to take a very good picture of the station Mir, please send me a
Email.
Thank you very much for your help, my best 73's

F1USC
Jean-Philippe

2120. Re: ICOM IC-970H

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: lijnencentrum@qmserver.vtm.be
Message-ID: <32665CC5.14FD@qmserver.vtm.be>
Source record: 21195

Hello,

I`m a IC-970 User also, using 2M,70 and 23cm with an outdoor
Preamp/PA system.
I`m also using the Pacsat`s UO-22,KO23,KO25

Add me to your list

ON4BCB
walter_crauwels@qmserver.vtm.be

2121. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: mdim@intranet.GR
Message-ID: <9610171206.AA11356@lotos>
Source record: 21196

Dear Amateurs

I am planning to buy a new sat. software tracking program and I need your opinions.
I 've seen the adver. of" Micro Orbiter 3.0" from Precision Software Solutions for 49.95 $ plus 4.00 for S & H, in the Satellite Times Magazine and I have also seen the adver.of" Nova" for $ 50.00 for AMSAT MEMBERS (that I am) in the Amsat Journal that I receive every 2 month.

I am currently using the "Instant Track" with a 486 at 100MHz.
I need the pros and cons for those two software from any possible users.

My warmest thanks to all of my fellow hams that will take the time to respond and help me out with my decision.

73 Michael SV1CVY

Electrical Engineer
Intracom SA
R & D Dept.
email mdim@intranet.gr

>
2

2122. Re: Connecting to Mir packet

Newsgroup: rec.radio.amateur.space
Date: 1996-10-17 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <5463q5$q8o@news.mhv.net>
Source record: 21197

In article <Pine.PTX.3.95c.961017082001.19640A-100000@carson.u.washington.edu>, "John T. Young" <jtyoung@u.washington.edu> wrote:
>Could someone please tell me the exact commands and protocols for
>connecting up to the automated MIR packet system? Do you type "C R0MIR"
>and then give a signal report if MIR responds to you? I simply wish to
>make a real quick QSO with MIR. Not interested in digipeating or leaving
>lengthy messages. Also, exactly how do you sign off? A simple "d" or
>"bye"? Thanks for answering my basic questions. I'd like to try a MIR
>contact but don't want to get on until I know the right procedures.
>There's enough QRM already I guess. 73 de John, KI7JB.

A connect to Mir's PBBS is: C R0MIR-1. To disconnect type b or d. Do
not try a connect while someone is still connected, it can only handle ONE
connect at a time. Wait until you see a DM then go for it, FAST!
If you do get in type SP R0MIR, then your message. Wait for a message number
back.

To connect to the keyboard it's: C R0MIR but don't expect a response back
from around 2000 to about 0500, most of the time they are asleep.
Good luck!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2123. Re: ICOM IC-970H

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: "Richard L. Kerns" <rlkerns@ix.netcom.com>
Message-ID: <01bbbca1$f54f6bc0$762db7c7@kingpin>
Source record: 21198

I also use the IC 970 on 2, 70, and 23 cm. Add me to you list

Rick WB8LBC

2124. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: smtp@caoesgis.oes.CA.GOV
Message-ID: <199610180857.BAA13818@UCSD.EDU>
Source record: 21199

```
From smtp Thu Oct 10 17:37 PDT 1996 remote from caoesgis
Received: from ucsd.edu by caoesgis.oes.ca.gov; Thu, 10 Oct 96 17:37 PDT
Received: by mail.ucsd.edu; id LAA29126
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:13 -0700 for ham-space-list
Received: by mail.ucsd.edu; id LAA29091
sendmail 8.6.12/UCSD-2.2-sun
Thu, 10 Oct 1996 11:43:09 -0700 for ham-space-ddist
Errors-To: owner-ham-space@ucsd.edu
Content-Length: 32000
Content-Type: binary
Sender: owner-ham-space@ucsd.edu
Precedence: List
Message-Id: <199610101843.LAA29091@mail.ucsd.edu>
Date: Thu, 10 Oct 96 11:43:07 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@ucsd.edu
Reply-To: Ham-Space@ucsd.edu
Precedence: List
Subject: Ham-Space Digest V96 #319
To: Ham-Space@ucsd.edu

Ham-Space Digest Thu, 10 Oct 96 Volume 96 : Issue 319

Today's Topics:
(none) (2 msgs)
Ham-Space Digest V96 #304
Ham-Space Digest V96 #305
Ham-Space Digest V96 #318
logsat
sarex freqs on mir ?
unsubscribe

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------
```

Date: 10 Oct 96 10:01:35 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: 10 Oct 96 09:56:20 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Wed, 2 Oct 96 04:30:35 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Subject: Ham-Space Digest V96 #304

Ham-Space Digest Wed, 2 Oct 96 Volume 96 : Issue 304

Today's Topics:
(none)
*** 2 More FREE DigiDay Calendar programs ***
AMSAT APRS and other ham files
Ham-Space Digest V96 #297
Help with Freq's...
JOTA (the hut?)
Mir Freqs. (2 msgs)
Opinions on satellite tracking software wanted
R0MIR active

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 96 10:02:18 GMT
From: smtp@caoesgis.oes.CA.GOV
Subject: (none)

Date: Tue, 01 Oct 1996 12:02:22 GMT
From: mricci@visionx.com (Michael Ricci)
Subject: *** 2 More FREE DigiDay Calendar programs ***

2 More FREE DigiDay Calendar programs

They just keep coming!

Vision X has teamed up with the folks at StarDate (the nationally syndicated radio program about space) and Amazon.com (the premiere bookstore on the Internet) to add two new exceptional titles to their already growing list of daily calendars.

Title: 365 Days of StarDate (available 10/1)
URL: http://www.visionx.com/ddstar.htm

Get your night sky episode every day! Based on the popular nationally syndicated radio program, StarDate provides a daily dose of fun astronomical facts and figures. Check out the screen design its out of this world!

Title: 365 Days of Amazon Book Reviews (available 10/2)
URL: http://www.visionx.com/ddbook.htm

There are over a zillion books in print and hundreds of new ones are published each day. Enjoy the convenience of having the Amazon staff separate the wheat from the chaff. Only the highly recommended make this list.

Coming Soon:

Vision X is very excited to announce the partnering with Windows95.com. The first calendar, Steve Jenkins Windows 95 Tips & Tricks is due out October 15th. Steves Shareware of the Day WINners will follow in December.

Also, look for the much anticipated 365 Days of Great Words to Know, 365 Days of MovieMania and 365 Days of Whats So Funny in November.

Current Titles include:

365 Days of Classic Quotes
365 Days of Off-the-WallPaper
DigiDay Site of the Day
Classic Quotes Screen Saver
DigiDay Clock
DigiDay Reminder
DigiDay WallBrowser

For more information, contact:

Michael Ricci
mricci@visionx.com
http://www.visionx.com/ddmain.htm

Date: Mon, 30 Sep 1996 07:58:20 GMT
From: ke4htm@bluenet.net (Jamie R. Dean)
Subject: AMSAT APRS and other ham files

The Western North Carolina APRS Home Page
---
http://www.bluenet.net/ke4htm

Automatic Packet/Position Reporting System's use has
really started to grow among the amateur radio community.
Over the past few years I've watched APRS really take off.
I was always discouraged, since there was no place to
get the files needed to run APRS or be on packet. So I
thought let's make a APRS page and offer not only APRS files
but other packet programs to. So I did. The page is young
but the files and brand new and the links are the hottest
ham links on the web. Come on by and take a look and drop me
some e-mail to let me know what you think.

73's
Jamie - KE4HTM

Date: Wed, 25 Sep 96 04:30:38 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #297

Ham-Space Digest Wed, 25 Sep 96 Volume 96 : Issue 297

Today's Topics:
Any info on JAS-2?
ARLK069 Keplerian data
DSP software for Creative ?
Ham-Space Digest V96 #296
HELP! Is shuttle audio available in Seattle? (2 msgs)
HELP me BAYCOM
NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)
RS-12
WWW: Used Microwave Components

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 24 Sep 1996 12:59:25 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: Any info on JAS-2?

Mark, you can get the latest Keps right on this newsgroup
(871 is the latest I see). As far as operational status I have
tryed for 4 or 5 passes and heard nothing. Let me know if
you, or anybody else for that matter, are able to connect.

73 KB2WQM Jeff

Date: 24 Sep 1996 18:07:44 -0400
From: w1aw@arrl.org
Subject: ARLK069 Keplerian data

SB KEP @ ARL $ARLK069
ARLK069 Keplerian data

ZCZC SK69
QST de W1AW
Keplerian Bulletin 69 ARLK069

Date: Tue, 24 Sep 1996 16:41:09 +0100
From: faimar@linknet.it (Luca Babini)
Subject: DSP software for Creative ?

Hi ...
I'm looking for software to use Creative Sound Blaster as DSP for EME
operation..

Any info ???

Luca Babini
e-mail: faimar@linknet.it

Date: 24 Sep 96 23:37:26 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #296

GE Item Number: 5457502
Original Msg Id: 387385
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #296
System: MARLBORO#
Date: Tue 24-Sep-96 23:31

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 24 Sep 1996 21:32:37 GMT
From: fisher@skylab.enet.dec.com (Burns Fisher)
Subject: HELP! Is shuttle audio available in Seattle?

In article <R.skarka-2109960141240001@news.linex.com>, skarka@pobox.com (Danny Skarka) writes:
|>Reposting article removed by rogue canceller.
|>
|>In article <32421569.2082@pacifier.com>, Rusty Countryman
|><byronc@pacifier.com> wrote:
|>
|> I can't believe it! There doesn't seem to be a relay for the shuttle
|>>> audio anywhere in the Northwest.
|>
|>You can get it from my Shuttle web page...
|>>>

A nice page...it puts a lot of good stuff together in one place.

However, I think what we need for shuttle audio is for someone with a satellite dish to set up another RealAudio server (and NASA TV frame grabber and/or CUCme server). Whenever anything interesting is happening, the poor web site at the Houston Chronical goes to its knees, as does the shuttle web site at KSC.

<sigh>

Burns (who wishes he had a place for a Big Ugly Dish)

Date: 25 Sep 1996 07:46:11 GMT
From: Philip Chien <kc4yer@amsat.org>
Subject: HELP! Is shuttle audio available in Seattle?

In article <51sk9n$ho@pulm1.accessone.com> Michael Rivero, rivero@accessone.com writes:
> I can't believe it! There doesn't seem to be a relay for the shuttle
>audio anywhere in the Northwest. The AMSAT list shows no entries for
>the states of Washington, Oregon, Idaho, or Montana.

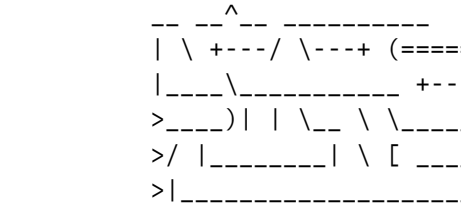
The best thing to do is get a local amateur radio club to retransmit the shuttle audio via a local repeater, and even better would be to also transmit amateur television.

As a guess the repeater site would have enough room for a 7 foot satellite dish (a real one, not one of the wimpy little dishes which doesn't have NASA TV available). Any decent techie can scrounge together the parts for a simple C-Band dish, recevier, and other components for a couple of hundred dollars. Add a phone patch with a remote controller and you're done.

In the Kennedy Space Center area John Anderson K4GCC has been transmitting NASA audio continiously from start of countdown through landing on his 146.94 Mhz repeater for every mission since STS-7 in June 1983. (other than hardware problems, local nets, or other technical issues).

LISATS, the local amateur television group has an amateur television repeater (K4ATV - 421.75 Mhz. out) with user switchable NASA TV.

If it doesn't exist - don't complain about it - do something about it.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

Date: 24 Sep 1996 19:21:08 GMT
From: petronet@sovam.com (Petronet Networks)
Subject: HELP me BAYCOM

I am needed of information aboit last
english ver. of BAYCOM (full).
73, Konstantin RK1NA ex UN1CD.

Date: 24 Sep 1996 23:11:04 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96268.24045518)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****

Mir
1 16609U 86017A 96268.24045518 .00005618 00000-0 68837-4 0 6818
2 16609 51.6517 344.9314 0011442 196.9516 163.1087 15.62035899605483
STS 79
1 24324U 96057A 96268.22916667 -.00000259 00000-0 31620-5 0 256
2 24324 51.6494 344.9899 0010803 190.3366 106.3455 15.62513891 1233
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

Date: 25 Sep 96 04:28:08 GMT
From: kb0rlo@juno.COM

Subject: RS-12

Is the 2 meter radio on RS-12 working? I can't seem to find my signal
downlink on 10
meters.

Mike
KB0RLO
KB0RLO@juno.com

Date: 25 Sep 1996 01:29:42 GMT
From: bass@cais.cais.com (Tim Bass)
Subject: WWW: Used Microwave Components

Hi.

Special Discount for rec.radio.amateur.space readers!

Take an extra 20 percent off microwave compenents;
filters, attenuators, waveguide, couplers, etc. until
the end of September off our very low prices.
30 day money back guarantee, as always.

http://www.valuerocket.com/microwave.html

I have been building a microwave lab, and have extra
gear to sell. Limited Quantities.

Tim

Date: (null)
From: (null)

SB KEP ARL ARLK069
ARLK069 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-79
1 24324U 96057A 96268.70563262 -.00000254 00000-0 32315-5 0 288
2 24324 51.6507 342.5879 0011623 192.1672 266.4251 15.62405357 1319
AO-10
1 14129U 83058B 96265.11924240 -.00000160 00000-0 10000-3 0 04551
2 14129 25.9261 188.3902 6039507 50.6255 348.8663 2.05882354071843
RS-10/11

```
1 18129U 87054A 96267.98645985 .00000037 00000-0 24438-4 0 02751
2 18129 82.9227 75.5068 0010259 240.6087 119.4044 13.72369699463728
UO-11
1 14781U 84021B 96268.00379276 .00000115 00000-0 27162-4 0 09350
2 14781 97.8077 254.3729 0012104 128.8854 231.3434 14.69481329672166
RS-12/13
1 21089U 91007A 96268.07217714 .00000014 00000-0 -84459-6 0 09371
2 21089 82.9230 116.0239 0028955 321.5573 38.3524 13.74073308282613
AO-13
1 19216U 88051B 96266.86957516 .00058522 99563-6 14563-2 0 02812
2 19216 57.1216 89.9045 7431519 51.4974 354.4505 2.13706262031906
UO-14
1 20437U 90005B 96268.06252003 .00000031 00000-0 28810-4 0 02258
2 20437 98.5404 349.2084 0010183 273.3052 86.6966 14.29932033348184
RS-15
1 23439U 94085A 96267.99212257 -.00000039 00000-0 10000-3 0 01768
2 23439 64.8131 223.2946 0159223 181.7270 178.3114 11.27528788071925
AO-16
1 20439U 90005D 96267.73671996 .00000016 00000-0 23249-4 0 00228
2 20439 98.5553 351.2845 0010693 275.4678 84.5280 14.29984768348157
DO-17
1 20440U 90005E 96267.74918494 .00000029 00000-0 28158-4 0 00136
2 20440 98.5568 351.9844 0010728 274.4147 85.5805 14.30126859348188
WO-18
1 20441U 90005F 96267.74114044 .00000022 00000-0 25262-4 0 00255
2 20441 98.5572 351.9080 0011336 275.9748 84.0135 14.30096022348183
LO-19
1 20442U 90005G 96267.79937845 .00000041 00000-0 32619-4 0 00225
2 20442 98.5592 352.5024 0011619 274.3193 85.6661 14.30206361348216
FO-20
1 20480U 90013C 96268.01026226 -.00000066 00000-0 -68502-4 0 09233
2 20480 99.0204 274.0653 0539888 260.5489 93.4217 12.83234067310569
AO-21
1 21087U 91006A 96268.36866747 .00000093 00000-0 82657-4 0 7433
2 21087 82.9396 248.2928 0033969 291.5682 68.1854 13.74572448283634
UO-22
1 21575U 91050B 96268.20087340 .00000034 00000-0 25701-4 0 7174
2 21575 98.3422 331.5950 0007611 335.7788 24.3039 14.37036971272285
KO-23
1 22077U 92052B 96268.15007653 -.00000037 00000-0 10000-3 0 06086
2 22077 66.0788 342.2534 0015228 273.6839 86.2440 12.86298076193538
KO-25
1 22828U 93061F 96268.11972426 .00000016 00000-0 23931-4 0 04886
2 22828 98.5715 342.1037 0010225 290.8283 69.1810 14.28152514124231
IO-26
1 22826U 93061D 96268.09195195 .00000016 00000-0 23847-4 0 05079
2 22826 98.5707 342.0038 0009261 307.8934 52.1409 14.27813294156116
AO-27
1 22825U 93061C 96268.10316971 -.00000027 00000-0 67741-5 0 05061
2 22825 98.5722 341.8345 0008256 306.1705 53.8694 14.27703860156101
```

PO-28
1 22829U 93061G 96268.13765730 .00000025 00000-0 27633-4 0 04969
2 22829 98.5724 342.1873 0009534 291.2456 68.7709 14.28134185156150
FO-29
1 24278U 96046B 96268.14698303 -.00000042 00000-0 -81271-5 0 00198
2 24278 98.5760 339.1601 0351824 154.9976 206.8674 13.52625960005150
Mir
1 16609U 86017A 96268.43238672 .00004561 00000-0 57048-4 0 6823
2 16609 51.6511 343.9616 0011067 198.4087 161.6595 15.62034554605512

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
September 28, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX

End of Ham-Space Digest V96 #297
****

Date: Mon, 30 Sep 1996 23:54:21 -0700
From: "alex@hic.net" <alex@hic.net>
Subject: Help with Freq's...

I am looking at an older radio that has Sat capability but works only,
116-150Mz and 225-400Mz, Is there any Bird I work using AM/FM? They make
a good antennae for it but I don't want to invest unless 3D or something
else might let me use it.

Thanks Alex@hic.net
KC5GEL

Date: 1 Oct 96 19:09:20 GMT
From: jeffrey_austin@juno.COM (Jeffrey S Austin)
Subject: JOTA (the hut?)

Well folks it's that time of the year again. Puzzled?, confused? Thinking
that this fellow has fallen from his rocker and can't get up. Nope, it's
time for JOTA, Jamboree On The Air. This year I'm hoping for contacts on
all the analog birds, especially AO-13. It will be held the third weekend
of this month starting at 0001 Saturday going until 2359 Sunday. All
times are local and there will be some activity starting Friday afternoon
and finishing Monday morning because of DX. If you want more info or set
a sked, e-mail me.

-73's de Jeff n8vna@amsat.org

"A man is only as intelligent as the words he speaks"

Date: 1 Oct 1996 13:05:53 GMT
From: "Claton Cadmus" <aplitech@spacestar.com>
Subject: Mir Freqs.

What are the current frequencies being used by Mir for packet and voice?

Thanks,
Claton Cadmus |73 de KA0GKC
Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
Ph. (612)926-8886 |ARCC, MNQRP&HB Society
Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us

Date: Tue, 01 Oct 96 16:18:38 GMT
From: trandall@mhv.net
Subject: Mir Freqs.

In article <01bbaf95$8db41d80$9d93dccc@groucho.spacestar.com>, "Claton Cadmus"
<cla@spacestar.com> wrote:
>What are the current frequencies being used by Mir for packet and voice?
>
>Thanks,
>Claton Cadmus |73 de KA0GKC
>Application Technologies Inc. |ARRL, QRP-ARCI, NorCal
>Ph. (612)926-8886 |ARCC, MNQRP&HB Society
>Fax (612)926-8545 |ka0gkc@ka0gkc.ampr.org
>E-mail cla@spacestar.net |ka0gkc@wb0gdb.#stp.mn.us
>

145.550 simplex for both packet and voice

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: 1 Oct 1996 06:30:55 GMT
From: aikido@magicnet.net (Matt O'Born)
Subject: Opinions on satellite tracking software wanted

Hello to all,

I've just upgraded my old 286 (finally..!) with a brand new computer
running Windows95. On my piece of antique I was using STSOrbit and
Traksat for my modest satellite activity (RS satellites and NOAA
reception). With my new machine I'd like to use a satellite tracking
program that works under Windows. I've been told about Logsat and

WISP. Has anyone out there had any experience with them? Do you have
any others you can suggest? I'm looking for either shareware programs
or commercial ones (if they are worth the price). Any comments are
welcome!

Matt O'Born
aikido@magicnet.net

Date: 1 Oct 1996 07:14:14 GMT
From: "BJ ARTS" <bjarst@uslink.net>
Subject: R0MIR active

I just worked R0MIR as the MIR space station passed over the USA during the
0700 UTC pass. I talked with Alexander and we had a nice long QSO. KC5TZQ
was busy with an experiment at the time. Alexander told me the conditions
are nice and warm on MIR. Temp between 70 and 75 degrees F and they have
having lots of fun.
73 de BJ WT0N

End of Ham-Space Digest V96 #304
****

Date: Thu, 3 Oct 96 04:30:40 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Subject: Ham-Space Digest V96 #305

Ham-Space Digest Thu, 3 Oct 96 Volume 96 : Issue 305

Today's Topics:
Any info on JAS-2?
DC/MD/VA RA Enthusiasts?
Internet for Ham: exist a book?
KANSAS CITY TRACKER

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Oct 1996 10:01:49 GMT
From: boyer@rd.bbc.co.uk (John Boyer)
Subject: Any info on JAS-2?

Bernard A. Poskus and Cheryl A. Blehm-Poskus (hamdan@ix.netcom.com) wrote:
: Guys, I worked someone on FO-29 (the permanent name for JAS-2) a few
: weeks ago. Unfortunately, I hear that NORAD seems to be having trouble
: getting accurate keps for it. I tried monitoring it tonight and heard
: nothing (it's Sept. 28th, and I tried to monitor a pass at about 5:20
: UTC). Most of the time, when I listen for it, I hear nothing, and I
: think this is because of bad keps. At any rate, when I have heard it,
: the analog transponder has been on and the signals have been excellant.
:
: 73's de Bernie, KF0QS
:

I have heard the digitalker once, but oftern I have heard nothing when
expected.

J.

Date: Wed, 2 Oct 1996 15:02:07 GMT
From: broom@acm.org (Ralph Broom)
Subject: DC/MD/VA RA Enthusiasts?

I'm looking for people in the DC metro area who are interested in, or
already active in Amateur Radio Astronomy. I would like to combine
expertise and resources to construct and operate an RA site, and
conduct data analysis.

Followups or email OK.

-Ralph Broom-

Date: Tue, 01 Oct 1996 02:05:40 GMT
From: kaleida@mbox.vol.it (kaleida)
Subject: Internet for Ham: exist a book?

I want any book on internet and radio amateur activity, if it exist?
kaleida@mbox.vol.it
tnx 73 -.-

Date: Tue, 01 Oct 1996 15:33:30 GMT
From: peter@frick.speedline.ca (Peter Gayle)
Subject: KANSAS CITY TRACKER

Hi I just recently bought a KC Tracker at an estate sale.
When I bought it, I did not realize that I also needed the
accompanying software disk. If u have this disk I would appreciate a
copy. I would pay for shipping or an Email transfer with an attachment
would work well too.
Thanks.....Peter, VA3PK

End of Ham-Space Digest V96 #305
****

Date: 10 Oct 96 18:24:29 GMT
From: shipco-postmaster@geis.COM
Subject: Ham-Space Digest V96 #318

GE Item Number: 9161541
Original Msg Id: 395410
shipco-postmaster response to your message

Subject: Ham-Space Digest V96 #318
System: MARLBORO#
Date: Thu 10-Oct-96 18:37

Status: 6 Message picked up by receiving system and
delivered to all recipients with some exceptions.

Address Delivered To:
REINHART
Address Status Message:
Invalid cc:Mail address

Date: 10 Oct 96 05:53:54 GMT
From: "Roberto Franceschetti" <roberto@netwide.net>
Subject: logsat

Rob,

<<<
When the user browses through a list of satellites, show him the object
numbers and associated names as they appear in the current keplerset.
When he selects one of these objects for future tracking, write only the
object number to his configuration file, not the name.
>>>

Again, we will not display satellites by catalog number. Numbers are not
made to be understandable by man, that's why we also assign NAMES to the
satellites. If you're a ham and you're tracking ao13 & rs-12 & rs-15 &
ko-25 & noaa10 & noaa14, or if you're in the navy and are tracking gps-bi01
& gps-bi02 & gps-bi03 & gps-bi04 & gps-bi05 & gps-bi06, or you're in
telecommunications and you're tracking Gorizon-14 & Intelsat-601 &
Intelsat-602 & Intelsat-603 & Telstar-401 & Telstar-402, etc... you're not
going to know the satellites by catalog number, you're going to recognize
them by NAME. Logsat will thus use names to identify satellites.

<<
Whenever the satellite is being tracked, read the elements from the current
keplerset by object number, and display the name found.
When the name in the keplerset changes, so does the name on the display.
>>

We can't do this: You are used in seing AO13 in the list of selectable satellites. You change your source of keps, update and.... your familiar AO13 disappears from the list. A new Oscar13 instead appears at the end of the list, but you won't know unless you dig in the list.

<<
When updating keplersets by adding additional data, only use the object number for identification of data. Don't look at the names, but just write the names in the keplerset file just as the other data is written. You will never have a double name because each object number can be present only once, and can have only one associated name.
>>

You will not have double names, but will have familiar names which might disappear.

LogSat is not only used by people like you and I, who know what catalog numbers are, but also by several users who don't know what they are, and don't want to know. All they need is to track their gps-bi03, or their Eutelsat 1. LogSat tries to be as user friendly as possible, and one of the things necessary to do so is to use names rather than numbers.

--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Rob Janssen <rob@pe1chl.ampr.org> wrote in article
<DyyC0I.Cw0@pe1chl.ampr.org>...
> In <01bbb34d$3cb0e420$068067ce@miseno.netwide.net> "Roberto
Franceschetti" <roberto@netwide.net> writes:
>
> >It's not as easy as you think. Suppose you're using Oscar 10 (cat
#14129).
> >The elements have become 15 days old, so you update them. The kep file
> >you're using is different than the one you used previously. This one
call
> >the same satellite AO 10 (again cat #14129). What should the program do
> >now?
>
> >1- Keep the satellite identified by #14129, and change the name from
Oscar
> >10 to AO 10. But in this case, if you're used to tracking a satellite
> >called Oscar 10, you see it disappear from the database.
>
> >2- Keep the satellite identified by #14129, and change the name of the
> >satellite being read from AO 10 to Oscar 10. This way though, you will
be
> >stuck with whatever name is in the keps file the first time ever that
keps
> >are read.

>
> >3- Since the cat # is unique, it could insert the new name AO 10, and at
> >the same time update the data for Oscar 10. This way you have both Oscar
10
> >and AO 10 in the database. But since the elements have the same age, you
> >can not use the option to remove sats with older keps, and you will
always
> >have a double satellite in the database. This might be better and cause
> >fewer problems for beginners, but once you figure out what's happening
with
> >the double name business, you'll get tired of having double sats in
there.
> >Remember that this also happens for NOAA 10, NOAA-10, NOAA10 etc.. You
> >would constantly have double, triple names in there everytime you
update.
>
> >4- Leave the Oscar 10 with its older keps alone, and import the AO 10
with
> >updated data. Now you have both satellites in there. You won't see your
> >Oscar 10 being updated, but there is an AO 10 with fresh data. The old
> >Oscar 10 will be erased if you select to remove older satellites. This
is
> >how things work now, but it is by no means a perfect choice. We had to
> >choose between the four, and we selected this one.
>
> 5- (the way it should be done, IMHO)
>
> When the user browses through a list of satellites, show him the object
> numbers and associated names as they appear in the current keplerset.
> When he selects one of these objects for future tracking, write only the
> object number to his configuration file, not the name.
>
> Whenever the satellite is being tracked, read the elements from the
current
> keplerset by object number, and display the name found.
> When the name in the keplerset changes, so does the name on the display.
>
> When updating keplersets by adding additional data, only use the object
> number for identification of data. Don't look at the names, but just
> write the names in the keplerset file just as the other data is written.
> You will never have a double name because each object number can be
present
> only once, and can have only one associated name.
>
> So, sometimes you may see "AO 10", sometimes "Amsat Oscar 10", sometimes
> "Oscar 10". But in all those cases you are tracking the same object
> and you are using the newest elements. There will be no "lost object"
> because the program has remembered it by object number, which always
> remains the same.
>

> The only time the above scheme causes trouble is when NASA and ARRL
> disagree about which object number is which satellite. This can be a
> problem with KO-25. KO-25 users know about this.
> It means you need to have the capability to select an object by object
> number as well as by name (as I have written in the first paragraph)
>
> Rob
> --
>
+-----------------------------------+---------------------------------------
+
> | Rob Janssen pe1chl@amsat.org | WWW:
http://www.knoware.nl/users/rob |
> | AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS:
PE1CHL@PI8WNO.#UTR.NLD.EU |
>
+-----------------------------------+---------------------------------------
+
>

Date: 10 Oct 1996 12:58:15 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: sarex freqs on mir ?

The other night, 10/8 about 3am est, a MIR post was read over
the air discussing a 9600 baud paket frequency set. The
frequency's mentioned were 437.975/435.775, and 437.925/435.725
with a pl 141.3 (which I monitor every pass and have heard
nothing). I know about the later but not the former. Anybody
know anything about this ? If anyone hears anything on either
set let me know.

73 Jeff kb2wqm@juno.com

Date: 10 Oct 96 21:26:56 GMT
From: ea1rup@arrakis.ES (Fernando Herranz Maestro)
Subject: unsubscribe

unsub ea1rup@arrakis.es ham-space

End of Ham-Space Digest V96 #319
****

2125. ic-820/821 out-of -band mods?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: Rafael Garcia <"rafael "@sat.cide.upm.es>
Message-ID: <547hcn$ar@sanson.dit.upm.es>
Source record: 21200

Hi all,

I would like to know if there is a way to extend the UHF band of
IC-820/821 Icom radios.

I do know VHF band is capable to receive 136-150 MHz, but nothing about
UHF.

Thanks in advance

Rafael

2126. Path of RS-10

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: baack@maine.maine.edu
Message-ID: <54819v$15t4@sol.caps.maine.edu>
Source record: 21201

Greetings all,
I was wondering about the path of rs-10. It seems that the best pass for my location (FN54kd) ((Camden, Maine area)) Seems to be in the early afternoon. 1-3ish? I was wondering if this "changes". I realize that the satellite changes its orbit, thus the need for new Keps... however, MAJOR changes happen approx. how often, a month? A week? 6 months?
(ex.. a good 2 pm pass has now moved to a good 4 pm pass)

Any help/ ideas?

TNX
Jason N1RWY
" 9 contacts on RS-10 and loving it! "

2127. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: Tim & Sandy Pickett <tim@tpickett.agn.net>
Message-ID: <5495kg$9lo@News.AGN.NET>
Source record: 21202

Mixalis Dimitrakakis wrote:
>
>
> Dear Amateurs
>
> I am planning to buy a new sat. software tracking program and I need your
> opinions.
> I 've seen the adver. of" Micro Orbiter 3.0" from Precision Software Solutions
> for 49.95 $ plus 4.00 for S & H, in the Satellite Times Magazine and I have
> also seen the adver.of" Nova" for $ 50.00 for AMSAT MEMBERS (that I am) in the
> Amsat Journal that I receive every 2 month.
>
> I am currently using the "Instant Track" with a 486 at 100MHz.
> I need the pros and cons for those two software from any possible users.
>
> My warmest thanks to all of my fellow hams that will take the time to
> respond and help me out with my decision.
>
> 73 Michael SV1CVY
>
> Electrical Engineer
> Intracom SA
> R & D Dept.
> email mdim@intranet.gr
>
> >
> 2

All I can say is Nova all the way! I have tried them all, and nothing
beats nova.

A demo copy of Nova is available from my web page if you want to try it.

Tim
http://www.agn.net/tpickett/index.html

2128. Re: RS-12

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: clinton.peebles@saloon.bcbbs.net
Message-ID: <9610190126042761@saloon.bcbbs.net>
Source record: 21203

```
> | | |
> ___________/ \ | | __
> |___________|_/\ ___|_|_________ |\\|
> /_________ |/ |_/ _______ ||//|
> _/ _____ \ |_____/ / _____ \ ||\\|
> |__ / _ \__\__________/_/ _ \_\_| --
> | (_) | '---' | (_) |
> \_____/ \_____/
```

```
LM> "There's only one Jeep!"
```

That's right and it's called CJ-5!!

2129. price per pound.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: mayen1@tcs.ITis.COM
Message-ID: <199610182308.SAA06324@tower.itis.com>
Source record: 21204

Hi all.

I was just wondering, what the price per pound on the average commercial
companies pay NASA to send their equipment into orbit.
I would think it would vary depending on the type of orbit too.
Does anyone have any facts on this?

Thanks
Joe Mayenschein
Near Space Sciences

2130. HOW to QSL Mir (KC5PZQ)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-18 00:00:00 UTC
From: baack@monet.umecut.maine.edu
Message-ID: <548mu2$9j5@service-2.agate.net>
Source record: 21205

Greetings all!
Was lucky enough today to work KC5PZQ about MIR!
What a Thrill. 25 watts into a 5/8 colinear @ 15'.(Kenwood TR-9130)

My question is what do I do to get a card? Who do I send information out to?

Any help would be great.

Jason N1RWY
baack@midcoast.com

2131. MirKEPSPCtrak

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: seven@datasync.com
Message-ID: <549l3s$f8f@osh2.datasync.com>
Source record: 21206

I need help ith loading the KEPS for MIR from W1AW into PCTRACK
tracking program. The darn key doesn't seem to match up with the keps.
The catalopg # and not much else is clear. HELP!!!
Anyone experienced with this program and inputting new keps?

thanks
73's

2132. Ham Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: marty@thepit.trucom.com
Message-ID: <549q32$d2d@thepit.trucom.com>
Source record: 21207
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

Hello, Folks:

I have just put up my new home page and invite all to drop in for a look. Included at the site are the following areas:

Ham Radio -- Mostly packet, mostly high speed

Pipe Smokers -- Very, very much still under construction

Astronomy -- Mostly Amateur Radio Astronomy (good 2nd interest for Hams!)

Mapping -- Mostly about elevation maps - NEW INFO!

The URL to use is:

http://www.trucom.com/ppages/marty

I have just today (17 OCT) updated the pages to include a Frames Version that makes navigation around the site easier. Note that the non-Frames Versions are still there but the URLs have changed.

Thanks!

Take Care & 73

Marty Albert - marty@trucom.com
Amateur Radio: KC6UFM@KC6UFM.#SEMO.MO.USA.NOAM

Heartland Internet Services

****
Are You A Pipe Smoker? Have A Look!
http://www.trucom.com/ppages/marty
****

2133. Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: cuervo@netcom.es
Message-ID: <54acuh$mdv@artemis.ibernet.es>
Source record: 21208

I'm searching some information about how make a home made antenna for the satellite meteosat.

Any information are welcome.

Victor Alonso EA1KR
cuervo@netcom.es

2134. Running OFS WFax Software in a DOS Window

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: jwhac4ca@atl.mindspring.com
Message-ID: <3268c412.2075895@news.mindspring.com>
Source record: 21209

Has anyone figured out how to run the OFS WFax software in a DOS Window from Win95 and still get more than two megs of XMS memory?

I have configured the DOS Window to allow 8M of XMS memory, but when OFS comes up it still uses only 2M. This limits the amount of data you can store on a pass to 2M. The only way I can figure out how to get more memory is to run the software in DOS Mode. This approach works fine, but is handicapped by having to restart Win95 upon exiting WFax.

Or better, does anybody know of any Win95 software to run the OFS PCMCIA card?

Regards -John
(http://www.mindspring.com/~jwhac4ca/jwhwxsat.html)

2135. Re: APT Satellite recv.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: William Vynck <creart.vynck@unicall.be>
Message-ID: <3268D14E.3126@unicall.be>
Source record: 21210

Terry Fugate wrote:
> you can find it at "http://www.ourworld.compuserve.com/homepages/hffax"
> (I think the WWW belongs in there).

My Nescape din't fins this adress, please help me out ?

THX
73
William

--
Visit my Homepage : http://uc2.unicall.be/creart
e-mail : creart.vynck@unicall.be - fidonet : 2:291/1800.15

2136. LMR COAX

Newsgroup: rec.radio.amateur.space
Date: 1996-10-19 00:00:00 UTC
From: p000655b@pbfreenet.seflin.lib.fl.us
Message-ID: <549ce3$6jc@nntp.seflin.lib.fl.us>
Source record: 21211

I bought some LMR 400 ultraflex. I have problems putting the N connectors
on it. Does any one know if it requires a special connector.
I am trying to improve my stations down link on 2 meters satellite.
Thanks in advanced.

73 KB4SVP.

--

Richard Bascom
p000655b@pbfreenet.seflin.lib.fl.us

2137. sattelit frequency

Newsgroup: rec.radio.amateur.space
Date: 1996-10-20 00:00:00 UTC
From: LE LEVIER Alain <leleval@worldnet.fr>
Message-ID: <01bbbe77$93963120$b59fcec2@Worldnet.sct.fr>
Source record: 21212

Please send me the list of differents frequencies of the radio -amateur
sattelites.
Tks per advance.
S 73
F6ELG

2138. amateur satellites and WV web page

Newsgroup: rec.radio.amateur.space
Date: 1996-10-20 00:00:00 UTC
From: John Harmon <n4okl@amsat.org>
Message-ID: <01bbbe85$2d137bc0$36ac63ce@Pjharmon>
Source record: 21213

Hello all,
You are invited to stop by and check out my new homepage which covers amateur satellites and Wv news. I am still working on it, seems like i heard that somewhere before.

Thanks and 73, John
--
Email: n4okl@amsat.org
homepage: http://www.newwave.net/~jharmon

2139. Re: LMR COAX

Newsgroup: rec.radio.amateur.space
Date: 1996-10-20 00:00:00 UTC
From: wday@dfw.net
Message-ID: <wday-2010962309120001@ppp14.isrc.net>
Source record: 21214

In article <549ce3$6jc@nntp.seflin.lib.fl.us>,
p000655b@pbfreenet.seflin.lib.fl.us (Richard Bascom) wrote:

> I bought some LMR 400 ultraflex. I have problems putting the N connectors
> on it. Does any one know if it requires a special connector.
> I am trying to improve my stations down link on 2 meters satellite.

Yes, the LMR cable does require a special connector. Your cable dealer
should have them... or contact Texas Towers (TexasRF@aol.com)
(800/272-3467)... they have them in stock.

73 Wayne KF5ZC

Wayne Day KF5ZC Fort Worth,Texas,USA kf5zc@amsat.org
CompuServe: 76703,376 76703.376@CompuServe.Com
wday@cq.net
Member: Bicycle Mobile Hams of America
For info on BMHA or the BIKEHAM mailing list: Finger KF5ZC@dfw.net
---

2140. CQ CQ SKED EME (25 and 26 october)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: "Jean Philippe P." <jpp@pacwan.mm-soft.fr>
Message-ID: <326BBE39.25B6@pacwan.mm-soft.fr>
Source record: 21121

Hello dear OM

The french group will go to activate EME station for the contest, and
over contest the week end of 25 and 26 october. Only the U.H.F.
frï¿½quencies.
******=oOo=******
The date and time is : - Day 25 october (20H00 GMT to 06H00 GMT)
- Day 26 october (20H00 GMT to 06H00 GMT)

The equipment : - ICOM 830 TH
- ANT. 8 x 26 elts UHF
- Amplifier antenna 600 W
- RX amplifier 20 DB for 0.45 NF of noise

The team : - F5IVP (Michel)
- F1IKA (Jean-Michel)
- F1USC (Jean-Philippe)
- F5SDD (David)
- F1LVO (Jean-Franï¿½ois)
And more
Thank you to read my Email, my best 73's and good DX

de F1USC, Jean-Philippe

2141. Newbie has Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: gradyr@mindspring.com
Message-ID: <gradyr-2110962357070001@user-168-121-178-82.dialup.mindspring.com>
Source record: 21122

First off, as a new HAM (KF4LDO), I thought it would be as simple as getting my license and a radio...well I've had my license since the end of July and STILL haven't bought a radio...why you might ask? Because everytime I think I've settle on a radio, I hear about something else you can do with Amateur Radio! :-) Blows my mind and it's definately excited.

Now I'm coming to you to learn more about satellites. I understand that at times one can speak with Shuttle Astronauts on 2M SSB. AM I correct on this? You can also talk with Cosmonauts on Space Station Mir. And I have heard of satellites that act as crossband-repeaters. Am I right on this? Can someone enlighten me a little more about what can be done?

Knowing this, it looks like a good radio would be a 2M Multi-mode radio. Perhaps the Yaesu FT-290? Seems to be relatively inexpensive, mobile, and very durable. Any other opinions?

Any help appreciated!

TIA,
Grady
KF4LDO

PS-Please don't limit to things that only Techs can do...working on Morse!

2142. Re: price per pound.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <54egc6$btq@paperboy.ids.net>
Source record: 21215

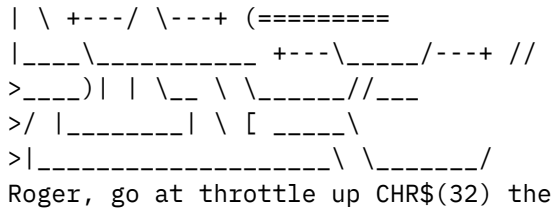
In article <199610182308.SAA06324@tower.itis.com> , mayen1@tcs.ITis.COM writes:
>I was just wondering, what the price per pound on the average commercial
>companies pay NASA to send their equipment into orbit.
>I would think it would vary depending on the type of orbit too.
>Does anyone have any facts on this?

The answer is zero dollars per pound. The last "commercial" satellite launched by NASA was the Palapa B2P satellite on a Delta rocket in 1987. The Space Commercialization Act of 1986 got NASA out of the business of rocket launches, turning it over to commercial industry. The exceptions are launches which specifically require the shuttle's unique capabilities, launches of national security payloads, and "other compelling reasons."

The typical price to take a commercial rocket to low earth orbit is in the range of about $4000 per kg.

To a more-typical geosynchronous transfer orbit a Delta 7925 retails for about $50 Million, an Atlas IIAS goes for about $115 Million, and half of an Ariane 4 goes for about $75 Million.

As an example, AMSAT has announced that it is paying approximately $1.5 Million to ESA for the launch of the phase 3-D satellite and suport hardware (about 500 kgs.) to a geosynchronous transfer orbit for the AR 502 launch. This is a discounted rate because it's a test flight. (Since test flights have a very high tendency to get delayed, and are considered riskier than operational missions they're sold at a discount.)

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

2143. FS: HP 3964A Instrumentation Recorder (4 Channel, HPIB)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: bass@cais.cais.com
Message-ID: <54em79$sdm@news2.cais.com>
Source record: 21216

[Article crossposted from sci.electronics.equipment]
[Author was bass@cais.cais.com]
[Posted on 21 Oct 1996 02:12:22 GMT]

Extra, working 4 channle Instrumentation Recorder, For Sale.
Excellent for monitoring and recording real-time data,
for example: SETI research, signal analysis, monitoring,
recording and playback of scope and analyzer signals.
Excellent for serious researchers and experimentalists.
However, not something the average person might have next
to the Netscape window and mouse pad.

Good Working Condition, HP-IB interface, dust cover removed.

Model: HP 3964A
Desc. Instrumentation Recorder
Channels: Four
Tape: 1/4" reel-to-reel
Speeds: 5 Speeds: 15/23, 15/16, 1 7/8, 3 3/4, 7 1/2 & 15
Calibration: 6 voltage calibration level, switchable meter for channels
Remote Control: Both IEEE-488 (HPIB) and standard (centronics)
Options: 002, 003, 004, 007, 026, 041
Manual: Yes

HP Orig. List $11,000.00 (without options)
ValueRocket Sale: $ 3,500.00 (with options :-)

Time Limited Offer.

Best Regards,

Tim

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mailto:lab@valuerocket.com voice (703) 222-4243
http://www.valuerocket.com/ fax (703) 222-7320

--
mailto:lab@valuerocket.com voice (703) 222-4243
http://www.valuerocket.com/ fax (703) 222-7320

2144. Re: Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <54fhb8$pnv@bbcnews.rd.bbc.co.uk>
Source record: 21217

victor alonso (cuervo@netcom.es) wrote:
: I'm searching some information about how make a home made antenna for
: the satellite meteosat.
:
: Any information are welcome.
:
: Victor Alonso EA1KR
: cuervo@netcom.es
:

If you join the RIG the Remote Imaging Group they have info and antennas
for sale in thier journal.

Try http://www.rig.org.uk/index.html

J.

2145. ic-820/ic-821 UHF extension?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: Rafael Garcia <rafael@sat.cide.upm.es>
Message-ID: <326B5572.35F4@sat.cide.upm.es>
Source record: 21218

Hi all,

I would like to know if there is an easy mod to extend the UHF band
portion for the ic-820/ic-821, especially below 430 MHz.

Thanks in advance,

Rafael,
Madrid, Spain

2146. Re: NOVA or Micro Orbiter 3.0 opinions....

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: Bob Snyder <Bob.Snyder@mci.com>
Message-ID: <326BC92D.58BB@mci.com>
Source record: 21219

Tim & Sandy Pickett wrote:
> All I can say is Nova all the way! I have tried them all, and nothing
> beats nova.

Well, I was using Nova until this last shuttle mission. I could not add the Shuttle to the database. I could enter the info, select the sat and it always showed up as the sun.

Also there are some bugs on the reports.

Get STS Plus. It's a great package.

2147. NORAD Two-Line Orbital Element Sets (TLE886)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <54gvd7$kot@blackbird.afit.af.mil>
Source record: 21220

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #886 -

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Alouette 1
1 00424U 62049A 96292.68988520 .00000068 00000-0 69564-4 0 2367
2 00424 80.4633 161.8890 0023982 74.7670 285.6119 13.67878417699226
ATS 1
1 02608U 66110A 96294.47264724 -.00000206 00000-0 10000-3 0 9843
2 02608 14.5939 351.4810 0008681 102.3362 257.7595 1.00298648 26120
ATS 3
1 03029U 67111A 96294.49416205 -.00000123 00000-0 10000-3 0 5583
2 03029 14.9146 358.4405 0009522 261.9147 201.5174 1.00273182106021
Starlette
1 07646U 75010A 96292.24309584 -.00000156 00000-0 -12079-4 0 54
2 07646 49.8295 23.1106 0205977 276.8135 80.9359 13.82191050 95982
LAGEOS
1 08820U 76039A 96293.56402216 .00000021 00000-0 00000+0 0 2320
2 08820 109.8512 68.6144 0043529 101.3067 259.2358 6.38664650221773
ETS-2
1 09852U 77014A 96291.27281713 -.00000145 00000-0 10000-3 0 807
2 09852 13.3796 31.4973 0006704 131.5009 228.5290 0.99998621 18862
GOES 2
1 10061U 77048A 96289.46326054 .00000056 00000-0 10000-3 0 7508
2 10061 12.5270 35.7026 0012052 122.3697 216.9959 1.00257423 15641
IUE
1 10637U 78012A 96292.27854743 -.00000182 00000-0 10000-3 0 2891
2 10637 35.6571 81.5855 1333957 61.0681 272.4706 1.00064303 21166
GOES 3
1 10953U 78062A 96290.39353315 -.00000121 00000-0 10000-3 0 7299
2 10953 11.5268 38.6309 0002185 143.3082 242.5145 1.00266647 20275
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SeaSat 1
1 10967U 78064A 96291.85712193 -.00000053 00000-0 27181-4 0 5236
2 10967 107.9942 68.5547 0002557 242.0296 118.0592 14.38127230959084
Nimbus 7
1 11080U 78098A 96295.16915359 -.00000023 00000-0 17040-4 0 6216
2 11080 98.9272 151.1708 0009471 352.0648 8.0355 13.83690422908591
GOES 5
1 12472U 81049A 96292.45429096 .00000095 00000-0 10000-3 0 9577
2 12472 8.3887 48.9386 0007131 73.4451 286.6280 1.00265617 14337
Cosmos 1383
1 13301U 82066A 96291.24414515 .00000021 00000-0 69267-5 0 5368
2 13301 82.9301 44.2994 0026144 265.0369 94.7798 13.68077412714064
LandSat 4
1 13367U 82072A 96292.69725584 .00000053 00000-0 21448-4 0 120
2 13367 98.0595 339.7709 0007801 109.5370 250.6672 14.57186421758521
DMSP B5D2-1
1 13736U 82118A 96295.12212986 .00000020 00000-0 26526-4 0 1069
2 13736 98.6234 121.4828 0009197 25.7300 334.4334 14.25807557719019
IRAS
1 13777U 83004A 96295.13952625 -.00000205 00000-0 -11105-3 0 4674
2 13777 98.9666 117.9764 0013362 108.8418 251.4196 13.99252798370981
Cosmos 1447
1 13916U 83021A 96293.85804008 .00000020 00000-0 50307-5 0 6287
2 13916 82.9432 98.8369 0037655 162.3910 197.8562 13.74346205680862
TDRS 1
1 13969U 83026B 96294.54183700 -.00000302 00000-0 10000-3 0 6509
2 13969 9.1554 42.4417 0003750 159.2273 333.7304 1.00283124 22648
GOES 6
1 14050U 83041A 96294.50078117 -.00000171 00000-0 10000-3 0 5614
2 14050 7.2293 52.4206 0002894 81.9819 341.2923 1.00221738107458
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96294.75257804 .00000045 00000-0 20255-4 0 5570
2 14780 98.3179 352.4772 0001555 273.7948 86.3065 14.57058942672249
UO-11
1 14781U 84021B 96293.94692114 .00000087 00000-0 22517-4 0 9212
2 14781 97.8094 279.1885 0012849 51.3987 308.8372 14.69488924675977
Cosmos 1574
1 15055U 84062A 96293.15341895 .00000050 00000-0 37846-4 0 8289
2 15055 82.9590 154.5284 0028274 359.4955 0.6166 13.73640730618001
Cosmos 1602
1 15331U 84105A 96291.23293782 .00000183 00000-0 18652-4 0 5101
2 15331 82.5353 358.6860 0018349 266.4656 93.4463 14.84794183651085
ERBS
1 15354U 84108B 96294.30738466 .00000150 00000-0 35288-4 0 2243
2 15354 56.9983 238.2428 0009627 98.6476 261.5725 14.94986518655552
NOAA 9
1 15427U 84123A 96294.82702008 .00000053 00000-0 51455-4 0 8850
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2 15427 98.9357 359.7447 0014806 321.8564 38.1558 14.13811055611387
Mir
1 16609U 86017A 96295.10895945 .00005160 00000-0 63237-4 0 7373
2 16609 51.6519 209.4110 0012486 299.1892 60.7883 15.62228257609680
SPOT 1
1 16613U 86019A 96292.24518717 -.00000045 00000-0 00000+0 0 9959
2 16613 98.8262 359.9977 0000443 205.7652 154.3502 14.19987711237775
Cosmos 1766
1 16881U 86055A 96293.41201991 .00000116 00000-0 11078-4 0 4257
2 16881 82.5182 54.3151 0017735 290.3964 69.5323 14.83765410552264
EGP
1 16908U 86061A 96292.21292321 -.00000083 00000-0 10000-3 0 1241
2 16908 50.0079 338.7657 0011543 326.0935 33.9160 12.44414880131720
NOAA 10
1 16969U 86073A 96294.74534428 .00000028 00000-0 30374-4 0 8206
2 16969 98.5305 288.2572 0013555 352.5952 7.5026 14.25006328524481
MOS-1
1 17527U 87018A 96294.18613798 -.00000043 00000-0 00000+0 0 4766
2 17527 98.9335 353.3662 0016796 342.7383 17.3239 14.00454014492483
GOES 7
1 17561U 87022A 96294.42702731 -.00000160 00000-0 10000-3 0 1089
2 17561 3.3088 68.5219 0004235 315.2698 62.8900 1.00260566 18564
Kvant-1
1 17845U 87030A 96295.04499290 .00702693 00000-0 71453-2 0 7909
2 17845 51.6540 209.7378 0012195 297.5296 62.4623 15.62285803543782
DMSP B5D2-3
1 18123U 87053A 96294.49599277 .00000005 00000-0 24920-4 0 6443
2 18123 98.7677 122.7293 0013281 258.3740 101.5944 14.15456275482223
RS-10/11
1 18129U 87054A 96294.88939849 .00000048 00000-0 35601-4 0 2784
2 18129 82.9239 55.6172 0011468 159.1883 200.9741 13.72370313467412
Meteor 2-16
1 18312U 87068A 96292.43143121 .00000015 00000-0 10000-7 0 5160
2 18312 82.5537 254.3147 0010929 232.7934 127.2262 13.84085816463227
Meteor 2-17
1 18820U 88005A 96294.54886761 .00000049 00000-0 30341-4 0 747
2 18820 82.5418 307.3800 0015777 299.6726 60.2863 13.84763609440873
DMSP B5D2-4
1 18822U 88006A 96294.53810023 -.00000003 00000-0 16735-4 0 3696
2 18822 98.3820 120.6200 0006712 6.0039 354.1218 14.23203565452408
Glonass 34
1 19163U 88043A 96294.34967549 .00000054 00000-0 10000-3 0 1232
2 19163 65.3210 81.6200 0006092 138.5701 221.4692 2.13102408 64904
Glonass 36
1 19165U 88043C 96294.40672059 .00000053 00000-0 10000-3 0 5301
2 19165 65.2987 81.5763 0005087 287.2950 72.6614 2.13102214 65524
METEOSAT 3
1 19215U 88051A 96292.30662265 -.00000094 00000-0 10000-3 0 2832
2 19215 3.5131 67.0488 0005696 117.8902 242.2482 0.96947514 18378
AO-13
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1 19216U 88051B 96293.72574326 .00103307 80894-6 26216-3 0 3056
2 19216 57.0575 84.0250 7406376 54.1726 354.7589 2.18486531 32483
OKEAN 1
1 19274U 88056A 96291.15140864 .00000220 00000-0 24260-4 0 1259
2 19274 82.5161 157.4381 0021470 82.3073 278.0579 14.82529324447445
Meteor 3-2
1 19336U 88064A 96294.89606801 .00000051 00000-0 10000-3 0 5206
2 19336 82.5362 77.4693 0015789 283.2277 76.7085 13.16979450396025
Glonass 39
1 19503U 88085C 96291.62171011 -.00000004 00000-0 10000-3 0 4100
2 19503 65.5462 320.5891 0009114 129.2859 230.8585 2.13101755 62955
NOAA 11
1 19531U 88089A 96294.77109470 -.00000022 00000-0 13244-4 0 7033
2 19531 99.1826 316.1253 0010804 249.5193 110.4819 14.13107144416183
TDRS 3
1 19548U 88091B 96294.81029988 -.00000207 00000-0 10000-3 0 2412
2 19548 2.7437 71.2485 0005689 138.9983 196.5134 1.00272719 16788
Glonass 40
1 19749U 89001A 96294.47455760 .00000052 00000-0 10000-3 0 6286
2 19749 65.2616 81.1390 0004782 258.9863 100.9664 2.13101553 60522
Glonass 41
1 19750U 89001B 96294.06017668 .00000054 00000-0 10000-3 0 5364
2 19750 65.2711 81.2192 0006188 239.3682 120.5800 2.13101828 60531
GPS BII-01
1 19802U 89013A 96293.79008293 .00000063 00000-0 00000+0 0 3068
2 19802 55.3964 105.6715 0032894 111.8779 248.4164 2.00554889 56213
Akebono
1 19822U 89016A 96294.32999841 .00007786 00000-0 36467-3 0 7996
2 19822 75.0800 51.1482 3741987 11.6632 355.1004 7.93927682176615
Meteor 2-18
1 19851U 89018A 96293.22889602 .00000068 00000-0 47429-4 0 5143
2 19851 82.5223 182.1761 0015397 353.2837 6.8115 13.84419124385992
MOP-1
1 19876U 89020B 96290.99611642 .00000000 00000-0 10000-3 0 2216
2 19876 2.1962 71.8579 0015940 287.2744 72.5553 0.97107742 7802
TDRS 4
1 19883U 89021B 96292.05941399 -.00000276 00000-0 00000+0 0 2658
2 19883 0.1299 74.8906 0005083 135.8452 156.4248 1.00266885200345
GPS BII-02
1 20061U 89044A 96291.13879128 .00000004 00000-0 10000-3 0 2845
2 20061 54.1241 281.3608 0169272 221.4226 137.2811 2.00562913 53900
Nadezhda 1
1 20103U 89050A 96294.84009686 .00000021 00000-0 59623-5 0 9408
2 20103 82.9636 16.0115 0039253 63.8228 296.6958 13.73870158365931
GPS BII-03
1 20185U 89064A 96290.92071359 .00000050 00000-0 10000-3 0 3325
2 20185 55.1771 106.2313 0020103 322.5572 37.3342 2.00807817 52475
GMS 4
1 20217U 89070A 96293.50120718 -.00000378 00000-0 10000-3 0 4661
2 20217 2.0165 75.2379 0000788 103.8515 149.5892 1.00282794 26668
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INTERCOSMOS 24
1 20261U 89080A 96295.17901111 .00000236 00000-0 63106-4 0 5366
2 20261 82.5980 190.2475 1242731 115.1523 258.3523 12.47354543321610
GPS BII-04
1 20302U 89085A 96294.99845257 -.00000034 00000-0 10000-3 0 3161
2 20302 53.2118 220.9728 0020798 165.2559 194.8342 2.00570082 51357
Meteor 3-3
1 20305U 89086A 96294.84293651 .00000044 00000-0 10000-3 0 6718
2 20305 82.5572 37.7146 0007328 15.1434 344.9906 13.04435235334585
COBE
1 20322U 89089A 96294.85165853 -.00000304 00000-0 -16637-3 0 2521
2 20322 98.9436 307.9799 0010399 42.5627 317.6315 14.03456103354557
Kvant-2
1 20335U 89093A 96295.04499290 .00702693 00000-0 71453-2 0 7212
2 20335 51.6540 209.7378 0012195 297.5296 62.4623 15.62285803392793
GPS BII-05
1 20361U 89097A 96291.52430745 -.00000023 00000-0 10000-3 0 1264
2 20361 56.0717 48.4456 0089010 136.7045 224.0166 2.00565566 40768
COSMOS 2054 (Altair-1)
1 20391U 89101A 96294.71184565 -.00000146 00000-0 00000+0 0 4379
2 20391 4.0740 62.8399 0004674 127.1724 79.6371 1.00271814 25255
SPOT 2
1 20436U 90005A 96292.86827267 -.00000044 00000-0 00000+0 0 1375
2 20436 98.7549 4.5939 0001205 62.0798 298.0500 14.20013939349393
UO-14
1 20437U 90005B 96292.20333375 .00000039 00000-0 32098-4 0 2186
2 20437 98.5382 12.8796 0010541 196.8218 163.2622 14.29934763351630
AO-16
1 20439U 90005D 96293.83582466 .00000021 00000-0 24958-4 0 168
2 20439 98.5520 16.9228 0011003 194.1159 165.9716 14.29986988351886
DO-17
1 20440U 90005E 96293.28598759 -.00000001 00000-0 16465-4 0 175
2 20440 98.5566 17.0909 0011073 194.7448 165.3413 14.30128888351832
WO-18
1 20441U 90005F 96294.74776658 .00000022 00000-0 25337-4 0 219
2 20441 98.5531 18.4517 0011730 191.0454 169.0480 14.30098332352041
LO-19
1 20442U 90005G 96291.23596540 .00000008 00000-0 19978-4 0 163
2 20442 98.5564 15.5485 0011989 199.5713 160.5024 14.30208301351562
GPS BII-06
1 20452U 90008A 96293.91033210 .00000024 00000-0 10000-3 0 2294
2 20452 54.0569 161.6815 0062464 90.0967 270.7050 2.00549969 49317
MOS-1B
1 20478U 90013A 96294.23763449 .00000088 00000-0 10000-3 0 9868
2 20478 99.1153 2.1302 0004799 276.1752 83.8862 13.93968391261970
DEBUT
1 20479U 90013B 96293.53723261 -.00000008 00000-0 56451-4 0 167
2 20479 99.0237 294.9619 0540141 202.0162 155.6907 12.83345100313852
FO-20
1 20480U 90013C 96291.08896505 -.00000015 00000-0 41764-4 0 9134
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2 20480 99.0230 292.7543 0540462 208.1428 148.9458 12.83235036313523
MOS-1B R/B
1 20491U 90013D 96292.22753972 -.00000906 00000-0 -16393-2 0 2842
2 20491 99.0739 2.7291 0470599 6.4089 354.2761 13.02982451317887
LACE
1 20496U 90015A 96295.13721267 .00001858 00000-0 59990-4 0 6968
2 20496 43.1014 204.2229 0009325 156.4909 203.6374 15.35992433373192
Nadezhda 2
1 20508U 90017A 96294.78661684 .00000041 00000-0 27253-4 0 9413
2 20508 82.9508 150.5375 0045565 17.8822 342.3920 13.73513499333139
OKEAN 2
1 20510U 90018A 96291.12213072 .00000089 00000-0 90788-5 0 5339
2 20510 82.5233 112.5302 0017490 281.9471 77.9770 14.78635205357698
GPS BII-07
1 20533U 90025A 96294.29656044 -.00000001 00000-0 00000+0 0 2696
2 20533 54.4851 282.0236 0049116 77.9277 282.6282 2.00564967 48095
PegSat
1 20546U 90028A 96294.85807039 .00007892 00000-0 14003-3 0 9803
2 20546 94.1191 63.9937 0055089 238.5359 121.0599 15.48558698364440
HST
1 20580U 90037B 96293.21619862 .00000392 00000-0 23580-4 0 8746
2 20580 28.4682 141.2617 0006162 31.6131 328.4821 14.91112136157111
MACSAT 2
1 20608U 90043B 96292.71559923 .00000141 00000-0 21667-4 0 2187
2 20608 89.9313 172.3531 0106551 345.5615 14.2556 14.64948493344376
Glonass 44
1 20619U 90045A 96294.37273294 .00000001 00000-0 10000-3 0 3330
2 20619 65.1405 319.6774 0024618 206.8846 153.0397 2.13102472 49972
Glonass 45
1 20620U 90045B 96291.20658501 -.00000004 00000-0 10000-3 0 3142
2 20620 65.1301 319.7704 0010565 60.9181 299.2594 2.13102735 49941
Glonass 46
1 20621U 90045C 96293.15118262 -.00000001 00000-0 10000-3 0 9305
2 20621 65.1314 319.7542 0012047 184.7346 175.3032 2.13102512 49989
Kristall
1 20635U 90048A 96295.04499290 .00702693 00000-0 71453-2 0 5136
2 20635 51.6540 209.7378 0012195 297.5296 62.4623 15.62285803363626
ROSAT
1 20638U 90049A 96292.88906295 -.00000321 00000-0 -20287-5 0 6018
2 20638 52.9857 101.9627 0013998 139.0089 221.1957 15.07471297350977
Meteor 2-19
1 20670U 90057A 96294.39719029 .00000010 00000-0 -39004-5 0 1070
2 20670 82.5431 248.4091 0014361 266.0228 93.9290 13.84127228319068
CRRES
1 20712U 90065A 96293.78479679 .00000124 00000-0 12508-3 0 3437
2 20712 17.5054 199.2148 7186857 112.5843 334.0670 2.35796654 46051
GPS BII-08
1 20724U 90068A 96292.64476007 .00000055 00000-0 00000+0 0 1193
2 20724 55.0123 103.7203 0131869 184.3220 175.5382 2.00564351 43922
Feng Yun1-2
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1 20788U 90081A 96294.89782916 .00000109 00000-0 10000-3 0 1056
2 20788 98.8109 296.0660 0015998 143.0988 217.1528 14.01386958313701
Meteor 2-20
1 20826U 90086A 96295.17292081 .00000108 00000-0 84625-4 0 261
2 20826 82.5279 184.0797 0012607 159.8237 200.3427 13.83639538306264
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2 21006 65.2595 80.6365 0056919 186.3366 173.6017 2.13102754 45575
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2 21007 65.2581 80.5648 0035973 177.9681 182.0481 2.13101065 45660
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JERS-1
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Glonass 73
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TDRS 7
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RADARSAT
1 23710U 95059A 96293.53781698 .00000161 00000-0 79543-4 0 1966
2 23710 98.5807 298.4670 0001155 64.3696 295.7605 14.29987699 50018
Glonass 79
1 23734U 95068A 96292.27618864 .00000011 00000-0 00000+0 0 1765
2 23734 64.8191 199.7758 0018504 323.0204 36.9060 2.13102216 6590
Glonass 78
1 23735U 95068B 96294.35249640 -.00000010 00000-0 00000+0 0 1747
2 23735 64.8148 199.6942 0007020 213.6340 146.3685 2.13125332 6631
Glonass 77
1 23736U 95068C 96293.44917337 -.00000002 00000-0 00000+0 0 1507
2 23736 64.8138 199.7368 0007761 198.0385 161.9832 2.13102127 6613
XTE
1 23757U 95074A 96291.90186277 .00000604 00000-0 21483-4 0 933
2 23757 22.9830 296.4026 0013384 89.3471 270.8557 14.97707328 43885
Polar
1 23802U 96013A 96291.23826788 .00000146 00000-0 00000+0 0 659
2 23802 86.2471 24.7632 6568294 280.2097 16.7734 1.36678853 3229
1996010E
1 23824U 96010E 96294.66902344 .00040377 00000-0 19212-1 0 1213
2 23824 47.5976 218.9216 7304862 58.3340 352.8326 2.23769772 5404
GPS BIIA-25
1 23833U 96019A 96294.04210773 -.00000060 00000-0 00000+0 0 939
2 23833 54.6756 342.9587 0039216 150.5315 209.7452 2.00564744 4187
Priroda
1 23848U 96023A 96295.04499290 .00702693 00000-0 71453-2 0 1624
2 23848 51.6540 209.7378 0012195 297.5296 62.4623 15.62285803 28195
MSX
1 23851U 96024A 96293.52654527 -.00000047 00000-0 00000+0 0 1145
2 23851 99.3889 275.4589 0007005 156.7356 203.4118 13.97552943 24869
SAX
1 23857U 96027A 96290.53499893 .00001078 00000-0 31484-4 0 378
2 23857 3.9560 311.8599 0014491 303.7561 56.1160 14.91626724 25299
MSTI 3
1 23868U 96031A 96295.11206485 .00002611 00000-0 54399-4 0 663
2 23868 97.1216 123.3756 0014003 74.2688 286.0106 15.46390860 24275
TOMS-EP
1 23940U 96037A 96293.22523485 .00002047 00000-0 94250-4 0 496
2 23940 97.4329 197.1364 0011639 272.4383 87.5521 15.21395603 16497
GPS BIIA-26
1 23953U 96041A 96291.46417431 .00000050 00000-0 00000+0 0 602
```

```
2 23953 55.0725 103.3901 0019464 340.9441 19.0089 2.00567353 1924
Progress M-32
1 24071U 96043A 96295.04499290 .00702693 00000-0 71453-2 0 837
2 24071 51.6540 209.7378 0012195 297.5296 62.4623 15.62285803 12715
ADEOS
1 24277U 96046A 96292.87897777 -.00000044 00000-0 00000+0 0 950
2 24277 98.6219 8.0127 0001981 101.4842 258.6563 14.27633052 8934
FO-29
1 24278U 96046B 96293.29710962 .00000024 00000-0 57559-4 0 276
2 24278 98.5755 0.9754 0352471 90.0376 274.1147 13.52626385 8551
Soyuz TM-24
1 24280U 96047A 96295.04500380 .00702824 00000-0 71465-2 0 666
2 24280 51.6540 209.7378 0012194 297.5295 62.5238 15.62285822 10098
FAST
1 24286U 96049B 96292.73442785 .00001633 00000-0 15903-3 0 319
2 24286 82.9982 151.3100 2207252 58.9531 320.9626 10.81841780 6309
MO-30
1 24305U 96052B 96292.22109835 .00000204 00000-0 20364-3 0 337
2 24305 82.9386 173.3951 0030835 156.3247 203.9306 13.73084480 5857
GPS BIIA-27
1 24320U 96056A 96294.31979440 -.00000001 00000-0 00000+0 0 255
2 24320 54.7038 283.4187 0054660 131.0636 229.1352 2.00563888 648
1996058A
1 24435U 96058A 96294.67683036 -.00000158 00000-0 00000+0 0 350
2 24435 0.1744 291.8242 0001707 204.9152 216.5460 1.00274253 235
1996058B
1 24436U 96058B 96273.42259432 .09269389 12720-4 11511-3 0 169
2 24436 51.6361 268.0057 0007631 300.3536 59.6839 16.49186939 442
1996058C
1 24437U 96058C 96271.59134398 .25242040 12693-4 30003-3 0 146
2 24437 51.6231 278.3198 0001631 39.3230 320.7852 16.49906500 141
1996058D
1 24438U 96058D 96271.42903887 -.00000244 00000-0 00000+0 0 20
2 24438 0.2950 290.3227 0008812 316.7620 4.5723 1.00168228 07
1996058E
1 24454U 96058E 96293.27443670 .00000547 00000-0 36723-3 0 114
2 24454 47.5563 276.6625 7269316 5.8978 359.3027 2.26894608 505
1996058F
1 24503U 96058F 96292.34346365 .00003021 00000-0 57795-3 0 100
2 24503 47.4962 276.8128 7293341 5.7650 359.3456 2.27472152 236
1996059A
1 24634U 96059A 96295.21865848 .00288248 80977-5 11580-3 0 55
2 24634 63.0411 82.9549 0125621 144.2580 216.7083 16.06884108 159
1996059B
1 24635U 96059B 96295.21786780 .02004426 80423-5 66947-3 0 41
2 24635 63.0513 82.9398 0121242 140.4413 220.5416 16.09495430 155
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

2148. Comprehensive frequency list ??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: Klaus Lutsch <lrt20892@rpool12.rus.uni-stuttgart.de>
Message-ID: <Pine.A32.3.94.961022074648.21431A-100000@rpool12.rus.uni-stuttgart.de>
Source record: 21123

Hello de dl8ser, name is Klaus.

Since I am new in the newsgroup business I do not know if there
were previous postings concerning satellite frequencies.

What I'm looking for is a comprehensive compilation of
frequencies used by both LEOs and GEOsats no matter whether
they are still in use or died away in orbit.

What I would like to try out is some sort of "satellite archeology"
I have learned that from time to time some satellites enter
a better sunangel and hence get enough power to revive for
a short periode of time.

So if there is anybody who knows of such a list I woul'd be very
glad if this list could be made available on this newsgroup.

I would also be happy about additional information and comments
about my project.

e-mail LKlaus@studbox.uni-stuttgart.de

73's de Klaus

2149. unsubscribe

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: lhagood@mail.utexas.EDU
Message-ID: <v01530506ae923c4cb37b@[128.83.253.16]>
Source record: 21124

```
Unsubscribe
```

2150. Mode K antennas?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: tkenny@qsun.ho.att.com
Message-ID: <326ee02d.334754083@nntpa.cb.lucent.com>
Source record: 21125

I've been trying to make my first satellite contact on RS12 via mode K (15m up, 10m down) and would appreciate antenna advice for operating this mode.

For now I'm just using a G5RV in simplex mode. The dimensions of my yard is something like 80' by 120' I was hoping that I could build some wire antennas that would help with the fading and be omnidirectional.

Any advice would be appreciated.

73, Tom Kenny KB2GLO

vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv
Tom Kenny KB2GLO Voice: 908-949-9704
PO Box 1222, Toms River, NJ 08754
EMail: tek@webspan.net URL: http://webspan.net/~tek
^^

2151. Re: Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: sdakin1@abacus.tis.tandy.com
Message-ID: <54irgs$rnc@abacus.tis.tandy.com>
Source record: 21126

victor alonso (cuervo@netcom.es) wrote:
: I'm searching some information about how make a home made antenna for
: the satellite meteosat.

: Any information are welcome.

: Victor Alonso EA1KR
: cuervo@netcom.es

If you can get a copy, look in the August 96 issue
of QST for an article on Quadrafilar antennas that
look to be well suited to this application.

Steve Dakin
WQ5N

2152. UHF/VHF Multimode choices

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: marv <MarvS@postoffice.worldnet.att.net>
Message-ID: <326C9439.78A7@postoffice.worldnet.att.net>
Source record: 21127

I've finally saved enough money to put together a UHF/VHF multimode station and would like some opinions on what radio to purchase.
I'm planning on using the station for UHF/VHF contests, packet (incl. 9600 baud), and working the present and future amateur satellites.
As of now I am leaning towards the new ICOM IC-821H, but I haven't ruled out the TS-790A or Yaesu FT-736R. Obviously I'd be adding amplifiers for use during contests and possibly for the satellites, and a 9600 baud ready capability should be present.
Some of the local hams I have asked have said that using Down East Microwave transverters with my TS-940SAT is THE best way to go for contesting, but doesn't give me a satellite or 9600bps packet capability.

Any Ideas..or experiences with any of the multi-mode radios would be appreciated..

Thanks & 73's

Marv (WA2BFW)

2153. Packet and IC-2000

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: Bob Snyder <Bob.Snyder@mci.com>
Message-ID: <326D1419.2A44@mci.com>
Source record: 21128
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

I would like to work packet on Mir and any others that are local to me here in Colorado. I bought an Icom IC-2000H and it has a modular microphone connector on it. I have 2 questions:

1. Does anyone have the mic. pin outs for the IC-2000?
2. What hardware should I buy? (I would like to stay under $300)

Thanks,
Bob Snyder KB0YGD

2154. Re: 2M lowcost aerial for receiving only

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: sdakin1@abacus.tis.tandy.com
Message-ID: <54jenu$gmg@abacus.tis.tandy.com>
Source record: 21129

Darin Quick (quicky@vicnet.net.au) wrote:
: I'm interested in the Telemerity from the Oscar series of satellites and
: was courious if there was any aerials that were cheep to make that didnt
: require constant moving to chase the satellite.

: Darin

Check the August 96 issue of QST. There is
an article about Quadrafilar antennas that
should work for you.

Steve Dakin
WQ5N

2155. ARLK077 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk077.1996@arrl.org>
Source record: 21130
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK077
ARLK077 Keplerian data

ZCZC SK77
QST de W1AW
Keplerian Bulletin 77 ARLK077
From ARRL Headquarters
Newington, CT October 22, 1996
To all radio amateurs

SB KEP ARL ARLK077
ARLK077 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96295.83719785 .00000074 00000-0 64202-4 0 02840
2 18129 82.9237 54.9160 0011565 156.4433 203.7255 13.72370634467549
UO-11
1 14781U 84021B 96295.98967995 .00000075 00000-0 20547-4 0 09320
2 14781 97.8096 281.1428 0012801 46.0253 314.1996 14.69489270676271
RS-12/13
1 21089U 91007A 96295.96117743 .00000004 00000-0 -11730-4 0 09425
2 21089 82.9206 95.3316 0027785 240.6900 119.1479 13.74074028286448
AO-13
1 19216U 88051B 96293.72574326 .00103307 80894-6 26216-3 0 03056
2 19216 57.0575 84.0250 7406376 54.1726 354.7589 2.18486531032483
UO-14
1 20437U 90005B 96296.26178749 .00000020 00000-0 24470-4 0 2194
2 20437 98.5371 16.8577 0010604 184.8667 175.2414 14.29935113352211
RS-15
1 23439U 94085A 96296.19670708 -.00000039 00000-0 10000-3 0 1705
2 23439 64.8192 177.6879 0157486 176.5686 183.6361 11.27528946 75104
AO-16
1 20439U 90005D 96295.79500546 .00000046 00000-0 34801-4 0 00259
2 20439 98.5520 18.8474 0011013 188.3477 171.7529 14.29987546352169
```

```
DO-17
1 20440U 90005E 96295.73472070 .00000025 00000-0 26545-4 0 00281
2 20440 98.5564 19.4979 0011085 187.2375 172.8647 14.30129437352184
WO-18
1 20441U 90005F 96295.79724571 .00000047 00000-0 35004-4 0 00277
2 20441 98.5533 19.4834 0011741 188.0311 172.0692 14.30098745352199
LO-19
1 20442U 90005G 96295.78336054 .00000023 00000-0 25802-4 0 00192
2 20442 98.5564 20.0198 0011867 186.2574 173.8463 14.30209086352215
FO-20
1 20480U 90013C 96296.07906173 -.00000066 00000-0 -75321-4 0 09189
2 20480 99.0232 296.7946 0540728 196.8177 161.4357 12.83234438314169
AO-21
1 21087U 91006A 96295.88367492 .00000094 00000-0 82657-4 0 07625
2 21087 82.9382 227.9251 0033098 212.0636 147.8507 13.74573172287417
UO-22
1 21575U 91050B 96296.12162880 .00000029 00000-0 24053-4 0 07329
2 21575 98.3382 358.6445 0006775 248.0269 112.0201 14.37040601276295
KO-23
1 22077U 92052B 96296.06242736 -.00000037 00000-0 10000-3 0 06293
2 22077 66.0780 283.8128 0015527 267.9233 92.0001 12.86298369197127
KO-25
1 22828U 93061F 96296.14389723 .00000014 00000-0 22869-4 0 05004
2 22828 98.5660 9.5969 0009519 202.9741 157.1011 14.28155532128233
IO-26
1 22826U 93061D 96296.12277530 .00000048 00000-0 36886-4 0 05227
2 22826 98.5715 9.5096 0008290 220.9728 139.0833 14.27815908160116
AO-27
1 22825U 93061C 96296.06604930 .00000031 00000-0 29936-4 0 05171
2 22825 98.5713 9.2635 0007652 221.0158 139.0467 14.27706797160094
FO-29
1 24278U 96046B 96296.10794282 .00000028 00000-0 62250-4 0 00421
2 24278 98.5752 3.4123 0352439 82.7640 281.3418 13.52626823008932
MO-30
1 24305U 96052B 96296.15608114 .00000204 00000-0 20364-3 0 348
2 24305 82.9374 170.4876 0030472 145.1993 215.1155 13.73084798 6398
Mir
1 16609U 86017A 96296.13245058 .00005364 00000-0 65462-4 0 07582
2 16609 51.6533 204.2468 0012572 303.6878 56.2918 15.62241102609847

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
October 26, 1996, at 2230z on Baudot and AMTOR.
NNNN
/EX
```

2156. Re: Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: Declined <nospam@this.addr.on.the.net>
Message-ID: <326D332C.41C6@this.addr.on.the.net>
Source record: 21131

Rob Janssen wrote:
>
> In <54fhb8$pnv@bbcnews.rd.bbc.co.uk> boyer@rd.bbc.co.uk (John Boyer) writes:
>
> >victor alonso (cuervo@netcom.es) wrote:
> >: I'm searching some information about how make a home made antenna for
> >: the satellite meteosat.
> >:
> >: Any information are welcome.
> >:
> >: Victor Alonso EA1KR
> >: cuervo@netcom.es
> >:
>
> >If you join the RIG the Remote Imaging Group they have info and antennas
> >for sale in thier journal.
>
> Is "information about how make a home made antenna" equivalent to
> "antennas for sale" these days? Sad.

Rob,

You may want to read John's sentence again. I do not believe "they have
info and antennas for sale" is equivalent to "antennas for sale" as you
have asserted. I read what John says as stating they 1) Have info
presumably for construction, 2) Also have ads for antennas for sale.
And if one is advertised for sale for minimal cost then Victor can make
an informed decision and possibly save time *and* money.

>
> I have no personal experience with meteosat, but I believe it is popular
> to use loopyagis, AKA "quad-yagi".
> Just a use scaled version of the 23cm example in e.g. the RSGB VHF-UHF
> manual.
>
> For more gain, you can stack 4 of them using a suitable combiner, or
> use a parabolic dish with a tin-can feed.
> UHF-SHF oriented books and magazines have several designs that you can
> scale to the correct frequency/wavelength.
>
> Rob

--
My from line is not machine readable my real e-mail address is:
jimf@corp.sgi.com Do not hit reply to send back to me.

Sending unsolicited e-mails to my address that are not of a
previously established personal nature nor directly related
to my business will be considered a request of my proof reading
services. My rates are $50 per word and punctuation. Sending
to my address is considered acceptance of these terms.

2157. DX and Satellite Cyberscheds available at http://www.sarrio

Newsgroup: rec.radio.amateur.space
Date: 1996-10-22 00:00:00 UTC
From: wb6siv@cyberg8t.com
Message-ID: <wb6siv-2210961732590001@host35.cyberg8t.com>
Source record: 21132

This is a new use of the WWW that can benefit ham radio operators throughout the world.

You can now schedule contacts with hams all over the world simply and easily by using the WWW and e-mail.I have set aside a section of my web site for hams to post their request for over-the-air schedules. Included in the posting is a place to list the posters specific ham radio contact needs (countries, zones,IOTA, grid squares ect...). The postings will also include an e-mail link that will allow hams that read the posts, to easily request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2158. Re: Packet and IC-2000

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <54jop5$pf4@news.mhv.net>
Source record: 21133
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

In article <326D1419.2A44@mci.com>, Bob Snyder <Bob.Snyder@mci.com> wrote:
>I would like to work packet on Mir and any others that are local to me here in
>Colorado. I bought an Icom IC-2000H and it has a modular microphone connector
> on it.
>I have 2 questions:
>
>1. Does anyone have the mic. pin outs for the IC-2000?
>2. What hardware should I buy? (I would like to stay under $300)
>
>Thanks,
>Bob Snyder KB0YGD

I recommend getting an MFJ TNC/Mic switch box, around $40 and a KPC-3
around $120.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2159. packet connection to MIr

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: doslover@juno.COM
Message-ID: <19961022.201438.6975.2.doslover@juno.com>
Source record: 21134

Greetings all, (again)
I was wondering what the proper protocol was to connect to the Mir
packet station.
Is there a FAQ or a summary sheet somewhere?
Again, any help would be wonderful.

Jason N1RWY

2160. QSL'ing Mir / John Blaha

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: doslover@juno.COM
Message-ID: <19961022.201438.6975.1.doslover@juno.com>
Source record: 21135

Greetings all!
I was lucky enough to have worked John on 10-18-96 19:57 UTC. (145.55)
How do I go about getting / sending a QSL card??
Would it be a Mir card (I hope) or a card from John? (Just as GOOD!)

Any help would be great.
Jason N1RWY

2161. Re: Packet and IC-2000

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: scederas@intercenter.net
Message-ID: <326d8fca.890778@news.intercenter.net>
Source record: 21136
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.space

I use a KPC-3 for packet on my IC-2000H. The KPC-3 I got used
for $75 and works like a champ. There is a command that allows the
KPC-3 to operate with squelch open. The pin outs for the IC-2000H are
in the manual but in case you do not have it.....

1. +8V DC output
2. Frequency up/down
3. AF detector output
4. PTT
5. GND (Microphone ground)
6. MIC (Microphone input)
7. GND
8. NC (No connection)

On Tue, 22 Oct 1996 12:36:09 -0600, Bob Snyder <Bob.Snyder@mci.com>
wrote:

>I would like to work packet on Mir and any others that are local to me here in
>Colorado. I bought an Icom IC-2000H and it has a modular microphone connector on it.
>I have 2 questions:
>
>1. Does anyone have the mic. pin outs for the IC-2000?
>2. What hardware should I buy? (I would like to stay under $300)
>
>Thanks,
>Bob Snyder KB0YGD

2162. HETE Spacecraft

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: jpd@space.mit.edu
Message-ID: <54jn7s$3ko@senator-bedfellow.MIT.EDU>
Source record: 21137
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.space,rec.radio.scanner

The High Energy Transient Experiment (HETE) Spacecraft is currently scheduled for launch on October 29, 1996 from Wallops Island on a Pegasus rocket. Our low rate VHF (137.96 MHz) data transmitter on board may be of interest to radio hobbyists. This data stream will be used for spacecraft status messages and to notify astronomical observers of gamma ray burst positions in real time. This data may be received with relatively simple equipment.

The planned orbit is ~540 km altitude, 38 degrees inclination. The other elements depend on the launch date and time. The first northgoing equator crossing should occur at around 164 degrees east longitude on the Earth, about 4300 seconds after the release of Pegasus from the launch aircraft (nominally 1700 UT).

VHF signals will be weak for the first few hours, as the VHF antenna is stowed with the solar panels, which will not release until we have adequate control of spacecraft angular momentum.

For information on receiving the VHF data, visit:

http://space.mit.edu/HETE/VHFlistening.html

For general information on HETE, visit:

http://space.mit.edu/HETE/

John Doty, HETE Project Scientist

--
John Doty "You can't confuse me, that's my job."
jpd@space.mit.edu

2163. Re: Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <54khmp$26v@bbcnews.rd.bbc.co.uk>
Source record: 21138

Rob Janssen (rob@pe1chl.ampr.org) wrote:
: In <54fhb8$pnv@bbcnews.rd.bbc.co.uk> boyer@rd.bbc.co.uk (John Boyer) writes:
:
: >victor alonso (cuervo@netcom.es) wrote:
: >: I'm searching some information about how make a home made antenna for
: >: the satellite meteosat.
: >:
: >: Any information are welcome.
: >:
: >: Victor Alonso EA1KR
: >: cuervo@netcom.es
: >:
:
: >If you join the RIG the Remote Imaging Group they have info and antennas
: >for sale in thier journal.
:
: Is "information about how make a home made antenna" equivalent to
: "antennas for sale" these days? Sad.
:

The RIG journal also has included articles on feed fors dishes and
designs for long and loop yagis.

I did say info and antennas.

J.

2164. Re: packet connection to MIr

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <54kse3$lgg@news.monad.net>
Source record: 21139

> doslover@juno.COM (Jason K Baack) writes:
> Greetings all, (again)
> I was wondering what the proper protocol was to connect to the Mir
> packet station.
> Is there a FAQ or a summary sheet somewhere?
> Again, any help would be wonderful.
>
> Jason N1RWY
>
>>>>
check my home page folllow a link to files and stuff and read the article by Miles Mann WF1F it is pretty old but very complete..
watch for a disconnect and try not to cause interference as ham interference is the biggest problem in connecting to Mir and sending a
message..

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
phone 1-603-542-2493 1-603-542-6917
http://www.cyberportal.net/dhend/dave1.html

I used to have a handle on life, then it broke.

2165. Re: Meteosat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: Rolf Mathison <rolf_mathison@hp.com>
Message-ID: <326E3CFA.1984@hp.com>
Source record: 21140

Steve Dakin wrote:
>
> victor alonso (cuervo@netcom.es) wrote:
> : I'm searching some information about how make a home made antenna for
> : the satellite meteosat.
>
> : Any information are welcome.
>
> : Victor Alonso EA1KR
> : cuervo@netcom.es
>
> If you can get a copy, look in the August 96 issue
> of QST for an article on Quadrafilar antennas that
> look to be well suited to this application.
>
> Steve Dakin
> WQ5NSteve,
The quadrifilar is usually used for the 137Mhz NOAA Polar
Orbiters. The Meteosat (or GOES) antennas are typically 3 - 4 Ft dishes
or Loop-Yagis.

Regards,
Rolf

2166. test

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: orion@capital.net
Message-ID: <326e4b35.8449666@news.capital.net>
Source record: 21141

test

2167. Re: sattelit frequency

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: Philippe JEULIN <jeulin@unilim.fr>
Message-ID: <326E446B.48A5@unilim.fr>
Source record: 21142

I prepare then i send. A french ham. F1IFA

2168. Trakbox updater

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: Christine Hillebrand <chrishil@erols.com>
Message-ID: <326EA993.7B08@erols.com>
Source record: 21143

Recently a series of files was uploaded to KO-23 containing a new utility program for automating updates to the Trakbox. I need a location to download that from the web ... or would appreciate it if someone out there that has this utility could email it to me...

Thanks & 73
Art -- AA3GU

Art.Jeyes@jhuapl.edu

2169. DX and Satellite Cyberscheds available at http://www.sarrio

Newsgroup: rec.radio.amateur.space
Date: 1996-10-23 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.623.39@anjo.com>
Source record: 21144

RE: DX and Satellite Cyberscheds available at http://www.sarrio
BY: Raymond Sarrio to ALL on Tue Oct 22 1996 17:32:59

> From: wb6siv@cyberg8t.com (Raymond Sarrio)
> Newsgroups: rec.radio.amateur.space
> Organization: Raymond Sarrio Co.
> Message-ID: <wb6siv-2210961732590001@host35.cyberg8t.com>
>
> This is a new use of the WWW that can benefit ham radio operators
> throughout the world.
>
> You can now schedule contacts with hams all over the world simply and
> easily by using the WWW and e-mail.I have set aside a section of my web
> site for hams to post their request for over-the-air schedules. Included
> in the posting is a place to list the posters specific ham radio contact
> needs (countries, zones,IOTA, grid squares ect...). The postings will also
> include an e-mail link that will allow hams that read the posts, to easily
> request an over-the-air schedule.
>
> How Can Cyberscheds work for me?
>
> Do you need a certain state to complete a WAS award? Are you just a few
> countries away from a DXCC?

{clip}

If you pre-arrange a contact by any means (including electronically),
then it is not valid for most awards. "Cyberscheds" will make it easy
for people to CHEAT their way into an award that they don't deserve.

73, de Gus 8P6SM
Barbados - the easternmost isle

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

2170. weather sat. pic. wxsat.gif - wxsat.gif (19/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54ma3s$dnp@uruguay.earthlink.net>
Source record: 21071

<uuencoded_portion_removed>

2171. Mir info?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: Brian@brimar.demon.co.uk
Message-ID: <846134943snz@brimar.demon.co.uk>
Source record: 21072

Hello. I am hoping to find a source of general information about
the Mir space station. Does anyone reading this NG know to where I may
refer for such? eg. Is there another NG not specific to amateur radio?
Note:- I have no Web browser so am unable to use one of the normal
search engines to obtain any references. Any help will be much
appreciated especially as my daughter has shown an interest after
watching a few of the recent visual orbit passes. TIA.....73.....Brian
--

Brian Gibbs Email: brian@brimar.demon.co.uk
Neston, Wiltshire. UK Packet: g3mbn @ gb7sdn.#49.gbr.eu

2172. Re: Newbie has Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: baack@maine.maine.edu
Message-ID: <54o3i2$1mua@sol.caps.maine.edu>
Source record: 21073

In article <Dzrv15.2y@pe1chl.ampr.org>, pe1chl@amsat.org wrote:
>Newsgroups: rec.radio.amateur.space
>Path:
> sol.caps.maine.edu!cam-news-feed2.bbnplanet.com!cpk-news-feed2.bbnplanet.com!c
>pk-news-hub1.bbnplanet.com!www.nntp.primenet.com!nntp.primenet.com!feed1.news.e
>rols.com!howland.erols.net!surfnet.nl!sun4nl!rnzll3!sys3.pe1chl!rob
>From: rob@pe1chl.ampr.org (Rob Janssen)
>Subject: Re: Newbie has Questions
>X-Newsreader: NN version 6.5.0 (NOV)
>Reply-To: pe1chl@amsat.org
>Organization: PE1CHL
>Message-ID: <Dzrv15.2y@pe1chl.ampr.org>
>References: <gradyr-2110962357070001@user-168-121-178-82.dialup.mindspring.com>
>Date: Thu, 24 Oct 1996 08:46:17 GMT
>Lines: 48
>Status: N
>
>In <gradyr-2110962357070001@user-168-121-178-82.dialup.mindspring.com>
> gradyr@mindspring.com (Grady Russell) writes:

>
>You have to focus on one or a few topics that interest you.
>When you try to do everything, you will certainly not be as satisfied.
>(not even when you have the budget to buy everything you want)
>
>>Now I'm coming to you to learn more about satellites. I understand that at
>>times one can speak with Shuttle Astronauts on 2M SSB. AM I correct on
>>this? You can also talk with Cosmonauts on Space Station Mir. And I have
>>heard of satellites that act as crossband-repeaters. Am I right on this?
>>Can someone enlighten me a little more about what can be done?

I made my first qso to MIR utilizing a kenwood tr-9130 allmode in the fm mode,

however, from what I have seen, most straight fm rigs have a 5 kc step.
There is some doppler effect that does take place with Mir, as my QSo took
place on 145.54 not 5.55. With most fm rigs you would have a choice of 5.55
or 5.50 or 5.60. I would consider an allmode rig. It gives you the advantage
oof working the sats as well in USB or CW. (plus weak signal work on VHF is
very nice..and a little different).
IMHO you can't go wrong with an all mode rig..something that you can "grow -in
to".
As, your understanding / skill / time / wallet allows.

just my .02 cents.

p.s. you can find good used allmode rigs in the $275-400 range.

Jason N1RWY

2173. Re: Newbie has Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: dh1saj@aol.com
Message-ID: <54o8tp$i4h@newsbf02.news.aol.com>
Source record: 21074

In Article
<gradyr-2110962357070001@user-168-121-178-82.dialup.mindspring.com>,
gradyr@mindspring.com (Grady Russell) wrotet:

>Now I'm coming to you to learn more about satellites. I understand that
at
>times one can speak with Shuttle Astronauts on 2M SSB. AM I correct on
>this? You can also talk with Cosmonauts on Space Station Mir. And I have

Yep. But FM is OK. You don't need a SSB rig.

>heard of satellites that act as crossband-repeaters. Am I right on this?
>Can someone enlighten me a little more about what can be done?

Yep. HAMs have launched more then 30 (thirty) sat since 1968. Most of them
were active as "crossband repeaters", execpt the early ones. Some are
PacketRadio Mailboxes, some were working in FM (!)
But normally you will have to use SSB. Unfortunately the best one for
Sat-DX (AO-13 or Amsat-Oscar 13) is re-entring theese days :-((

Check www.amsat.org for plenty of information !

>Knowing this, it looks like a good radio would be a 2M Multi-mode radio.
>Perhaps the Yaesu FT-290? Seems to be relatively inexpensive, mobile, and
>very durable. Any other opinions?
>

Ouuuuuu. Satellite operation is a more expensive hobby than having some
girlfriends.....
If you REALLY will use it, you need TRX equipment for 2m, 70cm,
23cm......no limits !
As well you need beams, rotators, pre-ams, computers, interfaces, time,
much time, much more time.

But you cann as well start very liittle - listening HAM operation of
russian SpaceStation MIR or the shuttles etc. Keep watching this group for
information........and check www.amsat.org

Joe

2174. Re: Newbie has Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <54oi89$5b6@news.mhv.net>
Source record: 21075

In article <54o3i2$1mua@sol.caps.maine.edu>, baack@maine.maine.edu (Jason) wrote:

>p.s. you can find good used allmode rigs in the $275-400 range.
>
>Jason N1RWY

PLEASE tell me where I can get a 2 meter allmode for this price range!
I'll be darned if I can find one for that.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2175. Re: Mode K antennas?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: ken coleman <acoleman@access.eve.net>
Message-ID: <326FFE6F.1C3F@access.eve.net>
Source record: 21076

Brian Gibbs wrote:
>
> In article <326ee02d.334754083@nntpa.cb.lucent.com>
> tkenny@qsun.ho.att.com "Thomas E. Kenny" writes:
>
> > I've been trying to make my first satellite contact on RS12 via mode K
> > (15m up, 10m down) and would appreciate antenna advice for operating
> > this mode.
> >
> > For now I'm just using a G5RV in simplex mode. The dimensions of my
> > yard is something like 80' by 120' I was hoping that I could build
> > some wire antennas that would help with the fading and be
> > omnidirectional.
>
> Hi Tom. I used to operate via RS12 in mode K some while ago.
> The antennas I used were a horizontal 15m dipole and a horizontal
> loop for receive. I found it better to use seperate antennas to get
> rid of mutual interefernce. It worked very well, and I was able to
> get good signals back from the satellite when overhead using less
> than 5W. It was great fun, and really ought to have another go at
> it! Hope this is of some help....73....Brian
> --
>
> --
> Brian Gibbs Email: brian@brimar.demon.co.uk
> Neston, Wiltshire. UK Packet: g3mbn @ gb7sdn.#49.gbr.eu
> --
Have used an all HF band vertical (GAP TITAN) with great success. Just
getting started. Satellite is rarely (that) directly overhead to lose
use of vertical.

2176. weather sat. pic. wxsat.gif - wxsat.gif (29/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54map3$dnp@uruguay.earthlink.net>
Source record: 21077

```
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0#\:$=%#MII"PPB0#^"B+C5%,
`
end
```

2177. Re: HOW to QSL Mir (KC5PZQ)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: Glenn Hansen <grhansen@worldnet.att.net>
Message-ID: <01bbc1e5$2df31ec0$868d93cf@ghansen.accesone.com>
Source record: 21078

Jason Baack <baack@monet.umecut.maine.edu> wrote in article =
<548mu2$9j5@service-2.agate.net>...
> Greetings all!
> Was lucky enough today to work KC5PZQ about MIR!
> What a Thrill. 25 watts into a 5/8 colinear @ 15'.(Kenwood TR-9130)
>=20
> My question is what do I do to get a card? Who do I send information =
out to?
>=20

I believe US hams can send reports to;

N6JLH
POB 1501
Pine Grove, Ca 95665

Enclose report and SASE.

This was good earlier in 96. Don't know if it still is. Maybe
somebody can confirm this.

Glenn

2178. weather sat. pic. wxsat.gif - wxsat.gif (10/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9mb$dnp@uruguay.earthlink.net>
Source record: 21145

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2179. weather sat. pic. wxsat.gif - wxsat.gif (06/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9h1$dnp@uruguay.earthlink.net>
Source record: 21146

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2180. weather sat. pic. wxsat.gif - wxsat.gif (01/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m995$dnp@uruguay.earthlink.net>
Source record: 21147

```
begin 644 wxsat.gif
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```

2181. weather sat. pic. wxsat.gif - wxsat.gif (11/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9nh$dnp@uruguay.earthlink.net>
Source record: 21148

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2182. weather sat. pic. wxsat.gif - wxsat.gif (03/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9c6$dnp@uruguay.earthlink.net>
Source record: 21149

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2183. weather sat. pic. wxsat.gif - wxsat.gif (07/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9ia$dnp@uruguay.earthlink.net>
Source record: 21150

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2184. weather sat. pic. wxsat.gif - wxsat.gif (22/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54ma8b$dnp@uruguay.earthlink.net>
Source record: 21151

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2185. weather sat. pic. wxsat.gif - wxsat.gif (02/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9ah$dnp@uruguay.earthlink.net>
Source record: 21152

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2186. weather sat. pic. wxsat.gif - wxsat.gif (20/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54ma5l$dnp@uruguay.earthlink.net>
Source record: 21153

<uuencoded_portion_removed>

2187. weather sat. pic. wxsat.gif - wxsat.gif (17/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9vu$dnp@uruguay.earthlink.net>
Source record: 21154

<uuencoded_portion_removed>

2188. weather sat. pic. wxsat.gif - wxsat.gif (16/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9uj$dnp@uruguay.earthlink.net>
Source record: 21155

<uuencoded_portion_removed>

2189. weather sat. pic. wxsat.gif - wxsat.gif (18/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54ma20$dnp@uruguay.earthlink.net>
Source record: 21156

<uuencoded_portion_removed>

2190. weather sat. pic. wxsat.gif - wxsat.gif (26/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54mah2$dnp@uruguay.earthlink.net>
Source record: 21157

<uuencoded_portion_removed>

2191. weather sat. pic. wxsat.gif - wxsat.gif (08/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9jp$dnp@uruguay.earthlink.net>
Source record: 21158

<uuencoded_portion_removed>

2192. weather sat. pic. wxsat.gif - wxsat.gif (25/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54macp$dnp@uruguay.earthlink.net>
Source record: 21159

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2193. weather sat. pic. wxsat.gif - wxsat.gif (09/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9kv$dnp@uruguay.earthlink.net>
Source record: 21160

<uuencoded_portion_removed>

2194. weather sat. pic. wxsat.gif - wxsat.gif (21/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54ma6t$dnp@uruguay.earthlink.net>
Source record: 21161

<uuencoded_portion_removed>

2195. weather sat. pic. wxsat.gif - wxsat.gif (14/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9rl$dnp@uruguay.earthlink.net>
Source record: 21162

<uuencoded_portion_removed>

2196. weather sat. pic. wxsat.gif - wxsat.gif (27/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54maki$dnp@uruguay.earthlink.net>
Source record: 21163

<uuencoded_portion_removed>

2197. weather sat. pic. wxsat.gif - wxsat.gif (04/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9df$dnp@uruguay.earthlink.net>
Source record: 21164

<uuencoded_portion_removed>

2198. weather sat. pic. wxsat.gif - wxsat.gif (28/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54mamn$dnp@uruguay.earthlink.net>
Source record: 21165

<uuencoded_portion_removed>

2199. Re: Mode K antennas?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: Brian@brimar.demon.co.uk
Message-ID: <846135908snz@brimar.demon.co.uk>
Source record: 21166

In article <326ee02d.334754083@nntpa.cb.lucent.com>
tkenny@qsun.ho.att.com "Thomas E. Kenny" writes:

> I've been trying to make my first satellite contact on RS12 via mode K
> (15m up, 10m down) and would appreciate antenna advice for operating
> this mode.
>
> For now I'm just using a G5RV in simplex mode. The dimensions of my
> yard is something like 80' by 120' I was hoping that I could build
> some wire antennas that would help with the fading and be
> omnidirectional.

Hi Tom. I used to operate via RS12 in mode K some while ago.
The antennas I used were a horizontal 15m dipole and a horizontal
loop for receive. I found it better to use seperate antennas to get
rid of mutual interefernce. It worked very well, and I was able to
get good signals back from the satellite when overhead using less
than 5W. It was great fun, and really ought to have another go at
it! Hope this is of some help....73....Brian
--

Brian Gibbs Email: brian@brimar.demon.co.uk
Neston, Wiltshire. UK Packet: g3mbn @ gb7sdn.#49.gbr.eu

2200. weather sat. pic. wxsat.gif - wxsat.gif (24/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54mabk$dnp@uruguay.earthlink.net>
Source record: 21167

<uuencoded_portion_removed>

2201. weather sat. pic. wxsat.gif - wxsat.gif (15/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9t9$dnp@uruguay.earthlink.net>
Source record: 21168

<uuencoded_portion_removed>

2202. weather sat. pic. wxsat.gif - wxsat.gif (12/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9om$dnp@uruguay.earthlink.net>
Source record: 21169

<uuencoded_portion_removed>

2203. weather sat. pic. wxsat.gif - wxsat.gif (13/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-24 00:00:00 UTC
From: donmixon@earthlink.net
Message-ID: <54m9ps$dnp@uruguay.earthlink.net>
Source record: 21170

<uuencoded_portion_removed>

2204. KWD TS-790s How does it fare?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: arden@teleport.com
Message-ID: <54p1og$743@nadine.teleport.com>
Source record: 21079

I'm potentially interesting in getting a Kenwood TS-790s. I've been
offered it in trade for a Yaesu FT-767GX with HF/6m/2m/70cm modules
installed. The Kenwood covers 2m/70cm/1.2 Ghz. How do the two
compare in price generally on the open market? How do they compare
for satellite use?

Thanks in advance for the advice?

Arden Eby KI7FG

****
Arden Eby
Internet: arden@teleport.com
Packet Radio: KI7FG@KA7AGH.OR.USA.NA
Homepage (Eby's Cyberscroll) http://www.teleport.com/~arden/
****

2205. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: acagle@sirinet.NET
Message-ID: <1.5.4.32.19961025131952.0067b020@mail.sirinet.net>
Source record: 21080

```
unsubscribe ham-space digest
```

2206. Those !#*@!!! Wx GIFs, TLEs, etc.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: pmarkham@sun.lssu.EDU
Message-ID: <199610251349.JAA12550@sun.lssu.edu>
Source record: 21081

I have a suggestion.

Please refer the readers to the source of the wx
GIFs. GIFs,TLEs and other files that are available from various "net"
resources do not belong in my mailbox. I and many others get our mail
in digest form and pay for the time so we do not get burdened with the
junk advertising. By including a readily available achived resource in
my mail, you burden me with having to sort through, or flush, something
I gan get, in much better form, in much better format, in a timely fashion
from several resources, at will.

Just imagine what this, or any other mailing list would look
like if everyone posted files, daily, relative to their particular
interest.

Thank you
Pete/wa4hei

The meek will not inherit the Earth.

2207. MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: brunel@hugo.rz.fh-ulm.de
Message-ID: <brunel.205.0008D405@hugo.rz.fh-ulm.de>
Source record: 21082

Hi,
can anyone tell me the uplink frequency of the repeater aboard the mir- space-station. Yesterday evening (17:00 utc) I saw it during its pass and for the first time heard the downlink on my 70 cm- handy.
Many thanks, 73 de Roman (DL2SFE)

2208. Re: MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32710950.3F91@wco.com>
Source record: 21083

PE Roman Brunel wrote:
>
> Hi,
> can anyone tell me the uplink frequency of the repeater aboard the mir- space-
> station. Yesterday evening (17:00 utc) I saw it during its pass and for the
> first time heard the downlink on my 70 cm- handy.
> Many thanks, 73 de Roman (DL2SFE)

roman,uplink is 435.750 with a pl of 141.3 .
i have heard ve7 on the bird and worked utah from cm88.
73 steve

2209. Re: Newbie has Questions

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32710A18.19EB@wco.com>
Source record: 21084

trandall@mhv.net wrote:
>
> In article <54o3i2$1mua@sol.caps.maine.edu>, baack@maine.maine.edu (Jason) wrote:
>
> >p.s. you can find good used allmode rigs in the $275-400 range.
> >
> >Jason N1RWY
>
> PLEASE tell me where I can get a 2 meter allmode for this price range!
> I'll be darned if I can find one for that.
>
> Tom
>
> Tom Randall Amateur Radio - KB2SMS
> trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
> Member: AAVSO Solar Division
>
> Opinions herein are mine and may not be that of MHV.NET!

tom,i have bought ic-251a from news groups, and seen at least 10
for sale in that price range.also ic-451a's.
73 steve

2210. SAFEX homepage?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: s722413@kub.nl
Message-ID: <54r325$rmm@mailnews.kub.nl>
Source record: 21085

Hi all,...

I've been looking if the SAFEX experiment has a homepage somewhere, but I cant find it. Can anyone point me in the right direction?

Thanks,

Kees, PE1RHP

PS: SAFEX is the MIR amateur radio experiment
--
Kees Leune Email: C.J.Leune@KUB.NL
Student of Information Management and Technology Tilburg University
Linux, the choice of a GNU generation! The Netherlands

WWW: http://kubstu.kub.nl:2080/people/kees HAM callsign: PE1RHP

2211. Re: Ham-Space Digest V96 #366

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: waterspout@juno.COM
Message-ID: <19961025.165725.7079.1.waterspout@juno.com>
Source record: 21086

>Date: 25 Oct 96 00:58:05 GMT
>From: glittle@awod.COM (Glenn Little)
>Subject: Weather pictures
>
>Am I in the minority or is there a group on this list tht would like
>to receive the weather pictures that have flooded the list lately?

Actually Glen all 29 posts were just parts of one picture... seems to me like it would be a whole lot better to just post a URL where the picture could be located. It would certainly save bandwidth and wear and tear on disinterested recipiants.

Besides, by the time anyone recieved all 29 parts, reassembled and decoded them the staelite shot would be so out of date as to be useless for anything but an archive. And there are already several WX satelite photo archives out there.

I didn't send flames to Don Mixon's mailbox because I assumed it would already be full...

But if that sort of thing continues, I for one, will simply drop the NG. Its just not worth the hassle having to delete 29 posts filled with outdated trash...

David J Brooks - KC5WNK
waterspout@juno.com
-+- -+-+ +++++ +-- -+ -+- +-+-+

2212. Weather pictures

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: glittle@awod.COM
Message-ID: <199610250046.UAA24124@sumter.awod.com>
Source record: 21087

Am I in the minority or is there a group on this list tht would like to receive the weather pictures that have flooded the list lately?

I for one am not really interested in getting constant weather pictures. The eat a lot of bandwidth and consume a lot of time to down load fron the host as mail.

If ther is a group interested in receiving constant weather pictures sent to them, could this be done on another list? This list is titled Ham-Space, not weather.

My opinions only.

73
Glenn Little
WB4UIV

WB4UIV@amsat.org
glittle@awod.com

2213. Re: weather sat. pic. wxsat.gif - wxsat.gif (25/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <3498569694.103512662@midnet.com>
Source record: 21088

Don,

Please stop posting binary files to this group.

Colin, G8FRA

2214. Mods wanted for Standard

Newsgroup: rec.radio.amateur.space
Date: 1996-10-25 00:00:00 UTC
From: darryl.linkow@grinder.com
Message-ID: <8CAF547.01A9000698.uuout@grinder.com>
Source record: 21089

Anyone have any mods for the Standard C5900DA tri-bander? If so,
please post here or Email me. 73, Darryl KE6IHA

---
* OLX 2.2 * Darryl Linkow (818)346-5278 9 am - 5 pm PDT

2215. GPS Keplerians

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: njachimi@coewl.cen.uiuc.edu
Message-ID: <54s66t$ih@vixen.cso.uiuc.edu>
Source record: 21090

I'm looking for the Keplerian data for the GPS satellites.
I've got old info from a version of Itrack but never found updates given
out. If anyone has GSP kepz or pointers where to get them please mail me.

njachimi@uiuc.edu

2216. Those !#*@!!! Wx GIFs, TLEs, etc.

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: amcleod@anjo.com
Message-ID: <414.662.39@anjo.com>
Source record: 21091

RE: Those !#*@!!! Wx GIFs, TLEs, etc.
BY: Peter Markham to ALL on Fri Oct 25 1996 13:48:45

Take for example the recent flood of UUENCODED files that have poured through this NG - I too don't appreciate them and consider them out of place.

That is why I have mailed them back to their rightful owner.

73, de Gus 8P6SM
Barbados - The easternmost isle

> From: pmarkham@sun.lssu.EDU (Peter Markham)
> Newsgroups: rec.radio.amateur.space
> Organization: ucsd usenet gateway
> Message-ID: <199610251349.JAA12550@sun.lssu.edu>
>
>
> I have a suggestion.
>
> Please refer the readers to the source of
> the wx
> GIFs. GIFs,TLEs and other files that are available from various "net"
> resources do not belong in my mailbox. I and many others get our mail
> in digest form and pay for the time so we do not get burdened with the
> junk advertising. By including a readily available achived resource in
> my mail, you burden me with having to sort through, or flush, something
> I gan get, in much better form, in much better format, in a timely fashion
> from several resources, at will.
>
> Just imagine what this, or any other mailing list would look
> like if everyone posted files, daily, relative to their particular
> interest.
>
> Thank you
> Pete/wa4hei
>
> The meek will not inherit the Earth.
>
>

-=-=-=-= The ANJO BBS, Barbados =-
amcleod@anjo.com <Angus John Mcleod>
Synchronet BBS for OS/2 v2.30 Beta and NetXpress for Synchronet v1.53

2217. Re: weather sat. pic. wxsat.gif - wxsat.gif (28/29)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <3498569694.110008764@midnet.com>
Source record: 21092

NO MORE GIFS P L E A S E !!!!!!!!!!
^^^^^^^^^^

2218. Re: GPS Keplerians

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.961026091425.3224A-100000@spork.callamer.com>
Source record: 21093

Nathan and all.....GPS keps are updated and available from Dr. Kelso:
http://www.grove.net/~tkelso
I assembled all the GPS sats in order in Instantrak so that I might see
which were in view at the time and then compare to my GPS receiver! It
was a good venture. Actually, the orbits are so stable that updates
really are not needed often. Cliff Buttschardt K7RR ex W6HDO
On 26 Oct 1996, Nathan Jachimiec wrote:

> I'm looking for the Keplerian data for the GPS satellites.
> I've got old info from a version of Itrack but never found updates given
> out. If anyone has GSP kepz or pointers where to get them please mail me.
>
> njachimi@uiuc.edu
>
>
>

2219. Best antennas for rs-15 ???/Rs-10 gives up.!!

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: millerj@dnaco.net
Message-ID: <54ti3i$mf5@pike.dnaco.net>
Source record: 21094

Does any one have any comments or ideas on the best Tx and Rx antennas
for use with on Rs-15. Also we have noticed that Rs10 will stop Tx
about half way through a pass. It acts just like some one turned it
OFF. Please any ideas.
TIA

Mr. Satellite
RS-10/11/RS-15
N8RTW
Johnny Miller
millerj@dnaco.net
http://www.dnaco.net/~millerj/n8rtw.html
Middletown, Ohio area 442.425(+)B.A.E.R.S Machine
Dayton, Ohio area 145.490(-) = Drake Machine

2220. don't post wx pics

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: jedent@phoenix.net
Message-ID: <jedent.53.00061937@phoenix.net>
Source record: 21095

don't post wx pics to this ng.

2221. moon keps

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <54u0f5$2dpd@ns2-1.CC.Lehigh.EDU>
Source record: 21096

Keps for the Moon....is there a such thing??

DAvid
thanks!

|--|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

2222. Re: bincancel:22 large binaries:AR671:@@NCM

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: red@redpoll.mrfs.oh.us
Message-ID: <ARMM-Report-671.a@redpoll.mrfs.oh.us>
Source record: 21097
Cross-posted to: alt.retromod,comp.os.ms-windows.apps.word-proc,comp.os.ms-windows.programmer.controls,comp.sys.ibm.pc.hardware.chips,news.newusers.questions,rec.radio.amateur.space

Large binary posts do not belong in unmoderated discussion groups.

I run a program that searches for, and issues advisory cancels for,
large binaries in the akr, biz, comp, misc, news, rec, and sci
hierarchies.

I have issued 22 cancels for large binary files (average size 84,258.4
characters - total size 1,853,685 characters) posted to 5 different
unmoderated discussion groups in the comp, news, and rec hierarchies as
follows:
9 rec.radio.amateur.space
8 news.newusers.questions
3 comp.os.ms-windows.apps.word-proc
1 comp.sys.ibm.pc.hardware.chips
1 comp.os.ms-windows.programmer.controls

This pointer is being posted to each affected group listed above.
Follow-ups are directed to news.admin.net-abuse.misc.

If you want to see exactly which file was deleted from a particular
group, read the full report in news.admin.net-abuse.announce. The
full report can also be found in alt.nocem.misc and alt.retromod.
Look for AR671 in the subject, or, if your reader supports it, use
this <URL:news:ARMM-Report-671@redpoll.mrfs.oh.us>

The criteria used to search for this batch of large binaries were:
NEWSGROUPS: Unmoderated akr, biz, comp, misc, news, rec, or sci
(except for comp.binaries.apple2, comp.bugs.2bsd,
and rec.games.bolo)
BINARY: base64, binhex, uuencode, and xbtoa encoded files, etc.
SIZE: > 100,000 characters [(size * (# of parts - .5)), if multi-part]

If you must post a binary to Usenet, please post it *only* to an
appropriate binaries newsgroup such as alt.binaries.misc, and do *not*
crosspost it to non-binaries groups. Then, if you like, post something
in the appropriate discussion group telling people where to find the
binary in the binaries group (a pointer to the binary). This will
permit news administrators and users to decide for themselves whether
to receive the binary files.

For more information about binary cancels, see the bincancel FAQ,
<URL:http://ursula.uoregon.edu/~geniac/binfaq.txt>.

Please direct public feedback to news.admin.net-abuse.misc and private
feedback to red@redpoll.mrfs.oh.us. In the interests of preventing

cross-posted flame wars, please honor the followup-to header and do
not cross-post your reply to multiple groups. Thanks for your
cooperation.

Best wishes,
Dick
--
Richard E. Depew, Munroe Falls, OH red@redpoll.mrfs.oh.us (home)
It's over, and can't be helped, and that's one consolation, as they
always say in Turkey, when they cut the wrong man's head off''
-- Charles Dickens, _The Pickwick Papers_

2223. (no subject)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: nsallay@internext.COM.BR
Message-ID: <3271EAD9.66B3@internext.com.br>
Source record: 21098

unsubcribe

2224. Sat. antennas...more height??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <54u022$r2f@ns2-1.CC.Lehigh.EDU>
Source record: 21099

Hello!
I FINALLY got my tower up!!!!!!!
I was wondering if i should worry about putting my 2m and 440mhz yagis with the rotors on the top of the tower (30feet) or leave them on the 10 foot section i have on the side? Heights are not my favorite thing, and working with a 40lbs system at 30ft is NOT my idea of fun :)

thanks!!

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

2225. Re: GPS Keplerians

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbc35e$9a6e90a0$068067ce@miseno.netwide.net>
Source record: 21100

Nathan,

Try http://www.logsat.com/keps.htm, you'll find keps divided into
categories, including one for the GPSs.
--
Roberto Franceschetti

http://www.logsat.com
roberto@netwide.net
roberto@logsat.com

Nathan Jachimiec <njachimi@coewl.cen.uiuc.edu> wrote in article
<54s66t$ih@vixen.cso.uiuc.edu>...
> I'm looking for the Keplerian data for the GPS satellites.
> I've got old info from a version of Itrack but never found updates given
> out. If anyone has GSP kepz or pointers where to get them please mail
me.
>
> njachimi@uiuc.edu
>
>

2226. Re: GPS Keplerians

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: "Richard B. Langley" <lang@unb.ca>
Message-ID: <54tcn0$s28@sol.sun.csd.unb.ca>
Source record: 21101

In article <54s66t$ih@vixen.cso.uiuc.edu> Nathan Jachimiec,
njachimi@coewl.cen.uiuc.edu writes:
> I'm looking for the Keplerian data for the GPS satellites.
> I've got old info from a version of Itrack but never found updates given
> out. If anyone has GSP kepz or pointers where to get them please mail me.
>
> njachimi@uiuc.edu

You can get them from the Celestial BBS Web site via my GPS Web page:

http://gauss.gge.unb.ca/GPS.INTERNET.SERVICES.HTML

==
Richard B. Langley Internet: LANG@UNB.CA or SE@UNB.CA
Geodetic Research Laboratory BITnet: LANG@UNB or SE@UNB
Dept. of Geodesy and Geomatics Engineering Phone: (506) 453-5142
University of New Brunswick FAX: (506) 453-4943
Fredericton, N.B., Canada E3B 5A3 Telex: 014-46202
==

2227. Re: moon keps

Newsgroup: rec.radio.amateur.space
Date: 1996-10-26 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <3272DE34.EE4@wco.com>
Source record: 21102

c002@Lehigh.EDU wrote:
>
> Keps for the Moon....is there a such thing??
>
> DAvid
> thanks!
> |---|> | David Roseman | c002@lehigh.edu |
> | | The Flying HAm - BBS |
> | Utopia Telecommunications | Technomage - BBS |
> | 610.838.2989 | N3SQE/1 - HAm |
> | (Parttime system) | |
> |-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----|

yes. http://www.logsat.com
73 steve

2228. Re: Sat. antennas...more height??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: Stan Vandiver <kd9be@pla-net.net>
Message-ID: <327334C8.5EC9@pla-net.net>
Source record: 21103

c002@Lehigh.EDU wrote:
>
> Hello!
> I FINALLY got my tower up!!!!!!!
> I was wondering if i should worry about putting my 2m and 440mhz yagis with
> the rotors on the top of the tower (30feet) or leave them on the 10 foot
> section i have on the side? Heights are not my favorite thing, and working
> with a 40lbs system at 30ft is NOT my idea of fun :)
>
> thanks!!
>
> DAvid

Hi David,

As long as your sat antennas aren't obstructed by anything, I wouldn't worry
about it. What difference could 20 ft. possibly make when the birds are up
a couple of hundred miles? Put your 'terrestrial' antennas (like packet) on
the top!

To answer your other post... yes, there are keps available for the moon.
I've got some around here somewhere if you want 'em.

73, Stan/KD9BE
http://www.pla-net.net/~kd9be/

2229. Mir Frequencies

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: jwc@a.crl.com
Message-ID: <32739542.60544119@165.113.1.24>
Source record: 21104

I remember reading somewhere that the Mir freqs have changed. Checked the AMSAT site but could not find any info. Can anyone tell me what the freqs are and when they will go into use? Thanks and 73.

Jim,N0VAH (at least until the Gate 2 lottery results are announced)

2230. Re: HOW to QSL Mir (KC5PZQ) : (sic) [KC5TZQ]

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <32739eac.4052804@news.monad.net>
Source record: 21105

On 18 Oct 1996 19:48:16 GMT, baack@monet.umecut.maine.edu (Jason
Baack) wrote:

>Greetings all!
>Was lucky enough today to work KC5PZQ about MIR!
>What a Thrill. 25 watts into a 5/8 colinear @ 15'.(Kenwood TR-9130)
>
>My question is what do I do to get a card? Who do I send information out to?
>
>
>Any help would be great.
>
>Jason N1RWY
>baack@midcoast.com
>
To get a QSL from Mir, it will be here..
To: MIR@USBBS
Subject: New Qsl mgr for USA
Path: WA1WOK!WB1DSW!K1UGM!WG1I!KA1RCI!N1OKK!N4GAA!WB0TAX ...

I have been granted the privilage from Sergji [RV3DR]
to become the MIR QSL mgr for USA only hams , If you
have worked MIR.

I need the Date, time , mode .
SASE

Send to

N6JLH
POB 1501
Pine Grove Calif.
95665

Please make sure you send a SASE.

Dave N6JLH

WA1WOK - 4 Users >
He is now requesting a green stamp to help cover costs.. but no big
deal.. DAVE N1PPP

2231. Dove DO-17 - where is it????

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: David Mitchell <fq45@dial.pipex.com>
Message-ID: <01bbc446$c8b54ba0$cafd82c1@solfq45.dial.pipex.com>
Source record: 21106

Does anyone have any information on the current status of DO-17 - or know
of any WWW sites which deal specifically with this satellite?

2232. Re: Weather pictures

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: Harebottle Family <normhh@gvn.net>
Message-ID: <32730908.3A35@gvn.net>
Source record: 21107

Glenn Little wrote:
>
> Am I in the minority or is there a group on this list tht would like to receive the weather pictures that have flooded the list lately?
>
> I for one am not really interested in getting constant weather >pictures. The eat a lot of bandwidth and consume a lot of time to >down load fron the host as mail.
>
> If ther is a group interested in receiving constant weather pictures >sent to them, could this be done on another list? This list is >titled Ham-Space, not weather.

AMEN. THAT NEEDED TO BE SAID.
I don't appreciate having all of those GIF's on my files. I get this
newsgroup via TCP/IP over Amatuer Radio and it takes long enough but
when I have a 55K file every couple of msgs it really CLOGS my link.

Just my humble opionion

..'73
de Norman III

2233. Re: moon keps

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <5512mf$1beq@ns2-1.CC.Lehigh.EDU>
Source record: 21108

>yes. http://www.logsat.com
>73 steve

thank you!

DAvid

|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

2234. Re: Sat. antennas...more height??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: c002@Lehigh.EDU
Message-ID: <5512p9$1ihh@ns2-1.CC.Lehigh.EDU>
Source record: 21109

>>As long as your sat antennas aren't obstructed by anything, I wouldn't
>>worry
>>about it. What difference could 20 ft. possibly make when the birds are
>>up

>Hi David! Height is not important for satellites. One consideration
>might be inteference with locat TV antennas. Go below or above TV

ok, thank you all for the replies!!!

DAvid
|---|
David Roseman	c002@lehigh.edu
	The Flying HAm - BBS
Utopia Telecommunications	Technomage - BBS
610.838.2989	N3SQE/1 - HAm
(Parttime system)	
-----My AWESOME home page :) http://www.lehigh.edu/~c002/c002.html-----

2235. Phase 3D Lab News from Orlando FL

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: Rick Leon KA1RHL <p3dlab@magicnet.net>
Message-ID: <01bbc42c$94994b60$LocalHost@saturn>
Source record: 21110

The members of the integration team are interested in expanding awareness and interest in P3D. We don't always have time to read news group postings but can often respond to Email to the lab.

Lab visitors are always welcome whenever the lab is open.
Lab Hours are usually 9-6 M-F and 11-5 Sat
Sat is often an organized volunteer day with tasks for all skill levels.

The Lab is located 2-3 miles south of the Bee Line Toll road off Tradeport Road which runs along the west perimeter of Orlando International Airport. Lindy Circle is the first left turn after passing the airport fuel storage facility. We are in the Free Trade Zone Bldg. to your left as you turn onto Lindy Circle.

You can expect to see the actual Phase 3D spacecraft in its' clean room, the full-size functional antenna mockup, payload modules under test and development, the p3d spin balance test fixture and of course the happy smiling lab staff (usually happy). Anyone familiar with previous amateur satellites will be stunned by the size and scope of this effort. For example p3d will have a wing span of aprox. 21 feet, generate 600 watts of solar power and weigh around 1100 pounds at liftoff. Older satellites are spin stabilized which means the hi-gain antennas are pointed at the Earth only during part of an orbit. P3d is the first 3 axis stabilized craft so that the Hi-gain antenna farm is always pointed for maximum coverage except during orbital maneuvering burns of the 400 Newton (aprox 90 lb.) thrust rocket or the 1 tenth Newton (aprox one ounce) thrust ammonia arcjet rocket. Band coverage will extend from 10m to 24 gigahertz. The Japanese SCOPE experiment will down link hi resolution color pictures of the earth.

Currently Ariane is projecting a launch date around April 15th 1997.

Send questions to:
Rick Leon KA1RHL@amsat.org

Phase 3D Spacecraft Integation Facility
p3dlab@magicnet.net (407) 859-2344
4101 Lindy Circle, Orlando FL 32827

2236. Re: Sat. antennas...more height??

Newsgroup: rec.radio.amateur.space
Date: 1996-10-27 00:00:00 UTC
From: tgliang@eskimo.com
Message-ID: <DzyFDv.570@eskimo.com>
Source record: 21111

Stan Vandiver <kd9be@pla-net.net> wrote:

>c002@Lehigh.EDU wrote:
>>
>> Hello!
>> I FINALLY got my tower up!!!!!!!
>> I was wondering if i should worry about putting my 2m and 440mhz yagis with
>> the rotors on the top of the tower (30feet) or leave them on the 10 foot
>> section i have on the side? Heights are not my favorite thing, and working
>> with a 40lbs system at 30ft is NOT my idea of fun :)
>>
>> thanks!!
>>
>> DAvid

>Hi David,

>As long as your sat antennas aren't obstructed by anything, I wouldn't
>worry
>about it. What difference could 20 ft. possibly make when the birds are
>up
>a couple of hundred miles? Put your 'terrestrial' antennas (like
>packet) on
>the top!

>To answer your other post... yes, there are keps available for the moon.
>I've got some around here somewhere if you want 'em.

>73, Stan/KD9BE
>http://www.pla-net.net/~kd9be/
Hi David! Height is not important for satellites. One consideration
might be inteference with locat TV antennas. Go below or above TV
antennas, unless they are at right angles to your satellite Yagis. At
right angles, their gain patterns are small. 73
Tom KC7EMC, Seattle, Washington

2237. Recripocal Licence UK/US Question

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: oneal@pacbell.net
Message-ID: <32740abb.28763615@news.pacbell.net>
Source record: 21112

An off topic question:

Does anyone on this news group know the license agreements between the US and the UK ? I am visiting the UK, want to operate and would like to know what the requirements are.

Anyone also got any hints or tips for taking a HT through customs, other than the old "have a receipt" bit.

Thanks
Steve N6CRR

2238. Re: Dove DO-17 - where is it????

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: Glenn Hansen <grhansen@worldnet.att.net>
Message-ID: <01bbc47c$4ffba020$d48393cf@ghansen.accesone.com>
Source record: 21113

Well David, what in the world are you doing with your time waiting for =
an answer? If I were you I would
go to http://altavista.digital.com/ on the world wide web and ask it. =
In no time you should have all the
answers to you questions. Probably more than you needed and you will be =
lost wandering around the net
looking at all the new 'cool' stuff you found. :-)

David Mitchell <fq45@dial.pipex.com> wrote in article =
<01bbc446$c8b54ba0$cafd82c1@solfq45.dial.pipex.com>...
> Does anyone have any information on the current status of DO-17 - or =
know
> of any WWW sites which deal specifically with this satellite?
>=20
>

2239. NORAD Two-Line Orbital Element Sets (TLE890)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <553e20$jud@blackbird.afit.af.mil>
Source record: 21114

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #890 -
Alouette 1
1 00424U 62049A 96301.10145049 .00000068 00000-0 69564-4 0 2388
2 00424 80.4632 153.5899 0024121 54.0110 306.3265 13.67879154700379
ATS 1
1 02608U 66110A 96294.47264724 -.00000206 00000-0 10000-3 0 9843
2 02608 14.5939 351.4810 0008681 102.3362 257.7595 1.00298648 26120
ATS 3
1 03029U 67111A 96298.31351612 -.00000128 00000-0 10000-3 0 5617
2 03029 14.9153 358.3979 0010489 264.0577 138.1440 1.00273240106069
Starlette
1 07646U 75010A 96301.20850578 -.00000127 00000-0 11416-4 0 78
2 07646 49.8306 347.7375 0205791 306.4716 51.7367 13.82191356 97220
LAGEOS
1 08820U 76039A 96302.01994855 .00000001 00000-0 00000+0 0 2346
2 08820 109.8534 71.5176 0043440 99.7232 260.8164 6.38664408222316
ETS-2
1 09852U 77014A 96291.27281713 -.00000145 00000-0 10000-3 0 807
2 09852 13.3796 31.4973 0006704 131.5009 228.5290 0.99998621 18862
GOES 2
1 10061U 77048A 96299.64858646 .00000039 00000-0 10000-3 0 7552
2 10061 12.5392 35.6024 0012783 123.3577 292.3635 1.00260726 15753
IUE
1 10637U 78012A 96299.43680831 -.00000205 00000-0 10000-3 0 2909
2 10637 35.6694 81.4778 1332143 61.3013 330.8770 1.00061355 21246
GOES 3
1 10953U 78062A 96296.28584803 -.00000131 00000-0 10000-3 0 7304
2 10953 11.5349 38.5658 0002292 140.9956 211.8089 1.00266500 20323

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SeaSat 1
1 10967U 78064A 96300.41280665 .00000005 00000-0 46238-4 0 5255
2 10967 107.9956 86.2610 0002571 245.0472 115.0402 14.38129285960319
Nimbus 7
1 11080U 78098A 96299.58003583 -.00000013 00000-0 25385-4 0 6224
2 11080 98.9269 155.3585 0009266 340.7949 19.2858 13.83690514909209
GOES 5
1 12472U 81049A 96298.43824179 .00000000 00000-0 10000-3 0 9589
2 12472 8.3474 48.8848 0003908 76.3946 283.6552 1.00261438 14594
Cosmos 1383
1 13301U 82066A 96299.36226918 .00000021 00000-0 69267-5 0 5389
2 13301 82.9313 38.3486 0025898 241.1190 118.7363 13.68077697715172
LandSat 4
1 13367U 82072A 96299.56387263 .00000057 00000-0 22319-4 0 145
2 13367 98.0590 346.4154 0008131 91.2570 268.9561 14.57187618759520
DMSP B5D2-1
1 13736U 82118A 96299.12213039 .00000044 00000-0 36817-4 0 1074
2 13736 98.6235 125.4180 0009095 14.0227 346.1202 14.25808395719588
IRAS
1 13777U 83004A 96302.14710228 .00000021 00000-0 44398-4 0 4748
2 13777 98.9656 124.8341 0013770 90.0151 270.2591 13.99254247371965
Cosmos 1447
1 13916U 83021A 96301.86638328 .00000044 00000-0 30082-4 0 6304
2 13916 82.9426 92.9103 0038280 140.2145 220.1835 13.74346896681967
TDRS 1
1 13969U 83026B 96298.54198078 -.00000305 00000-0 10000-3 0 6544
2 13969 9.1626 42.4111 0003867 157.2748 339.8382 1.00281195 22686
GOES 6
1 14050U 83041A 96297.22616424 -.00000172 00000-0 10000-3 0 5627
2 14050 7.2339 52.3970 0003216 82.3332 244.2898 1.00221310107471
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96301.20773514 .00000059 00000-0 23372-4 0 5590
2 14780 98.3173 358.9211 0001450 236.6540 123.4519 14.57060058673184
UO-11
1 14781U 84021B 96302.04985572 .00000149 00000-0 32929-4 0 9236
2 14781 97.8106 286.9435 0012579 29.6493 330.5402 14.69491866677166
Cosmos 1574
1 15055U 84062A 96301.60286288 .00000024 00000-0 10096-4 0 8305
2 15055 82.9540 148.2956 0027522 336.1391 23.8490 13.73640687619169
Cosmos 1602
1 15331U 84105A 96299.52203448 .00000232 00000-0 24471-4 0 5124
2 15331 82.5353 350.9218 0018247 235.6172 124.3320 14.84797657652317
ERBS
1 15354U 84108B 96302.19784408 .00000174 00000-0 37462-4 0 2272
2 15354 56.9959 206.6996 0009778 96.4123 263.8026 14.94990001656738
NOAA 9
1 15427U 84123A 96301.76248696 .00000046 00000-0 47819-4 0 8952
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2 15427 98.9325 6.6703 0014441 301.5703 58.4055 14.13812585612365
Mir
1 16609U 86017A 96302.14530687 .00003248 00000-0 41945-4 0 7530
2 16609 51.6529 173.9168 0012403 326.4704 33.5522 15.62303401610780
SPOT 1
1 16613U 86019A 96301.82810214 -.00000045 00000-0 00000+0 0 9984
2 16613 98.8253 9.5458 0001169 160.7287 199.3933 14.19989034239136
Cosmos 1766
1 16881U 86055A 96302.24634974 .00000172 00000-0 17896-4 0 4278
2 16881 82.5178 46.0332 0017278 258.7301 101.1976 14.83768817553579
EGP
1 16908U 86061A 96300.48521811 -.00000083 00000-0 10000-3 0 1261
2 16908 50.0090 313.3359 0011271 346.7412 13.3125 12.44415005132755
NOAA 10
1 16969U 86073A 96301.83705452 .00000032 00000-0 32035-4 0 8292
2 16969 98.5296 295.1503 0013186 332.4297 27.6184 14.25007522525497
MOS-1
1 17527U 87018A 96298.90146336 -.00000043 00000-0 00000+0 0 4781
2 17527 98.9297 357.9703 0017096 329.2538 30.7876 14.00457455493144
GOES 7
1 17561U 87022A 96297.23866760 -.00000163 00000-0 10000-3 0 1133
2 17561 3.3141 68.5067 0004365 310.3497 2.6628 1.00260238 18589
Kvant-1
1 17845U 87030A 96300.80202316 -.00004962 00000-0 -48880-4 0 7941
2 17845 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649544681
DMSP B5D2-3
1 18123U 87053A 96301.77687887 .00000034 00000-0 39974-4 0 6524
2 18123 98.7684 129.8901 0013233 235.8664 124.1258 14.15457096483252
RS-10/11
1 18129U 87054A 96299.40967325 .00000065 00000-0 54321-4 0 2797
2 18129 82.9238 52.2749 0011849 146.3246 213.8663 13.72370913468039
Meteor 2-16
1 18312U 87068A 96298.72071395 .00000219 00000-0 18349-3 0 5178
2 18312 82.5552 249.3269 0010768 214.1178 145.9324 13.84087738464095
Meteor 2-17
1 18820U 88005A 96301.48536372 .00000054 00000-0 34675-4 0 806
2 18820 82.5411 301.8592 0015497 279.2498 80.6914 13.84763970441833
DMSP B5D2-4
1 18822U 88006A 96301.63880961 .00000020 00000-0 27050-4 0 3751
2 18822 98.3818 127.3819 0006286 345.7864 14.3138 14.23204381453415
Glonass 34
1 19163U 88043A 96298.57300180 .00000007 00000-0 10000-3 0 1242
2 19163 65.3220 81.4784 0006250 142.0299 218.0037 2.13102406 64990
Glonass 36
1 19165U 88043C 96301.44557650 -.00000011 00000-0 10000-3 0 5342
2 19165 65.2926 81.3441 0002824 301.8376 58.1053 2.13102257 65678
METEOSAT 3
1 19215U 88051A 96296.43253128 -.00000070 00000-0 10000-3 0 2849
2 19215 3.5211 67.0323 0005781 118.2647 241.8892 0.96947096 18411
AO-13
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1 19216U 88051B 96301.89985857 .00169732 -29076-6 27075-3 0 3109
2 19216 57.1001 82.1940 7384966 54.9772 353.5877 2.21606104 32663
OKEAN 1
1 19274U 88056A 96300.12808206 .00000229 00000-0 25372-4 0 1274
2 19274 82.5155 149.0367 0021491 54.9319 305.3907 14.82532624448773
Meteor 3-2
1 19336U 88064A 96298.92255158 .00000051 00000-0 10000-3 0 5210
2 19336 82.5361 74.6191 0015691 272.7300 87.2024 13.16979418396550
Glonass 39
1 19503U 88085C 96301.94546796 -.00000038 00000-0 10000-3 0 4122
2 19503 65.5406 320.2398 0009357 138.3447 221.7725 2.13101729 63176
NOAA 11
1 19531U 88089A 96301.78080148 .00000029 00000-0 40387-4 0 7138
2 19531 99.1816 323.3100 0010775 227.3223 132.7030 14.13108426417174
TDRS 3
1 19548U 88091B 96301.84127617 -.00000206 00000-0 10000-3 0 2422
2 19548 2.7602 71.2577 0005733 148.3051 205.2436 1.00270773 16854
Glonass 40
1 19749U 89001A 96297.75937459 .00000016 00000-0 10000-3 0 6291
2 19749 65.2625 81.0278 0005427 255.4884 104.4407 2.13101528 60591
Glonass 41
1 19750U 89001B 96301.56832869 -.00000011 00000-0 10000-3 0 5371
2 19750 65.2766 80.9658 0006390 237.4605 122.4583 2.13101805 60694
GPS BII-01
1 19802U 89013A 96300.77050202 .00000014 00000-0 00000+0 0 3103
2 19802 55.3976 105.3977 0033246 119.5336 240.8096 2.00555693 56358
Akebono
1 19822U 89016A 96301.76157493 .00007241 00000-0 33644-3 0 8038
2 19822 75.0847 46.8142 3741709 6.0280 357.4931 7.94058822177201
Meteor 2-18
1 19851U 89018A 96301.75711431 .00000039 00000-0 21986-4 0 5165
2 19851 82.5224 175.3790 0014726 330.3985 29.6340 13.84419487387171
MOP-1
1 19876U 89020B 96290.99611642 .00000000 00000-0 10000-3 0 2216
2 19876 2.1962 71.8579 0015940 287.2744 72.5553 0.97107742 7802
TDRS 4
1 19883U 89021B 96295.37008641 -.00000284 00000-0 00000+0 0 2660
2 19883 0.1334 85.8843 0004262 134.5341 261.8187 1.00266548200370
GPS BII-02
1 20061U 89044A 96300.11315556 -.00000055 00000-0 10000-3 0 2874
2 20061 54.1191 280.9860 0174864 221.1063 137.5818 2.00562376 54081
Nadezhda 1
1 20103U 89050A 96301.83157350 .00000021 00000-0 59567-5 0 9472
2 20103 82.9620 10.8560 0038951 45.1381 315.2925 13.73870556366897
GPS BII-03
1 20185U 89064A 96300.88024439 .00000013 00000-0 10000-3 0 3362
2 20185 55.1724 105.8224 0024384 334.7118 25.1557 2.00806939 52674
GMS 4
1 20217U 89070A 96301.60886207 -.00000379 00000-0 10000-3 0 4700
2 20217 2.0466 74.7534 0000463 305.3858 355.5014 1.00277510 26742
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INTERCOSMOS 24
1 20261U 89080A 96299.18966448 .00000109 00000-0 23662-4 0 5378
2 20261 82.5975 187.6867 1242468 106.0372 268.0885 12.47354834322115
GPS BII-04
1 20302U 89085A 96301.47992016 -.00000018 00000-0 10000-3 0 3217
2 20302 53.2093 220.7031 0022078 152.7002 207.4773 2.00569858 51483
Meteor 3-3
1 20305U 89086A 96298.37118394 .00000044 00000-0 10000-3 0 6732
2 20305 82.5601 35.2828 0007107 4.8785 355.2403 13.04436832335040
COBE
1 20322U 89089A 96302.05214250 -.00000123 00000-0 -50507-4 0 2545
2 20322 98.9420 315.0548 0010003 28.8287 331.3435 14.03454748355564
Kvant-2
1 20335U 89093A 96300.80202316 -.00004962 00000-0 -48880-4 0 7254
2 20335 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649393692
GPS BII-05
1 20361U 89097A 96300.00010177 -.00000075 00000-0 10000-3 0 1291
2 20361 56.0792 48.1136 0089088 136.9171 223.7771 2.00565279 40938
COSMOS 2054 (Altair-1)
1 20391U 89101A 96300.56637840 -.00000147 00000-0 00000+0 0 4437
2 20391 4.0990 62.6050 0004597 131.5980 28.8330 1.00271245 25317
SPOT 2
1 20436U 90005A 96302.16917869 -.00000044 00000-0 00000+0 0 1402
2 20436 98.7536 13.7927 0000938 32.9494 327.1740 14.20015211350712
UO-14
1 20437U 90005B 96300.88002559 .00000021 00000-0 24982-4 0 2204
2 20437 98.5374 21.3870 0010729 170.4160 189.7222 14.29935719352879
AO-16
1 20439U 90005D 96298.24398137 .00000034 00000-0 30067-4 0 171
2 20439 98.5522 21.2536 0010997 180.8628 179.2529 14.29987828352518
DO-17
1 20440U 90005E 96302.24135395 -.00000003 00000-0 15473-4 0 197
2 20440 98.5566 25.8950 0011393 166.9396 193.2084 14.30129893353117
WO-18
1 20441U 90005F 96298.80575430 .00000022 00000-0 25228-4 0 225
2 20441 98.5536 22.4406 0011765 179.1048 181.0158 14.30098942352629
LO-19
1 20442U 90005G 96299.77107460 .00000032 00000-0 29258-4 0 180
2 20442 98.5569 23.9414 0011849 174.7446 185.3862 14.30209714352784
GPS BII-06
1 20452U 90008A 96298.89645589 .00000053 00000-0 10000-3 0 2308
2 20452 54.0527 161.4795 0062534 90.0865 270.7309 2.00550017 49415
MOS-1B
1 20478U 90013A 96300.19510887 .00000088 00000-0 10000-3 0 9890
2 20478 99.1141 8.0085 0004766 260.3380 99.7227 13.93967876262807
DEBUT
1 20479U 90013B 96301.95732290 -.00000003 00000-0 64037-4 0 181
2 20479 99.0207 301.7804 0540221 182.9180 176.8727 12.83345300314934
FO-20
1 20480U 90013C 96300.05555605 -.00000006 00000-0 57105-4 0 9153
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2 20480 99.0231 300.0138 0540732 187.8220 171.4180 12.83234996314674
MOS-1B R/B
1 20491U 90013D 96300.75037230 -.00000743 00000-0 -13323-2 0 2863
2 20491 99.0720 9.9044 0470334 346.4805 12.4059 13.02969498318994
LACE
1 20496U 90015A 96299.88420485 .00001897 00000-0 61040-4 0 6975
2 20496 43.1024 177.1136 0009698 190.9432 169.1201 15.36014136373927
Nadezhda 2
1 20508U 90017A 96301.85273851 .00000041 00000-0 27559-4 0 9481
2 20508 82.9495 145.3244 0045035 358.4819 1.6193 13.73513792334104
OKEAN 2
1 20510U 90018A 96299.85175233 .00000167 00000-0 19687-4 0 5350
2 20510 82.5220 104.4152 0017114 249.5923 110.3452 14.78637623358980
GPS BII-07
1 20533U 90025A 96300.27937093 -.00000055 00000-0 00000+0 0 2710
2 20533 54.4799 281.7768 0049050 77.7640 282.7676 2.00566212 48218
PegSat
1 20546U 90028A 96301.90147097 .00009892 00000-0 17442-3 0 9845
2 20546 94.1209 68.0237 0055097 210.7161 149.0825 15.48704716365538
HST
1 20580U 90037B 96301.91754313 .00000420 00000-0 26291-4 0 8771
2 20580 28.4681 85.3121 0006337 121.7247 238.3955 14.91117381158419
MACSAT 2
1 20608U 90043B 96301.18556905 .00000190 00000-0 30232-4 0 2201
2 20608 89.9300 172.2787 0104939 315.9011 43.3870 14.64951075345613
Glonass 44
1 20619U 90045A 96296.24976146 -.00000000 00000-0 10000-3 0 3345
2 20619 65.1411 319.6136 0024952 207.7868 152.1366 2.13102514 50016
Glonass 45
1 20620U 90045B 96299.18403872 -.00000018 00000-0 10000-3 0 3208
2 20620 65.1222 319.4935 0009028 50.1443 309.9858 2.13102508 50111
Glonass 46
1 20621U 90045C 96297.37453355 -.00000005 00000-0 10000-3 0 9313
2 20621 65.1337 319.6103 0012074 185.2540 174.7891 2.13102518 50072
Kristall
1 20635U 90048A 96300.80202316 -.00004962 00000-0 -48880-4 0 5178
2 20635 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649364525
ROSAT
1 20638U 90049A 96299.85045049 .00000037 00000-0 21263-4 0 6031
2 20638 52.9876 70.6043 0013757 157.7754 202.3833 15.07478554352026
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1 20670U 90057A 96301.84289759 .00000032 00000-0 15849-4 0 1131
2 20670 82.5436 242.4953 0014177 243.0631 116.9079 13.84127675320094
CRRES
1 20712U 90065A 96300.98980495 .00000175 00000-0 21163-3 0 3456
2 20712 17.5162 196.2145 7185459 118.0678 330.1921 2.35799540 46221
GPS BII-08
1 20724U 90068A 96300.62203140 .00000011 00000-0 00000+0 0 1245
2 20724 55.0236 103.3941 0133184 184.3340 175.5686 2.00564687 44084
Feng Yun1-2
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2 20826 82.5278 180.8582 0013100 147.8915 212.3045 13.83639267306828
GPS BII-09
1 20830U 90088A 96301.17556500 -.00000075 00000-0 00000+0 0 966
2 20830 56.0199 45.9888 0068849 96.7829 263.9985 2.00567118 44733
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1 20959U 90103A 96299.08300452 .00000033 00000-0 10000-3 0 761
2 20959 55.2353 105.5377 0083777 226.7087 132.6085 2.00559788 43288
DMSP B5D2-5
1 20978U 90105A 96301.79385068 .00000097 00000-0 49771-4 0 8184
2 20978 98.5839 11.7619 0079841 138.1989 222.5327 14.32689601308704
Glonass 47
1 21006U 90110A 96295.52086925 .00000042 00000-0 10000-3 0 8908
2 21006 65.2586 80.4314 0057097 186.5321 173.4007 2.13102747 45702
Glonass 48
1 21007U 90110B 96298.52850739 .00000005 00000-0 10000-3 0 297
2 21007 65.2550 80.4209 0035237 177.6841 182.3310 2.13101164 45750
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1 21008U 90110C 96301.70946108 -.00000012 00000-0 00000+0 0 2958
2 21008 65.2411 80.2493 0009299 269.3089 90.5653 2.13098487 45812
AO-21
1 21087U 91006A 96301.19742738 .00000094 00000-0 82657-4 0 7537
2 21087 82.9376 223.9911 0033665 197.1196 162.8827 13.74573407288147
RS-12/13
1 21089U 91007A 96301.85938598 .00000052 00000-0 39773-4 0 9283
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Nadezhda 3
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2 21152 82.9251 47.5505 0041996 335.7536 24.1641 13.73538494281957
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1 21216U 91025A 96297.41629102 -.00000005 00000-0 10000-3 0 5465
2 21216 64.8795 319.0640 0011528 188.7142 171.3176 2.13103265 43257
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2 21217 64.8718 319.0771 0007487 196.9396 163.0847 2.13102041 43231
Glonass 52
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2 21218 64.8627 318.9372 0010894 316.9132 43.0486 2.13102514 43314
GRO
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2 21225 28.4602 350.2447 0002884 250.5377 109.4912 15.44464398190219
Meteor 3-4
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2 21232 82.5348 281.6783 0012386 195.1048 164.9701 13.16473682264499
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OKEAN 3
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2 21397 82.5267 17.7768 0022410 329.6147 30.3770 14.76514803290854
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TUBSAT-A
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2 21577 98.3313 2.9416 0005322 230.9019 129.1694 14.36529935277082
SARA
1 21578U 91050E 96300.21933970 .00000281 00000-0 10437-3 0 9203
2 21578 98.3668 10.0913 0004054 221.0185 139.0701 14.39259289277189
TDRS 5
1 21639U 91054B 96299.51149845 .00000066 00000-0 00000+0 0 1063
2 21639 0.0659 60.4556 0002739 167.4791 176.1023 1.00275425 19179
Meteor 3-5
1 21655U 91056A 96300.19533399 .00000051 00000-0 10000-3 0 9271
2 21655 82.5547 227.9215 0012261 199.7070 160.3580 13.16849312249911
UARS
1 21701U 91063B 96301.20977598 -.00000124 00000-0 10243-4 0 7996
2 21701 56.9875 300.8853 0005597 105.5992 254.5659 14.96546717280126
DMSP B5D2-6
1 21798U 91082A 96301.71067927 .00000058 00000-0 53957-4 0 4907
2 21798 98.9412 319.0748 0011924 210.8701 149.1768 14.14000063253656
Glonass 53
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2 21853 65.1954 79.9298 0006710 201.1927 158.7613 2.13102337 36913
Glonass 54
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2 21854 65.1985 79.8952 0015403 22.2592 337.7882 2.13104375 36914
Glonass 55
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2 21855 65.1933 79.9007 0007949 194.4502 165.5118 2.13102103 36904
JERS-1
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2 21867 97.6798 14.8430 0001174 83.4006 276.6539 14.98654602257373
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2 21987 28.4316 27.1762 0009432 44.5799 315.5557 15.19946013243519
SAMPEX
1 22012U 92038A 96299.53482370 .00000553 00000-0 45365-4 0 7556
2 22012 81.6729 341.6221 0119377 105.3374 256.1073 14.91765169234666
GPS BIIA-14
1 22014U 92039A 96297.06983396 .00000043 00000-0 00000+0 0 7858
2 22014 54.8481 163.4800 0094047 329.4149 30.1183 2.00569999 24976
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1 22056U 92047A 96301.34637058 -.00000037 00000-0 00000+0 0 2759
2 22056 64.7124 318.9482 0006596 265.0617 94.9055 2.13103359 33004
Glonass 57
1 22057U 92047B 96300.70467743 -.00000032 00000-0 00000+0 0 2442
2 22057 64.7255 318.9989 0008755 305.5781 54.3912 2.13102785 32961
Glonass 58
1 22058U 92047C 96297.35925005 -.00000006 00000-0 10000-3 0 1488
2 22058 64.7235 319.1069 0009013 267.5163 92.4341 2.13102791 32945
TOPEX
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2 22161 62.9809 265.6369 0851665 29.0388 335.5345 13.21914967195901
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2 22195 52.6549 270.0376 0136971 133.1223 228.0883 6.47294056 94635
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1 22231U 92079A 96299.70999619 .00000050 00000-0 00000+0 0 8175
2 22231 54.6852 164.5084 0036075 281.1829 78.5072 2.00566021 28788
GPS BIIA-17
1 22275U 92089A 96299.82985093 .00000052 00000-0 00000+0 0 8158
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TDRS 6
1 22314U 93003B 96299.74996946 -.00000298 00000-0 10000-3 0 6683
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GPS BIIA-18
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Glonass 59
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Glonass 60
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2 22513 65.2027 79.8307 0007422 185.9426 174.0344 2.13102268 28650
Glonass 61
1 22514U 93010C 96301.32893719 -.00000014 00000-0 00000+0 0 9825
2 22514 65.2244 79.7606 0011468 183.3279 176.6459 2.13101847 28709
ASTRO-D
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2 22521 31.1026 315.7370 0055857 17.8198 342.4401 15.03129111202058
UFO F1
1 22563U 93015A 96288.00000000 -.00000051 00000-0 00000+0 0 5328
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GPS BIIA-19
1 22581U 93017A 96299.07837876 -.00000067 00000-0 10000-3 0 5960
2 22581 55.1749 342.7737 0065875 37.1806 323.3359 2.00575840 26221
GPS BIIA-20
1 22657U 93032A 96298.21134064 -.00000064 00000-0 10000-3 0 7481
2 22657 55.1015 342.5568 0311254 297.1243 59.7621 2.00566088 21534
RADCAL
1 22698U 93041A 96297.99720813 .00000066 00000-0 24045-4 0 5274
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2 22700 54.1847 223.0340 0053261 1.7026 358.3485 2.00563545 24359
NOAA 13
1 22739U 93050A 96301.94965661 -.00000044 00000-0 74585-6 0 1845
2 22739 99.0573 258.1737 0009842 206.3414 153.7259 14.10974240165774
GPS BIIA-22
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2 22779 54.2738 281.9040 0015466 275.0994 84.7053 2.00548429 23130
Meteor 2-21
1 22782U 93055A 96293.41752723 -.00000015 00000-0 -27540-4 0 5203
2 22782 82.5455 248.6707 0023054 353.7428 6.3440 13.83061279158306
UFO F2
1 22787U 93056A 96293.96616546 -.00000079 00000-0 00000+0 0 6848
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SPOT 3
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STELLA
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AO-27
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KO-25
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2 22829 98.5692 11.7479 0009742 195.9694 164.1180 14.28137564160456
GPS BIIA-23
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2 22877 55.6790 43.8906 0100507 298.5040 60.4779 2.00565889 22023
METEOSAT 6
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HST Array
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Meteor 3-6
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2 22969 82.5641 168.5362 0014610 276.0009 83.9455 13.16739194132209
TUBSAT-B
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Glonass 64
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RESURS 1-3
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NOAA 14
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Glonass 71
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Glonass 73
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DMSP B5D2-8
1 23533U 95015A 96301.73439548 .00000052 00000-0 51617-4 0 7256
2 23533 98.8449 302.5184 0008265 44.2556 315.9269 14.12759274 82344
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OSC 2
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Microlab 1
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2 23547 69.9783 228.3890 0012625 343.6160 16.4559 14.45602431 82455
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2 23549 143.3645 318.8530 0212539 178.8266 181.2976 15.18810424 86517
GFZ-1
1 23558U 86017JE 96301.02947134 .00003993 00000-0 48904-4 0 1685
2 23558 51.6514 167.8830 0005924 10.2297 349.8812 15.63017569610624
ERS-2
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2 23560 98.5478 13.4137 0001351 82.1878 277.9466 14.32247276 79478
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GOES 9
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Helios 1A
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2 23607 98.1112 236.0550 0006855 121.1009 239.0834 14.66972114 70042
TDRS 7
1 23613U 95035B 96299.70321586 .00000082 00000-0 00000+0 0 2413
2 23613 0.9469 82.1517 0004020 161.3187 232.8893 1.00279295 4691
Glonass 74
1 23620U 95037A 96301.30774429 .00000022 00000-0 00000+0 0 1964
2 23620 64.8097 199.5597 0018359 167.3960 192.7118 2.13102802 9829
Glonass 75
1 23621U 95037B 96301.95466159 .00000022 00000-0 00000+0 0 2077
2 23621 64.8250 199.5350 0017931 178.0142 182.0593 2.13102063 9833
```

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Glonass 76
1 23622U 95037C 96300.13570921 .00000017 00000-0 00000+0 0 2096
2 23622 64.8172 199.5987 0036826 165.1130 195.0549 2.13102413 9790
Prognoz-M2
1 23632U 95039A 96298.18305820 -.00001948 00000-0 00000+0 0 884
2 23632 70.9220 248.7030 7990332 324.0940 14.4640 0.26343600 1191
SICH-1
1 23657U 95046A 96300.87221196 .00000179 00000-0 24050-4 0 1186
2 23657 82.5308 79.3503 0028343 346.0244 14.0181 14.73501784 62228
RADARSAT
1 23710U 95059A 96299.90514033 .00000142 00000-0 72025-4 0 1989
2 23710 98.5803 304.7448 0001618 66.6735 293.4619 14.29989762 50924
Glonass 79
1 23734U 95068A 96301.66141697 .00000022 00000-0 00000+0 0 1812
2 23734 64.8220 199.4603 0018472 324.7649 35.1797 2.13101999 6791
Glonass 78
1 23735U 95068B 96301.39065441 .00000022 00000-0 00000+0 0 1769
2 23735 64.8112 199.4578 0007098 212.1303 147.8874 2.13125152 6785
Glonass 77
1 23736U 95068C 96300.95734894 .00000021 00000-0 00000+0 0 1552
2 23736 64.8062 199.4859 0007435 195.8881 164.1465 2.13102052 6776
XTE
1 23757U 95074A 96300.36266499 .00000790 00000-0 36908-4 0 955
2 23757 22.9826 238.8262 0013776 188.7259 171.3000 14.97714338 45154
Polar
1 23802U 96013A 96291.23826788 .00000146 00000-0 00000+0 0 659
2 23802 86.2471 24.7632 6568294 280.2097 16.7734 1.36678853 3229
1996010E
1 23824U 96010E 96301.80621737 .00048243 00000-0 19264-1 0 1253
2 23824 47.5845 216.9583 7302894 60.0972 352.4040 2.24506321 5564
GPS BIIA-25
1 23833U 96019A 96299.52648044 -.00000070 00000-0 00000+0 0 989
2 23833 54.6628 342.7235 0033362 153.8554 206.3723 2.00564642 4293
Priroda
1 23848U 96023A 96300.80202316 -.00004962 00000-0 -48880-4 0 1666
2 23848 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649 29094
MSX
1 23851U 96024A 96299.89828730 -.00000047 00000-0 00000+0 0 1162
2 23851 99.3934 281.9773 0007810 145.2365 214.9304 13.97549495 25755
SAX
1 23857U 96027A 96300.09593841 .00001431 00000-0 65642-4 0 386
2 23857 3.9553 241.9725 0014448 82.2594 278.0167 14.91639934 26720
MSTI 3
1 23868U 96031A 96301.90644101 .00002386 00000-0 49808-4 0 689
2 23868 97.1218 130.0538 0014073 51.9963 308.2530 15.46429394 25325
TOMS-EP
1 23940U 96037A 96298.61840712 .00003082 00000-0 14017-3 0 514
2 23940 97.4326 202.4629 0011588 252.9935 107.0087 15.21430143 17313
GPS BIIA-26
1 23953U 96041A 96298.44423703 .00000037 00000-0 00000+0 0 645
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2 23953 55.0794 103.1051 0024219 347.2106 12.7490 2.00565586 2064
Progress M-32
1 24071U 96043A 96300.80202316 -.00004962 00000-0 -48880-4 0 879
2 24071 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649 13614
ADEOS
1 24277U 96046A 96302.20038634 -.00000044 00000-0 00000+0 0 981
2 24277 98.6214 17.2065 0002141 86.1845 273.9581 14.27634409 10269
FO-29
1 24278U 96046B 96301.72957064 .00000018 00000-0 52476-4 0 300
2 24278 98.5746 8.2862 0352488 68.2832 295.5440 13.52627097 9694
Soyuz TM-24
1 24280U 96047A 96300.80202316 -.00004962 00000-0 -48880-4 0 707
2 24280 51.6516 180.6954 0012378 320.9304 39.0530 15.62285649 10994
FAST
1 24286U 96049B 96301.14862596 .00001859 00000-0 18241-3 0 342
2 24286 83.0000 147.4144 2207063 44.0768 331.6371 10.81872316 7210
MO-30
1 24305U 96052B 96299.72671186 .00000204 00000-0 20364-3 0 354
2 24305 82.9384 167.8508 0030936 135.3488 225.0161 13.73085109 6884
GPS BIIA-27
1 24320U 96056A 96300.30439762 -.00000054 00000-0 00000+0 0 326
2 24320 54.7060 283.1605 0060598 95.0822 265.9016 2.00562462 763
Ekspress
1 24435U 96058A 96300.64181275 -.00000158 00000-0 00000+0 0 386
2 24435 0.1650 292.6034 0001689 209.2926 204.6825 1.00273272 294
1996058B
1 24436U 96058B 96273.42259432 .09269389 12720-4 11511-3 0 169
2 24436 51.6361 268.0057 0007631 300.3536 59.6839 16.49186939 442
1996058E
1 24454U 96058E 96299.00371911 .00000652 00000-0 44694-3 0 134
2 24454 47.5387 275.0949 7271850 7.3662 359.1831 2.26902356 639
1996058F
1 24503U 96058F 96302.01223509 .00004818 00000-0 89380-3 0 122
2 24503 47.4631 274.0838 7294141 8.4961 358.9991 2.27575080 458
FSW-2
1 24634U 96059A 96302.24810781 .00265899 81068-5 10385-3 0 357
2 24634 63.0418 55.2549 0124883 143.7330 217.2371 16.07320496 1282
1996059B
1 24635U 96059B 96302.37627527 .04509354 85563-5 22326-3 0 359
2 24635 63.0319 54.2062 0036435 143.9805 216.3813 16.37742388 1312
Molniya 3-47
1 24640U 96060A 96301.60159095 .00000274 00000-0 -75230-2 0 85
2 24640 62.8385 156.8719 7412048 288.3065 9.2749 1.95692113 69
1996060B
1 24641U 96060B 96302.06151298 .00232928 74098-5 51964-3 0 77
2 24641 62.8132 144.3049 0251440 122.7748 239.7876 15.60701143 564
1996060C
1 24642U 96060C 96301.87728351 .00625588 73641-5 62631-3 0 70
2 24642 62.8105 145.0416 0307778 119.2355 243.9923 15.58345734 536
1996060D
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1 24643U 96060D 96300.17176725 .00029140 00000-0 54458+0 0 31
2 24643 62.8804 157.0390 7404585 288.2435 86.9773 1.96534388 39
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2240. New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bbc4e5$8f923820$aaecbdcc@rsmith>
Source record: 21115
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

Are those new N connectors that look like PL259's OK. I have a few and they pretty easy to work with. But then again the standard ones now seem just as easy to use.

Thanks and 73 de Bob.

2241. Re: HOW to QSL Mir (KC5PZQ)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <pPAQn4v.sanderman@delphi.com>
Source record: 21116

Yes this is correct. It has been posted in numerous places as well as in recent AMSAT bulletins.

73 de Stephan Anderman, WA3RKB
Stillwater, NY

2242. What is MO-30?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <pNBTPSI.sanderman@delphi.com>
Source record: 21117

In the ARRL Keps posted last Tuesday, 24-Oct (ARLK077), the list included MO-30, which I had not previously seen. Is this the new designation for the new Mexican satellite UNAMSAT-B? I have not seen any information in the AMSAT Bulletins showing the assignment of "OSCAR 30". If this is true, can it be assumed that the "MO" means "Mexican OSCAR"?

Can someone send me applicable frequencies?

Many thanks!

Stephan Anderman, WA3RKB
Stillwater, NY
sanderman@delphi.com

2243. Amphenol N's w/ 9913?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bbc4e5$e32f3fa0$aaecbdcc@rsmith>
Source record: 21118
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

I am finding that the Amphenol connectors I bought for RG8/9913 the center pin is too small for the center conductor. Usually I drill these out a bit and they work just fine - Question - is this killing any of the required characteristics?

thanks and 73 de Bob.

2244. Re: Dove DO-17 - where is it????

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <552pv3$qfn@news.mhv.net>
Source record: 21119

In article <01bbc446$c8b54ba0$cafd82c1@solfq45.dial.pipex.com>, "David Mitchell"
<fq45@dial.pipex.com> wrote:
>Does anyone have any information on the current status of DO-17 - or know
>of any WWW sites which deal specifically with this satellite?
>

IT's still working. They are trying some new software last I heard. I also
hear some of the telemetry isn't always accurate. I wish them much luck with
her, I'd like to see the sat around for a long time.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2245. Re: Dove DO-17 - where is it????

Newsgroup: rec.radio.amateur.space
Date: 1996-10-28 00:00:00 UTC
From: Bigdad <Bigdad@Rworld.com>
Message-ID: <5518du$flt@kirin.wwa.com>
Source record: 21120

It appears to still be around as i have recieved at least SOME of the telemetry packets from it. Never the whole thing and never on a consistant basis either. Look for it at 145.825 i use PKTMON12 to receive it with my scanner. Hope that helps ya some!

2246. AO-13 Re-Entry

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: dh1saj@aol.com
Message-ID: <554gjk$50s@newsbf02.news.aol.com>
Source record: 21021

Since a few month I'm carefully watching AO-13 keplerian elements and as well reading all postings about AO-13 re-entry into earth athmosphere.

As I understand the elements so far, Re-Entry date will be somewhat earlier than all predictions by AMSAT etc. (abt 6.Dec 96) saying.

Am I wrong ????
Are there some very new Re-Entry predictions I don't know about ?

As perigee is currently close to 100km, I expect re-entry within the next week.
But as there were no updated keplers since 6 days - has the bird already crashed ????

Unfortunately, I currently have no working HAM equipment at all, so I cannot listen to the beacons and I can't read any PacketRadio informations.

Is there anyone out there who can tell me more ?

73s, Joe

2247. Re: HOW to QSL Mir (KC5PZQ)

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: Glenn Hansen <grhansen@worldnet.att.net>
Message-ID: <01bbc562$4d8a5980$b18c93cf@ghansen.accesone.com>
Source record: 21022

Stephan M. Anderman wrote in article ...
> Yes this is correct. It has been posted in numerous places as well as =
in
> recent AMSAT bulletins.
> =20

It works. QSO on the 17th, QSL/SASE mailed on the 22nd and I received a =
R0MIR/KC5TZQ QSL
on the 28th. Not bad at all.

Glenn

2248. Re: SAFEX homepage?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: PE1LOZ@amsat.org
Message-ID: <554v6u$fav@news.euro.net>
Source record: 21023

s722413@kub.nl (Kees Leune) wrote:

=>Hi all,...

=>I've been looking if the SAFEX experiment has a homepage somewhere, but I cant
=>find it. Can anyone point me in the right direction?
...
=>PS: SAFEX is the MIR amateur radio experiment

Kees,
A search with Alta Vista gives me (except of the comdom-stuff) :

* SAREX-BBS Archive: Mir SAFEX comms :
http://kpt1.tricon.net/Personal/alan/archive/sarex/Mar96/0020.html
This brings you to : http://www.cybase.co.uk/satcom/
with some info about the MIR.

*SAREX Nachrichten und Archiv.
http://www.tu-muenchen.de/dl0tum/sarex.html
this is an old one and links you to :
http://www.dl0tum.vo.tu-muenchen.de/sarex.html
that gives you some info.

* You'll find some old stuff at :
http://gndstn.sp.nps.navy.mil/wisp/KO-23/msgs/17C85.msg

So the answer is (for the moment) : No.
Maybe, you can make one yourself.
Would be interesting ;-)

/_____/\ 73's de
/ o o \ Dick PE1LOZ
(== ^ ==) Gouda
) - (Holland
( )
(( ) ( )) PE1LOZ@amsat.org
(__(__)___(__)__) http://www.euronet.nl/users/d_segers/PE1LOZ/

2249. Elmer for Microsats/Kitsats wanted...

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: Dave_Covert@msn.com
Message-ID: <00001ff1+00000aef@msn.com>
Source record: 21024

I want to learn how to work the microsats/kitsats. I have read all I could find on them on the web and still have some questions... some basic, some specific. Could someone step aside with me and bring me up to speed (so I don't bother the entire alias with my newbie questions)?

Thank you for your time,

David Covert, KB5GOG

Very funny Scottie... now beam down my clothes...

2250. Re: New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.961029130503.3147H-100000@spork.callamer.com>
Source record: 21025
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

When you get some answers on this would you be sure and post it? I think
there are many of us that would like to know your results. Cliff K7RR

On 28 Oct 1996, Bob Smith wrote:

> Are those new N connectors that look like PL259's OK. I have a few and
> they pretty easy to work with. But then again the standard ones now seem
> just as easy to use.
>
> Thanks and 73 de Bob.
>
>
>

2251. Re: AO-13 Re-Entry

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: rlong@magnus.acs.ohio-state.edu
Message-ID: <rlong-2910961723130001@ts10-6.homenet.ohio-state.edu>
Source record: 21026

In article <554gjk$50s@newsbf02.news.aol.com>, dh1saj@aol.com (DH1SAJ) wrote:

> Since a few month I'm carefully watching AO-13 keplerian elements and as
> well reading all postings about AO-13 re-entry into earth athmosphere.
>
> As I understand the elements so far, Re-Entry date will be somewhat
> earlier than all predictions by AMSAT etc. (abt 6.Dec 96) saying.
>
> Am I wrong ????
> Are there some very new Re-Entry predictions I don't know about ?
>
> As perigee is currently close to 100km, I expect re-entry within the next
> week.
> But as there were no updated keplers since 6 days - has the bird already
> crashed ????
>
> Unfortunately, I currently have no working HAM equipment at all, so I
> cannot listen to the beacons and I can't read any PacketRadio
> informations.
>
> Is there anyone out there who can tell me more ?
>
> 73s, Joe

AO-13 is still working fine. Reentry prediction date has not changed as
far as I know. The electronic equipment, however, is expected to fail 2 -
3 weeks before actual re-entry. So the time left to use the satellite is
getting very limited. The attitude is still 165, -10. The command stations
have not decided whether to change to 90,0 as had been earlier planned, or
to leave it alone for awhile longer. The keplerian elements from NORAD are
now very much in error, even the latest ones. So you have to expect that
sometimes LOS may come before you expect. And when you hear the beacon
swing your antennas around and peak the signal, as the calculated AZ and
EL may be in error. The beacon is now 145.985 plus or minus Doppler.
ron, w8gus.

2252. ARLK079 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk079.1996@arrl.org>
Source record: 21027
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK079
ARLK079 Keplerian data

ZCZC SK79
QST de W1AW
Keplerian Bulletin 79 ARLK079
From ARRL Headquarters
Newington, CT October 29, 1996
To all radio amateurs

SB KEP ARL ARLK079
ARLK079 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96302.18016482 .00000039 00000-0 25755-4 0 02976
2 18129 82.9240 50.2269 0011935 139.3735 220.8327 13.72370747468410
UO-11
1 14781U 84021B 96302.04985572 .00000149 00000-0 32929-4 0 9236
2 14781 97.8106 286.9435 0012579 29.6493 330.5402 14.69491866677166
RS-12/13
1 21089U 91007A 96301.93220357 .00000048 00000-0 34576-4 0 09303
2 21089 82.9200 90.9006 0027802 223.2538 136.6448 13.74074528287269
AO-13
1 19216U 88051B 96302.35080960 .00163405 -68722-7 26914-3 0 3117
2 19216 57.0767 82.0735 7383774 54.9005 353.3427 2.21726395 32672
UO-14
1 20437U 90005B 96302.20951900 .00000003 00000-0 17965-4 0 02297
2 20437 98.5374 22.6908 0010828 166.3523 193.7964 14.29935638353062
RS-15
1 23439U 94085A 96302.13918127 -.00000039 00000-0 10000-3 0 01796
2 23439 64.8186 168.0805 0157458 175.4554 184.7844 11.27528917075770
AO-16
1 20439U 90005D 96302.30228510 -.00000028 00000-0 60656-5 0 184
2 20439 98.5523 25.2412 0011267 168.8281 191.3153 14.29987578353092
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DO-17
1 20440U 90005E 96302.24135395 -.00000003 00000-0 15473-4 0 197
2 20440 98.5566 25.8950 0011393 166.9396 193.2084 14.30129893353117
WO-18
1 20441U 90005F 96302.16408973 -.00000011 00000-0 12617-4 0 00381
2 20441 98.5540 25.7416 0011951 168.7976 191.3477 14.30098871353105
LO-19
1 20442U 90005G 96302.21967131 -.00000003 00000-0 15480-4 0 00319
2 20442 98.5562 26.3481 0012050 167.3535 192.7953 14.30209658353130
FO-20
1 20480U 90013C 96302.08279173 -.00000028 00000-0 89865-5 0 09288
2 20480 99.0233 301.6556 0540818 183.2298 176.5249 12.83234802314934
AO-21
1 21087U 91006A 96301.85254864 .00000094 00000-0 82657-4 0 07572
2 21087 82.9380 223.5079 0033574 195.6274 164.3846 13.74573362288230
UO-22
1 21575U 91050B 96302.24887153 -.00000015 00000-0 91887-5 0 7255
2 21575 98.3373 4.5783 0006994 224.1194 135.9413 14.37041031277177
KO-23
1 22077U 92052B 96302.36019947 -.00000037 00000-0 10000-3 0 6155
2 22077 66.0774 270.6255 0015637 265.8413 94.0816 12.86298338197935
KO-25
1 22828U 93061F 96302.16908998 .00000025 00000-0 27592-4 0 04903
2 22828 98.5662 15.5081 0009587 183.9135 176.1975 14.28156416129094
IO-26
1 22826U 93061D 96302.21947739 -.00000012 00000-0 12515-4 0 5090
2 22826 98.5715 15.4909 0008431 200.6693 159.4145 14.27816073160989
AO-27
1 22825U 93061C 96302.16321641 -.00000005 00000-0 15522-4 0 05296
2 22825 98.5707 15.2425 0007627 201.4859 158.6005 14.27707117160961
FO-29
1 24278U 96046B 96302.17338160 .00000005 00000-0 38504-4 0 00357
2 24278 98.5745 8.6711 0352517 67.1525 296.6438 13.52626969009753
MO-30
1 24305U 96052B 96302.05855217 .00000204 00000-0 20364-3 0 00499
2 24305 82.9388 166.1296 0031477 129.8764 230.5161 13.73084677007207
SICH 1
1 23657U 95046A 96301.89081438 .00000226 00000-0 31218-4 0 01257
2 23657 82.5308 78.4127 0028265 342.7992 17.2260 14.73502519062372
Mir
1 16609U 86017A 96302.14530687 .00003248 00000-0 41945-4 0 7530
2 16609 51.6529 173.9168 0012403 326.4704 33.5522 15.62303401610780

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
November 2, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2253. Attenuation of trees, leaves???

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: George La Belle <george_labelle@ccm.hf.intel.com>
Message-ID: <32768BCA.7BA2@ccm.hf.intel.com>
Source record: 21028

I just put up mode B antennas once again (been off satelliting for a coupla years) to practice up in anticipation of PIIID. The antennas face pretty much right into a big maple tree to the east. While this never seemed to pose a problem for mode B, I just realized it may for 1 or 2 GHz operation. Anyone with experience/knowledge in this area? Will the tree attenuate 1 or 2 GHz signals appreciably? (I'm in oregon, where it rains a lot too!) If this is the case, I'm
going to have to plan on putting my antennas on a tower to get them much higher. There are a lot of trees around.

Thanks,
George
WB6YZZ

2254. ft290/790 9600 mods

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: John Mcleod <johnm@weitek.com>
Message-ID: <32769724.167EB0E7@weitek.com>
Source record: 21029

I would like to be able to use my ft290r II (and the 440 version) on the 9600 baud pacsats, but I have been unable to find anyone who may have the necessary hoopup points/modifications. Does anyone have this info ?

Thanks !

John Mcleod N6RCD

2255. What is SICH 1?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <B9ERn46.sanderman@delphi.com>
Source record: 21030

Today's Keplerian Bulletin from ARRL (ARLK079) has added, in addition to the MO-30, a satellite called SICH 1 which carries the NORAD #23657. Can anyone tell me what these two new birds are?

Many thanks!

Stephan Anderman, WA3RKB
Stillwater, NY
sanderman@delphi.com
518/664-6809

2256. new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <32766e08.823764@news.monad.net>
Source record: 21031

recieved from Mir today..

[R 43]
Stat : PR
Posted : 10/29/96 18:29
To : ALL
From : R0MIR
@ BBS :
xID :
Subject: new Mir frequency

Since November 1 we'll have new frequency on Mir.
xPacket - 145.800
Voice - 145.800 Rx/145.200 Tx.
These frequencies are recommended us by the International amateur
conference in region 1.
We'll open for contacts on new frequency.
73 Mir crew
****
I am not really to happy about them switching as I know there are a
lot of APRS people at 145.79 and when doppler is compensated for there
will be substantial interference. The 145.200 freq is also in use by
various digital packet nodes in the region.. be sure to listen on your
transmit frequency to be sure it is not in use before using.. These
frequencies will definitly help out the european community where
145.55 is a common simplex frequency but I am not sure how it will be
taken here or in the rest of the world. It would seem to me that this
push to change frequencies has been well resisted, but now the moment
has come, and we shall all see how this european frequency change
works..
I would invite your opinions in this forum..
Dave N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

2257. Re: New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-29 00:00:00 UTC
From: rfm@worldnet.att.net
Message-ID: <wkybgoyjno.fsf@urth2.worldnet.att.net>
Source record: 21032
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

In article <01bbc4e5$8f923820$aaecbdcc@rsmith> "Bob Smith" <bsmith@msn.com> writes:

> Are those new N connectors that look like PL259's OK. I have a few and
> they pretty easy to work with. But then again the standard ones now seem
> just as easy to use.

Well, I have no data on how well they work, but I've decided I don't
like 'em. Usually I'm putting Ns on 9913 and with that skimpy spiral
poly dielectric the last thing I want to do is apply heat to solder
the braid.

So I'm back to the old types. Now, the problem with the old type is
sometimes after I put them on the connector is "loose", that is I can
hold the coax in one hand and the connnector in the other and twist,
and the connector moves. Connections like this "seem" to work OK
until the connector falls off, but that usually is only a few hours
later. Sometimes, the connector is on nice and tight and stays that
way. My question is, what is it I did wrong with the ones that are
loose?

Rich, KO6CL

--
Rich McAllister, KO6CL, rfm@worldnet.att.net

2258. Re: Attenuation of trees, leaves???

Newsgroup: rec.radio.amateur.space
Date: 1996-10-30 00:00:00 UTC
From: chainsaw@tfs.net
Message-ID: <5560vt$2s3@uucp.tfs.net>
Source record: 21033

Yes, unfortunately a wet tree in the beam of a UHF/SHF antenna is
gonna make a very noticeable difference. On AO-13 mode S, I totally
lost the signal when the sat dipped below the pecan tree that was in
the back yard of my old QTH. When the tree was wet, my uplink on 435
went down appreciably as well when working mode B. Of course the sigs
from AO-13 on 2.4GHz are REAL weak, so you might get a passable sig
thru the tree under better sig (power/offpoint angle) conditions from
PIIID.

Bob Scott
wy7o@amsat.org

George La Belle <george_labelle@ccm.hf.intel.com> wrote:

>I just put up mode B antennas once again (been off satelliting for a
>coupla years) to practice up in anticipation of PIIID. The antennas face
>pretty much right into a big maple tree to the east. While this never
>seemed to pose a problem for mode B, I just realized it may for 1 or 2
>GHz operation. Anyone with experience/knowledge in this area? Will the
>tree attenuate 1 or 2 GHz signals appreciably? (I'm in oregon, where it
>rains a lot too!) If this is the case, I'm
>going to have to plan on putting my antennas on a tower to get them much
>higher. There are a lot of trees around.

>Thanks,
>George
>WB6YZZ

2259. GET FAST CASH

Newsgroup: rec.radio.amateur.space
Date: 1996-10-30 00:00:00 UTC
From: gingham2@aol.com
Message-ID: <558fid$gpd@newsbf02.news.aol.com>
Source record: 21034

Hello! I've got some awesome news that I think you need to take two minutes to read if you have ever thought "How could I make some serious cash in a hurry???" , or been in serious debt, ready to do almost anything to get the money needed to pay off those bill collectors. So grab a snack, a warm cup of coffee, or a glass of your favorite beverage, get comfortable and listen to this interesting, exciting find!

Let me start by saying that I FINALLY FOUND IT! That's right!. I found it! And I HATE GET RICH QUICK SCHEMES!! I hate those schemes like multi-level marketing, mail-order schemes, envelope stuffing scams, 900 number scams... the list goes on forever. I have tried every darn get rich quick scheme out there over the past 12 years. I somehow got on mailing lists for people looking to make money (more like: 'desperate stupid people who will
try anything for money!'). Well, when I was a teenager, these claims to 'get me rich quick' sounded irresistible! I would shell out $14.95 here, $29.95 there, $24.95 here, and another $49.95 there. I had maxed out my new CircuitCity Card AND my Visa...I was desperate for money!! So, I gave them all a chance but failed at every one of them! Maybe they worked for some people, but not for me. Eventually, I just tossed that JUNK MAIL in the trash when I got the mail. I recognized it right
away. I can smell a money scam from a mile away these days...or so i thought. I believed I could sniff out a scam easily. WAS I WRONG!!...I LOVE THE INTERNET!!!

I was scanning thru a NEWSGROUP and saw an article stating: 'GET CASH FAST'!! I thought..."Here on the Internet?? Well, I'll just have to see what schemes could possibly be on the internet." The article described a way to MAIL A ONE DOLLAR BILL TO ONLY FIVE PEOPLE AND MAKE $50,000 IN CASH IN 4 WEEKS! Well, the more I thought about it, the more I became very curious.
Why? Because of the way it worked AND BECAUSE IT WOULD ONLY COST ME FIVE DOLLARS (AND FIVE STAMPS), THAT'S ALL I EVER PAY....EVER!!

Ok, so the $50,000 in cash was maybe a tough amount to reach, but it was possible. I knew that I could at least get a return of $1,000 or so. So I did it!! As per the instructions in the article, I mailed out ('snail mail'for you e-mail fanatics) a single dollar bill to each of the five people on the list that

was contained in the article. I included a small note,
with the dollar, that stated "Please Add Me To Your List."
I then removed the first position name of the five names listed
and moved everyone up one position, and I put my name in position
five of the list. This is how the money starts rolling in!
I then took this revised article now with my name on the list and
REPOSTED IT ON AS MANY NEWSGROUPS AND LOCAL BULLETIN
BOARDMESSAGE AREAS THAT I KNEW. I then waited to watch the
money come in...prepared to maybe receive about $1000 to $1500
in cash or so....But what a welcome surprise when those envelopes
kept coming in!!! I knew what they were as soon as I saw the
return addresses from people all over the world--most from the
U.S., but some from Canada, even some from Australia! I tell
you, THAT WAS EXCITING!! So how much did I get in total return?
$1000? $5000? Not even!!! I received a total of $23,343!!!
I couldn't believe it!!

I now have a brand new black Acura Integra to speak for, due to
this!! Now after almost 8 months, I am ready to do it again!!!
Somaybe it was possible to get $50,000 in cash, I don't know,
but IT COMPLETELY DEPENDS ON YOU, THE INDIVIDUAL! You must
follow through and repost this article everywhere you can think
of!
The more postings you achieve will determine how much cash will
arrive in you rvery own mailbox!! It's just too easy to pass
up!!!

Let's review the reasons why you should do this: The only cost
factors are for the five stamps, 5 envelopes, and the 5 one
dollar
bills that you send out to the listed names by snail mail
(US Postal Service Mail). Then just simply repost the article
(WITH YOUR NAME ADDED) to all the newsgroups and local BBS's you
can.
Then sit back, and enjoy walking (you can run if you like! :o)
down your driveway to your mailbox and scoop up your rewards!!
We all have five dollars to put into such an easy effortless
investment with SPECTACULAR REALISTIC RETURNS OF $15,000 to
$25,000
in about 3-5weeks! So HOLD OFF ON THOSE LOTTERY NUMBERS FOR
TODAY,
EAT AT HOME TONIGHT INSTEAD OF TAKEOUT FROM McDONALDS AND INVEST
FIVE
DOLLARS IN THIS AMAZING MONEY MAKING SYSTEM NOW!!! YOU CAN'T
LOSE!!

So how do you do it exactly, you ask? I have carefully provided
the most detailed, yet straightforward instructions on how to
easily
get this underway and get your cash on its way. SO, ARE YOU READY
TO

MAKE SOME CASH!!!?? HERE WE GO!!!*** THE LIST OF NAMES IS AT THE
END
OF THIS ARTICLE. ***OK, Read this carefully. Get a printout of
this
information, if you like, so you can easily refer to it as often
as
needed.

INSTRUCTIONS:

1. Take a sheet of paper and write on it the following: "Please add my
name
to your list". This creates a service out of this money making system
and
thus making it completely legal. You are not just randomly sending a
dollar
to someone, you are paying one dollar for a legitimate service. Make
sure
you include your name and address. I assure you that, again, this is
completely legal! For a neat little twist, also write what slot their
name was in: "You werein slot 3", Just to add a little fun! This is all
about having fun and making money at the same time!

2. Now fold this sheet of paper around a dollar bill ,(no checks or
money
orders), and put them into an envelope and send it on its way to the five
people listed. The folding of the paper around the bill will insure its
arrival to its recipient. THIS STEP IS IMPORTANT!!

3. Now listen carefully, here's where you get YOUR MONEY COMING TO YOUR
MAILBOX. Look at the list of five people; remove the firs tname from
position one and move everyone on the list up slot one on the list.
Position 2 name will now move to the position 1 slot, position 3 will now
become position 2, 4 will be be 3, 5 wil be 4. Now put your name,
address,
zipcode AND COUNTRY in position 5, the bottom position on the list.

4. Now upload this updated file to as many newsgroups and local bulletin
boards' message areas & file section as possible. Give a catchy
description
of the file so it gets noticed!! Such as: "NEED FAST CASH?, HERE IT
IS!,"
or "NEED CASH TO PAY OFF YOUR DEBTS??," etc. And the more uploads, the
more money you will make, and of course, the more money the others on the
list will make too. LET'S ALL TAKE CARE OF EACH OTHER BY BEING HONEST
AND
BY PUTTING FORTH 120 PERCENT INTO THIS PROFITABLE & AMAZING SYSTEM!!!
You'll reap the benefits, believe me!!! Set a goal for the number of
total
uploads you'll post, such as 15-20 postings or more! Always have a goal
in mind!!! If you can UUE encode the file when uploading, that will make
it easier for the people to receive it and have it downloaded to their

hard
drive. That way they get a copy of the article right on their computer
without hassles of viewing and then saving the article from the File
menu.
Don't alter the file type, leave it as an MS-DOS Text (***.txt) file.
The best test is to be able to view this file using Microsoft's Notepad
for
Windows 3.x or WordPad for Windows '95. If the margins look right without
making the screen slide left or right when at the ends of the sentences,
you're in business!

5. If you need help uploading, simply ask the sysop of the BBS, or"POST"
a message on a newsgroup asking how to post a file, tell them who your
Internet provider is and PEOPLE WILL ALWAYS BE GLAD TO HELP. I would try
to describe how to do it but there are simply too many internet software
packages with slightly different yet relatively simple ways to post or
upload a file. Just ask for help or look in the help section for
'posting'.
I do know that for GNN, you simply select 'POST' then enter a catchy
description under the subject box, choose 'ATTACH', selecting 'UUE' and
NOT 'TXT', then choose 'Browse' to go look for the file. Find your text
file CASH.TXT and click on it and choose 'OK'. Place a one line
statement
in the main body section of the message post screen. Something like
"Download this to read how to get cash arriving in your mailbox with no
paybacks!," or whatever. Just make sure it represents its true
feasibility,
NOT something like:" Get one million dollars flooding in your mailbox in
two days!" You'll never get ANY responses!

6. And this is the step I like. JUST SIT BACK AND ENJOY LIFE BECAUSE
CASH
IS ON THE WAY!! Expect to see a little money start to trickle in around 2
weeks, but AT ABOUT WEEKS 3 & 4, THE MONEY STORM WILL HIT YOUR MAILBOX!!
All you have to do is take it out of the mailbox and try not to scream
too
loud (outside anyway) when you realize YOU HIT THE BIG TIME AT LAST!!

7. So go PAY OFF YOUR BILLS AND DEBTS and then get that something
special
you always wanted or buy that special person in your life (or the one you
want in your life :)) a gift they'll never forget. ENJOY LIFE!

8. Now when you get low on this money supply, simply re-activate this
file again; Reposting it in the old places where you originally posted
and
possibly some new places you now know of. Don't ever lose this file,
always
keep a copy at your reach for when you ever need cash. THIS IS AN
INCREDIBLE TOOL THAT YOU CAN ALWAYS RE-USE TIME AND TIME AGAIN WHEN
CASH IS NEEDED!

9. (This comment added by Ron Markarian) Hell dude, this is great,
just send the money and wait like 1 week, then all of a sudden, BOOOOOOM!
Mail flood FULL of dollar bills. Hahahaha...its great

****** ******* ****** ********* ****** ******* ******* ***** *******
******
THE NAMES LIST THE NAMES LIST THE NAMES LIST
****** ******** ****** ********* ******* ********* ********* ******
****

HONESTY IS WHAT MAKES THIS PROGRAM SUCCESSFUL!!!

1. Ron Markarian
353 w. nees #214
Fresno, CA 93711
USA

2. Rob Shannon
2204 wabash ave,unit 24
Eielson,AK 99702
USA

3. Jesse Fahrenbruch
1147 Georgetown Rd.
apartment 104
Norfolk, VA 23502
USA

4. Stian Haugen
Jerpeveien 14
4890 GRIMSTAD
NORWAY

5. Chris Vogth-Eriksen
198 College Hill Rd.
Clinton, N.Y 13323
USA

2260. Re: Mir info?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <559cvq$8ud@news.injersey.com>
Source record: 21035

Brian Gibbs (Brian@brimar.demon.co.uk) wrote:
> Hello. I am hoping to find a source of general information about
> the Mir space station. Does anyone reading this NG know to where I may
> refer for such? eg. Is there another NG not specific to amateur radio?
> Note:- I have no Web browser so am unable to use one of the normal
> search engines to obtain any references. Any help will be much
> appreciated especially as my daughter has shown an interest after
> watching a few of the recent visual orbit passes. TIA.....73.....Brian

--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers Home Page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html

Jay Respler
--
JRespler@InJersey.com
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

2261. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <JjDR-zK.sanderman@delphi.com>
Source record: 21036

I've seen this info on the MIR packet beacon, as well. My question is this: Is 145.200 MHz THEIR transmit frequency (the downlink) or OUR transmit frequency (the uplink)? This aspect of the change is not too clear. Can someone authoritatively clear up this question?

Thanks...

Stephan Anderman, WA3RKB
Stillwater, NY
sanderman@delphi.com
518/664-6809

2262. FO-29 on 10 meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: Erik Skovgaard <Erik.Skovgaard@bc.sympatico.ca>
Message-ID: <01bbc6e6$46b0f300$1ec56cce@default>
Source record: 21037

The November issue of CQ VHF indicates that FO-12 is transmitting on 10 mters. The AMSAT web pages do not mention the frequency (-ies). Can anyone provide some insight?

73 de VE7MDL ....Erik.

2263. Re: AO-13 Re-Entry

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: jrespler@nj5.injersey.com
Message-ID: <559cp2$8ud@news.injersey.com>
Source record: 21038

DH1SAJ (dh1saj@aol.com) wrote:
> Since a few month I'm carefully watching AO-13 keplerian elements and as
> well reading all postings about AO-13 re-entry into earth athmosphere.

> As I understand the elements so far, Re-Entry date will be somewhat
> earlier than all predictions by AMSAT etc. (abt 6.Dec 96) saying.

> Am I wrong ????
> Are there some very new Re-Entry predictions I don't know about ?

> As perigee is currently close to 100km, I expect re-entry within the next
> week.

> Is there anyone out there who can tell me more ?

There is a lot of decay discussion on SEESAT-L, the Satellite Observer
Mail List. See below.

--

Jay Respler
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers Home Page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

2264. Re: MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: p034904b@pbfreenet.seflin.lib.fl.us
Message-ID: <55ao6u$1ji@nntp.seflin.lib.fl.us>
Source record: 21039

steve (kd6fyk@wco.com) wrote:
: PE Roman Brunel wrote:
: >
: > Hi,
: > can anyone tell me the uplink frequency of the repeater aboard the mir- space-
: > station. Yesterday evening (17:00 utc) I saw it during its pass and for the
: > first time heard the downlink on my 70 cm- handy.
: > Many thanks, 73 de Roman (DL2SFE)

: roman,uplink is 435.750 with a pl of 141.3 .
: i have heard ve7 on the bird and worked utah from cm88.
: 73 Steve

Could you please post the downlink frequency too?
Thank You
Ed
--
From the great town of Haverhill, Florida
Ed Howard
p034904b@pbfreenet.seflin.lib.fl.us

2265. ed's home page

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: john fleenor <jlfleenor@why.net>
Message-ID: <32795EAB.2E5B@why.net>
Source record: 21040

http://www.why.net/home/3051

2266. Wanted : Kenwood TH-78a

Newsgroup: rec.radio.amateur.space
Date: 1996-10-31 00:00:00 UTC
From: ihsd36@aol.com
Message-ID: <55b7n2$g83@newsbf02.news.aol.com>
Source record: 21041

Wanted to purchase a Kenwood TH-78a HT. If you have one or know of any one who has one for sale, please E-mail me at IHSD36@AOL.com or red.demon@juno.com. Please leave info on condition, accessories, and asking price. Thank You

2267. WinOrb2.9 Wheres the map?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: doslover@juno.COM
Message-ID: <19961031.180519.16119.0.doslover@juno.com>
Source record: 21042

Hello All,
I have just downloaded the version of Winorb (2.9), however I can't find the map!
I have a blank white screen with a circle on my location and the grapg of the satellite pass.. BUT no lakes rivers..or land formations...

Help?
What am I doing wrong..

Jason N1RWY

Amsat # 31356
"New to satellites and loving it!"

2268. $$ FAST CASH $$

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: Obelisk965 <Obelisk965@aol.com>
Message-ID: <01bbc80b$ac7a1ce0$5ae331cf@johnboy.net-link.net>
Source record: 21043
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.swap,rec.radio.broadcast

THIS IS THE FAIREST MOST HONEST WAY I KNOW TO

SHARE THE WEALTH! Hi there!

Question: would you like to make thousands of dollars,

quick, legally, with NO CATCH? If Yes, then keep reading. Please

take five minutes to read this article. It will change your life, just

like it did mine. If you're not interested, I apologize for wasting your

time.

It's true! You can make up to or over $50,000 dollars in 4-6

weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND

THIS IS NOT A SCAM! Interested? Then here we go.

A little while back, I was browsing through these

newsgroups, just like you are now, and came across an article

similar to this one, which said; "You could make thousands of

dollars in weeks with an initial investment of only $5!" So, I thought,

"Yeah, right, must be a scam!"... ...but like most of us I was

curious. So, I kept reading.

It said you send $1 to each of the 5 names and addresses stated in

the article. You then place your own name and address in the

article at the bottom of the list at #5, and post the article in at least

200 newsgroups (there are thousands). No catch, that was it!

So I thought it over, talked to a couple of people about the

whole thing. I figured what have I got to lose except for 5

stamps and $5? So, I tried it.

Well, guess what...within 7 days, I started getting money in

the mail! I was shocked! I figured it would end soon, and didn't

give it another thought. But the money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 28) and I've made about $42,000 TOTAL, and the money is still coming in.....

Let me tell you how this works and more importantly, WHY it works. Make sure you print a copy of this article NOW, so you can use the information from it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST." Fold each piece of paper in half. Take five $1 bills and place ONE in each piece of paper. Then put each piece of paper in to it's own envelope and seal it. You should now have 5 sealed envelopes , EACH containing a piece of paper AND a $1 bill inside the folded paper. Make sure the words ..."PLEASE PUT ME ON YOUR MAILING LIST." are written on each piece paper. By doing that, you are creating a service and it's PERFECTLY LEGAL.

Finally, mail 1 envelope to 1 of the following 5 addresses:

1. S. Shaw, 611 23rd St., Sacramento, CA 95816
2. G.Charters,5809 Hudson St., Vancouver, B.C. Canada V6M 2Z2
3. D.Miller, 26 Aristone Dr., Berlin, NJ 08009
4. B.Peale, 1619 Nth 5th St., Perkasie, PA 18944
5. D.Watson, 2430 W.Territorial Rd., Battle Creek, MI 49015

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, etc..) and put YOUR NAME as number 5 on the list.

STEP 3: Post your amended article (with you name at #5)
to at least 200 news groups (I think there are close to 18,000 of them). This is easy to do. You can either type out this message (altering any part you deem worthy, EXCEPT the name and addresses) with an ordinary editor or with your web browser's 'To:News' key at the upper left corner of this screen (Netscape Navigator 3.0). After typing this article, save a copy. Any time you want to post this article on a newsgroup, just use a flashy subject and post your saved copy. That's it, easy! Now, post the message to at least 200 DIFFERENT newsgroups. 200 IS THE MINIMUM. The more you post, the more money you will make. You are now in the mail order business and will start receiving your $1 envelopes from various people all over the world within days.
HINT: THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may even want to rent a PO Box, eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor." Please be sure to check that all the addresses on the envelopes are correct.

.
LET ME TELL YOU WHY THIS SYSTEM WORKS!!!
Out of every 200 postings, let's say I ONLY receive 5 replies, which is actually VERY LOW. So I made 5 dollars with my #5. Now then, each person who just sent me $1 makes, say only 200 POSTINGS, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; that's $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which

is $5,000 dollars! And finally, 5000 people make 200 postings
each with YOUR NAME AT NUMBER 1. YOU NOW GET A
RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF
THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS
ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the
latest posting that is appearing in the newsgroups, and SEND OUT
ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR
NAME AT 5 AGAIN. And start posting again. The thing to
remember is, do you realize that THOUSANDS OF PEOPLE ALL
OVER THE WORLD ARE JOINING THE INTERNET AND
READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE
RIGHT NOW!!! So can you afford $5 dollars and see if it really
works? I think so....
People have said, "What if the plan is played out and no sends
the money?" So what! What are the chances of that happening
when there are TONS OF NEW HONEST USERS AND NEW
HONEST PEOLE who are joining the Internet and newsgroups
everyday and are willing to give it a try?
Estimates are at 20,000 to 50,000 new users, every day, with
THOUSANDS of those joining the actual Internet. Remember, play
FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!!
Honesty is the key, and the best policy. Make sure you print this
article out RIGHT NOW, also, try to keep an eye on the
newsgroups to make sure everyone is playing fairly.
REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T
NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL
REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF
EXTRA CASH!!!
<< By the way, if you try to deceive people by posting the

messages with your name on the list and not sending the money to

the people already on the list, you'd be wasting your time.

I talked to someone who did that and only made $150 dollars, and

that was AFTER seven or eight weeks! He decided to send the 5

$1 bills, and in 4-5 weeks, he had over $10K. >>

THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!

GOOD LUCK!

2269. Re: MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: Jsapyta@getnet.com
Message-ID: <327971ef.2318237@news.getnet.com>
Source record: 21044

On 31 Oct 1996 17:38:38 GMT, p034904b@pbfreenet.seflin.lib.fl.us (Ed Howard) wrote:

>steve (kd6fyk@wco.com) wrote:
>: PE Roman Brunel wrote:
>: >
>: > Hi,
>: > can anyone tell me the uplink frequency of the repeater aboard the mir- space-
>: > station. Yesterday evening (17:00 utc) I saw it during its pass and for the
>: > first time heard the downlink on my 70 cm- handy.
>: > Many thanks, 73 de Roman (DL2SFE)
>
>: roman,uplink is 435.750 with a pl of 141.3 .
>: i have heard ve7 on the bird and worked utah from cm88.
>: 73 Steve
>
>
>Could you please post the downlink frequency too?
>Thank You
>Ed
>--
>From the great town of Haverhill, Florida
>Ed Howard
>p034904b@pbfreenet.seflin.lib.fl.us
>

Well, as of Nov 1. its going to be on 1456.800 (downlink) and 145.200 (downlink).

John

2270. (no subject)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: mphill@tsixroads.COM
Message-ID: <32794B1C.FFB@tsixroads.com>
Source record: 21045

add ham-space
<>< <>< <>< <>< <>< <>< <><
McCoy Phillips
Rt. 1 Box 278
Corinth,MS 38834
mphill@tsixroads.com
Visit Corinth, MS homepage at www.tsixroads.com

2271. New Mir 2 meter freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55bkl7$40p@news.mhv.net>
Source record: 21046

Just picked off of packet, As of Nov. 1st these are the new 2 meter Mir freqs.:

Voice: Downlink: 145.800, Uplink: 145.200
Packet: 145.800 simplex

Just for everyone's info! Not sure if it was posted yet....

73!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2272. Re: MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <327A371C.29BB@wco.com>
Source record: 21047

John Sapyta wrote:
>
> On 31 Oct 1996 17:38:38 GMT, p034904b@pbfreenet.seflin.lib.fl.us (Ed
> Howard) wrote:
>
> >steve (kd6fyk@wco.com) wrote:
> >: PE Roman Brunel wrote:
> >: >
> >: > Hi,
> >: > can anyone tell me the uplink frequency of the repeater aboard the mir- space-
> >: > station. Yesterday evening (17:00 utc) I saw it during its pass and for the
> >: > first time heard the downlink on my 70 cm- handy.
> >: > Many thanks, 73 de Roman (DL2SFE)
> >
> >: roman,uplink is 435.750 with a pl of 141.3 .
> >: i have heard ve7 on the bird and worked utah from cm88.
> >: 73 Steve
> >
> >
> >Could you please post the downlink frequency too?
> >Thank You
> >Ed
> >--
> >From the great town of Haverhill, Florida
> >Ed Howard
> >p034904b@pbfreenet.seflin.lib.fl.us
> >
>
> Well, as of Nov 1. its going to be on 1456.800 (downlink) and 145.200
> (downlink).
>
> Johnactually,the uhf down will still be 437.950.who would ever think someone
would put a sat.freq.at 145.200?
73 steve

2273. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: ve7vdx@dowco.com
Message-ID: <ve7vdx-0111961210120001@ppp60.dowco.com>
Source record: 21048

In article <JjDR-zK.sanderman@delphi.com>, Stephan M. Anderman
<sanderman@delphi.com> wrote:

> I've seen this info on the MIR packet beacon, as well. My question is this:
> Is 145.200 MHz THEIR transmit frequency (the downlink) or OUR transmit
> frequency (the uplink)? This aspect of the change is not too clear. Can
> someone authoritatively clear up this question?
>
> Thanks...
>
> Stephan Anderman, WA3RKB
> Stillwater, NY
> sanderman@delphi.com
> 518/664-6809

145.200 is our uplink
145.800 is our downlink

hope this helps,

2274. Announce: RF version 1.1 available (includes limited license facility for evaluation)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: Jon Jenkins <academic@onthenet.com.au>
Message-ID: <55dk9h$n3c@fjholden.OntheNet.com.au>
Source record: 21049
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

```
If you are not a registered RF user or are not interested in
radio or micorwave circuit design then hit delete now.

This news item announces that a new version of RF (1.1) is available.

The upgrade is available either via ftp:

ftp.onthenet.com.au /pub/academic/

or via WWW ftp:
ftp://ftp.onthenet.com.au/pub/academic

or simply via the WWW
http://www.onthenet.com.au/~academic

The update is free to all existing RF users although you will
have to contact Academic for a new serial number. The encrypt
key to decode the ftp'able zip file pdisk1.zip is the same as
for V1.0.

Also available now to interested parties are time limited
licenses which allow you to use RF's full facilities for a
limited time. Please contact us if you would like to try
RF.

The update is an interim update to add some requested features
and fix some bugs. A major upgrade (1.2) containing many new
features will be available in about four months.

If you have any questions please contact academic@onthenet.com.au

------------------------------------------------------------
Name: Academic Technologies Bongaree Rd,
Voice/Fax: 61-7-55-905-008 Terranora,
Inet: academic@onthenet.com.au NSW, AUSTRALIA 2486
Web: http://www.onthenet.com.au/~academic
My 3 year old son: "Daddy, why did God put the dinosaurs here first ?"
My 6 year old daughter: "To make it interesting for us!"...think about it
!!
------------------------------------------------------------
```

2275. Re: MIR- freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <327ADD9E.6E9E@wco.com>
Source record: 21050

Ed Howard wrote:
>
> steve (kd6fyk@wco.com) wrote:
> : PE Roman Brunel wrote:
> : >
> : > Hi,
> : > can anyone tell me the uplink frequency of the repeater aboard the mir- space-
> : > station. Yesterday evening (17:00 utc) I saw it during its pass and for the
> : > first time heard the downlink on my 70 cm- handy.
> : > Many thanks, 73 de Roman (DL2SFE)
>
> : roman,uplink is 435.750 with a pl of 141.3 .
> : i have heard ve7 on the bird and worked utah from cm88.
> : 73 Steve
>
>
> Could you please post the downlink frequency too?
> Thank You
> Ed
> --
> From the great town of Haverhill, Florida
> Ed Howard
> p034904b@pbfreenet.seflin.lib.fl.us

ed,437.950
73 steve

2276. Looking for RS12 Scheds

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: ve7vdx@dowco.com
Message-ID: <ve7vdx-0111961207370001@ppp60.dowco.com>
Source record: 21051

I am looking to complete my WAS on RS12 and I would be delighted to entertain QSO scheds from most anywhere as always but particularly the southern states and a few North eastern.

If you live in:

Idaho
Nevada
Wyoming
North Dakota
New Mexico
Oklahoma
Arkansas
Louisiana
Tennessee Please e-mail me for a sched
Mississippi BTW My QTH Grid CN89
Alabama Vamcouver, British Columbia
Kentucky Canada
Georgia
North Carolina ve7vdx@dowco.com
South Carolina
West Virginia
Georgia
Delaware
Maine
New Hampshire
Connecticut
Hawaii

2277. Re: FO-29 on 10 meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-01 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <JfIzXTe.sanderman@delphi.com>
Source record: 21052

FO-29 as posted in your header, or FO-12 (?) as posted in your message?

If you mean FO-29, maybe someone else here can answer. IF you mean FO-12, I didn't know there was such an animal.

I'm still trying to find out what MO-30 and SICH 1 are, as listed on the ARRL Keps from Tuesday, 10/29.

Stephan Anderman, WA3RKB
Stillwater, NY
sanderman@delphi.com

2278. Re: New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-02 00:00:00 UTC
From: wf3h@enter.net
Message-ID: <55e8me$9k1@news.enter.net>
Source record: 21053
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

"Bob Smith" <bsmith@msn.com> wrote:

>Are those new N connectors that look like PL259's OK. I have a few and
>they pretty easy to work with. But then again the standard ones now seem
>just as easy to use.

>Thanks and 73 de Bob.

N connectors are a pain in the ass. I just spent a few hours at 100'
for the K3ANS contest station replacing the female end of an N on
rg213. the female side had splayed out and became intermittent even
though it was nailed down pretty tight. And they are supposed to be
loose...if you can rotate them thats no problem. but they are a drag
to maintain.

2279. Wanted : Kenwood TH-78a

Newsgroup: rec.radio.amateur.space
Date: 1996-11-02 00:00:00 UTC
From: ihsd36@aol.com
Message-ID: <55g0rk$8v0@newsbf02.news.aol.com>
Source record: 21054

Wanted to purchase a Kenwood TH-78a HT. If you have one or know of any one who has one for sale, please E-mail me at IHSD36@AOL.com or red.demon@juno.com. Please leave info on condition, accessories, and asking price. Thank You

2280. Updated Satellite Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-11-02 00:00:00 UTC
From: John Harmon <n4okl@amsat.org>
Message-ID: <01bbc892$3b8d0a60$44ac63ce@Pjharmon>
Source record: 21055

Hello and thanks for the replies about my homepage.
I have updated the satellite data as of November 2.
Let me know what you think...
ttul 73, John

--
Email: n4okl@amsat.org
homepage: http://www.newwave.net/~jharmon

2281. ARLK080 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-02 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk080.1996@arrl.org>
Source record: 21056
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK080
ARLK080 Keplerian data

ZCZC SK80
QST de W1AW
Keplerian Bulletin 80 ARLK080
From ARRL Headquarters
Newington, CT November 2, 1996
To all radio amateurs

SB KEP ARL ARLK080
ARLK080 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96306.26299203 +.00000053 +00000-0 +40953-4 0 02954
2 18129 082.9243 047.2098 0012287 128.3210 231.9050 13.72371075468978
UO-11
1 14781U 84021B 96306.06727031 .00000135 00000-0 30696-4 0 9241
2 14781 97.8108 290.7871 0012446 17.3735 342.7885 14.69493353677759
RS-12/13
1 21089U 91007A 96305.93716185 +.00000031 +00000-0 +17276-4 0 09306
2 21089 082.9203 087.9303 0027819 211.7100 148.2366 13.74074479287817
AO-13
1 19216U 88051B 96305.94709820 .00269058 10308-5 43573-3 0 3168
2 19216 57.0689 81.2256 7369937 55.4636 354.7895 2.23494143 32753
UO-14
1 20437U 90005B 96306.26796860 +.00000015 +00000-0 +22665-4 0 02273
2 20437 098.5363 026.6680 0010889 154.4280 205.7443 14.29936291353642
RS-15
1 23439U 94085A 96306.13039405 -.00000039 +00000-0 +10000-3 0 01771
2 23439 064.8179 161.6267 0157389 174.7124 185.5505 11.27528977076221
AO-16
1 20439U 90005D 96306.29061599 +.00000004 +00000-0 +18183-4 0 00414
2 20439 098.5521 029.1585 0011462 156.9574 203.2125 14.29988143353668
```

```
DO-17
1 20440U 90005E 96306.22928881 -.00000011 +00000-0 +12589-4 0 00395
2 20440 098.5559 029.8132 0011569 155.2986 204.8763 14.30130270353682
WO-18
1 20441U 90005F 96306.29204120 -.00000009 +00000-0 +13270-4 0 00414
2 20441 098.5535 029.7978 0012159 156.5135 203.6604 14.30099347353691
LO-19
1 20442U 90005G 96306.27734405 +.00000005 +00000-0 +18729-4 0 00292
2 20442 098.5564 030.3380 0012185 155.2794 204.8975 14.30210035353711
FO-20
1 20480U 90013C 96306.05929171 -.00000010 +00000-0 +46350-4 0 09247
2 20480 099.0231 304.8746 0540931 174.2205 186.5480 12.83235146315449
AO-21
1 21087U 91006A 96306.22002177 +.00000094 +00000-0 +82657-4 0 07723
2 21087 082.9399 220.2809 0034356 182.3814 177.7184 13.74573181288835
UO-22
1 21575U 91050B 96306.21765162 +.00000052 +00000-0 +31795-4 0 07465
2 21575 098.3366 008.4213 0006954 213.7146 146.3598 14.37042306277746
KO-23
1 22077U 92052B 96306.40321460 -.00000037 00000-0 10000-3 0 6161
2 22077 66.0774 262.1609 0015488 265.6981 94.2268 12.86298380198454
KO-25
1 22828U 93061F 96306.23259066 .00000015 00000-0 23215-4 0 4895
2 22828 98.5659 19.4942 0009806 170.8531 189.2830 14.28156802129676
IO-26
1 22826U 93061D 96306.21386677 +.00000005 +00000-0 +19614-4 0 05292
2 22826 098.5713 019.4095 0008544 187.9286 172.1754 14.27816653161553
AO-27
1 22825U 93061C 96306.22799269 +.00000024 +00000-0 +27236-4 0 05253
2 22825 098.5714 019.2317 0007810 187.9063 172.1989 14.27707624161542
FO-29
1 24278U 96046B 96306.24163215 -.00000011 00000-0 22798-4 0 318
2 24278 98.5743 12.1984 0352537 56.6205 306.8148 13.52627008 10303
Mir
1 16609U 86017A 96306.49493940 .00001207 00000-0 19391-4 0 7614
2 16609 51.6515 151.9734 0013226 343.3967 16.6605 15.62317034611460

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
November 5, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2282. new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: doslover@juno.COM
Message-ID: <19961103.131559.6871.0.doslover@juno.com>
Source record: 21057

Greetings all..
I would love to get this whole freq debate straight.

I was under the impression that the NEW frequencies for two meters were
the following:
packet 145.800

voice 145.200 UP
145.800 DN (therefore I would hear MIR HERE..)

However, today @ 18:08 (11/3/96) I heard John (KC5PZQ) on the 145.200
frequency handling qso's (which should be OUR up freq) after he was on
the 145.800 frequency (our correct down) telling EVERYONE to change to
145.200 up and 145.800 down.

What is going on? And what will the correct frequency pattern (up / down
) be..

Jason N1RWY
Amsat # 31356 "thoroughly confused...."

2283. Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <55in4h$n7t@news.monad.net>
Source record: 21058

Just talked to John on Mir (KC5TZQ) and there is a great deal of confusion about the transmit recieve combination he wanted all to know
we transmit on 145.800 and we terrestrials recieve on 145.200
please try to get it togeather.. and there will be a lot of fun..
Best Regards Dave N1PPP

e-mail=dhend@cyberportal.net
packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743

http://www.cyberportal.net/dhend/dave1.html

Wear the world like a loose garment

2284. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <327cfc2f.926110@news.monad.net>
Source record: 21059

please get John's callsign right first... KC5TZQ
second he had heard so many people on the wrong freq he switched to
try and convice them to switch to the right freq.. and he ended up
confusing people further I think..
he wants us to transmit on 145.800 and to receive on 145.200 that
means that when you have a +duplex you are looking at 145.200, and
when you key up it switched to `145.800 this is not what was
origionally planned as far as I know, but being of sound mind and body
(ha ha) I programed both into my radio and was ready for whatever the
chef cooked up.. so if you want Mir to hear you transmit on 145.800
(at least for now) as it may change later.. the only thing that is
constant is change.. 73 DAVE N1PPP

On 3 Nov 96 21:15:56 GMT, doslover@juno.COM (Jason K Baack) wrote:

>Greetings all..
>I would love to get this whole freq debate straight.
>
>I was under the impression that the NEW frequencies for two meters were
>the following:
> packet 145.800
>
> voice 145.200 UP
> 145.800 DN (therefore I would hear MIR HERE..)
>
>However, today @ 18:08 (11/3/96) I heard John (KC5PZQ) on the 145.200
>frequency handling qso's (which should be OUR up freq) after he was on
>the 145.800 frequency (our correct down) telling EVERYONE to change to
>145.200 up and 145.800 down.
>
>What is going on? And what will the correct frequency pattern (up / down
>) be..
>
>Jason N1RWY
>Amsat # 31356 "thoroughly confused...."

dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

2285. Mir repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <327CE514.2D17@vogon.rain.com>
Source record: 21060

I havn't been able to hear/raise the Mir repeater for a few
days now. Does anyone know the status ??

Also, the new voice frequency has only had packet signals ... (?)

Is there a location on the net where I can find up to date
info in Mir happenings ?

Philip/kc7fwb

2286. Low Cost Access to Space in Education - November 12 - Ottawa

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: John Criswick <criswick@conveyor.com>
Message-ID: <55imh8$mg7@loki.tor.hookup.net>
Source record: 21061

Low Cost Access to Space in Education - Update
Ottawa, November 12, 1996

This is a reminder and program update for "Low Cost Access to Space in Education" taking place November 12th in Ottawa.

We would appreciate feedback on whether you plan to attend. Registrations will be accepted at the door, however, before the conference we would like to guage the number of people who will be attending.

Please forward this message on to you colleagues and anyone who may be interested.

Conference lectures include:

Lessons Learned in Low-Cost Access to Space at Stanford University
Prof. Robert Twiggs, Director, Stanford Space Systems Development Laboratory

Lessons Learned in Low-Cost Access to Space in Education
Mark Allery, Surrey Satellite Technologies Ltd, Surrey,U.K.

Low-Cost Microspacecraft Design
Rick Fleeter, Ph.D., President, AeroAstro

Small Payload Opportunities in the CSA Long-term Space Plan
Dr. David Kendall, Program Scientist, Canadian Space Agency

SILA: A Student Microsatellite Project
Prof. D.A. Staley, Department of Mechanical and Aerospace Engineering, Carleton University (tentative)

Using the Unviersity Satellite-Development Model in Industry
Mr. George Tyc, Project Manager, Bristol Aerospace Ltd.

Building Space-Qualified Hardware in Universities
Prof. Gethyn Timothy, Centre for Space Research, Department of Physics, University of New Brunswick (tentative)

SUNSAT: A Microsat Project at the University of Stellenbosch in South Africa
Mr. Sias Mostert, University of Stellenbosch, South Africa

Cost for LCASE registration is $30 (CAN) students and $75 others and includes lunch and coffee breaks. To register, please contact CASI at:

9th Conference on Astronautics - Education Workshop
CASI, 130 Slater Street, Suite 818
Ottawa, Ontario K1P 6E3
Tel: 613-234-0191
Fax: 613-234-9039

More information and an updated program are available on CAISU's web site at http://www.caisu.ca/ or contact the Conference co-organizer, John Criswick by phone at 613-562-2816 or e-mail at criswick@conveyor.com

LCASE is Co-Chaired by:

John Criswick, The Internet Conveyor Ltd. / SPACE JOBS Inc.
Jean-Francois Simard, Defense Research Establishment Ottawa

LCASE is sponsored by:

Canadian Alumni of the International Space University
Canadian Foundation for the International University
Canadian Aeronautics and Space Institute
Canadian Space Agency

2287. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <RfPw-ht.sanderman@delphi.com>
Source record: 21062

I don't have an answer. But I know a lot of people stateside are upset.

145.20 is in between two common FM repeater outputs - 145.19 and 145.21 (both of which are in use here in the Albany, NY area).

145.80 is but 10 kHz above the frequency commonly used by APRS users in many parts of the country.

Rumor has it that the JSC Amateur Radio Club (W5RRR) is pursuing this problem with the MIR crew, AMSAT, and other interested parties. Apparently, a new set of frequencies will be decided upon in the next few days. Watch the MIR packet beacon for information.

Stephan Anderman, WA3RKB
Stillwater, NY
sanderman@delphi.com

2288. Re: What is SICH 1?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: "Stephan M. Anderman" <sanderman@delphi.com>
Message-ID: <ZdOTHNp.sanderman@delphi.com>
Source record: 21063

No one replied to this. However, a friend of mine in Massachusetts was able
to come up with an answer. To wit...

From: IN%"dhorton@vgernet.net" "Don Horton" 3-NOV-1996 11:09:50.19
To: IN%"sanderman@delphi.com"
CC:
Subj: 23657 SICH-1

Return-path: <dhorton@vgernet.net>
Received: from photon.vgernet.net ("port 1961"@photon.vgernet.net)
by delphi.com (PMDF V5.0-7 #10880) id <01IBENYUJUKG91032Q@delphi.com> for
sanderman@delphi.com; Sun, 03 Nov 1996 11:09:49 -0500 (EST)
Received: from vger.vgernet.net (root@vger.vgernet.net [205.219.186.1])
by photon.vgernet.net (8.7.6/8.7.3) with ESMTP id LAA10847 for
<sanderman@delphi.com>; Sun, 03 Nov 1996 11:09:42 -0500
Received: from plp22.vgernet.net (plp22.vgernet.net [205.219.186.122])
by vger.vgernet.net (8.7.6/8.7.3) with SMTP id LAA25595 for
<sanderman@delphi.com>; Sun, 03 Nov 1996 11:09:40 -0500
Date: Sun, 03 Nov 1996 11:09:40 -0500
From: Don Horton <dhorton@vgernet.net>
Subject: 23657 SICH-1
X-Sender: dhorton@vgernet.net
To: sanderman@delphi.com
Message-id: <199611031609.LAA25595@vger.vgernet.net>
MIME-version: 1.0
X-Mailer: Windows Eudora Light Version 1.5.2
Content-type: text/plain; charset="us-ascii"
Content-transfer-encoding: 7BIT

Don't know why AMSAT has this in their file, other than as a source
of telemetry to listen to.

SICH-1 23657 95046A Launch: 31AUG95

FolLows text from NASA SPACEWARN back issue:

1995-046A
SICH 1 is a Ukrainian remote sensing satellite that was launched from
Plesetsk cosmodrome by a Tsiklon-3 rocket at 13:50 UT. The spacecraft and
instruments on board are similar to those of the Soviet Okean series. Its
main mission is to monitor objects of several hundred meters in size, such as
Arctic ice. A second payload, FASAT-ALPHA, which is a Chilean spacecraft of
50 kg mass, could not be separated from SICH 1, and so had to be muted.
Initial orbital parameters were period 98.7 min, apogee 682 km, perigee
651 km, and inclination 82.53 km.

****

Don Horton N1ISB

Amateur Radio: http://www.vgernet.net/dhorton/nobarc.html
Weather : http://www.vgernet.net/dhorton/wx.html
Satellites : http://www.vgernet.net/dhorton/birdhunt.html
N1ISB/Rover : http://www.vgernet.net/dhorton/rover.html

My thanks to Don for doing the research necessary to find me an answer. Guess the researcher at ARRL included this in error.

Stephan Anderman, WA3RKB
sanderman@delphi.com

2289. Re: DX and Satellite Cyberscheds available at http://www.sarrio

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: wb6siv@telis.org
Message-ID: <wb6siv-0311962353010001@host16.cyberg8t.com>
Source record: 21064

Hi Gus, I a few simple questions about your claim that prearranged scheduals are not allowed for a number of awards and contests. How do these arward programs view hams that work a DX station based upon a article in QST that gives feq. date,time and mode of operation? Or, what about the ham that says to a dx station that they just worked on 20 meters, "hay can you drop down to 40 meters so I can get that band confirmed,Or what about the QRP station that initially works a station with a KW and then turns the power to 5 whats and asks the dx station if he can still copy--would that contact still count? Or what about the ham that works a dx station through a dx net control who makes the original contact with both stations and then asks the dx station if he/she can hear w6xxx. I will not even get into the packet cluster issue. So as you can see Gus I am very confused, after all what is the significant difference between the above examples and a cybersched, that would make the cybersched cheating and these other methods of working dx stations to gain points in various contests and reward programs acceptable? Or are you saying all of the above mentioned methods are also disallowed? Just thought I'd ask. 73's Ray

>
>
> {clip}
>
>
>
> If you pre-arrange a contact by any means (including electronically),
>
> then it is not valid for most awards. "Cyberscheds" will make it easy
>
> for people to CHEAT their way into an award that they don't deserve.
>
>
>
> 73, de Gus 8P6SM
>
> Barbados - the easternmost isle
>
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2290. kc5tom (page)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: Robert Newland <robtnew@why.net>
Message-ID: <327D64F7.3C02@why.net>
Source record: 21065

visit the tired old mans page at http://www.why.net/home/robtnew for ham links and sports and more!

2291. meteosat

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: "Tomas Orzaez (EB6WQ)" <tom@redestb.es>
Message-ID: <55iafr$mf8@artemis.ibernet.es>
Source record: 21066

Just wanted to know if the Meteosat can be received with sound blaster card.Thanks .

2292. Re: Just try this, it will work

Newsgroup: rec.radio.amateur.space
Date: 1996-11-03 00:00:00 UTC
From: rb@cyberhighway.net
Message-ID: <327c39c7.13406857@news.cyberhighway.net>
Source record: 21067
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.space,alt.music.amazing-aces,rec.music.ambient,alt.games.ambrosiasw,alt.tv.amer-gothic,alt.music.america,alt.online-service.america-online,alt.renewing.american.civilization,alt.revolution.american.second,alt.current-events.amfb-explosion,alt.fan.ami-dolenz,alt.religion.amiga,alt.sources.amiga,alt.warez.amiga,aus.computers.amiga,backbone.fragen.amiga,comp.sys.amiga,comp.unix.amiga,fido.ger.amiga,ifci.support.amiga,it.comp.amiga,lightspeed.rechner.amiga

On Sat, 2 Nov 1996 23:44:01 GMT, sbolting@nemonet.com (Stephen Boltinghouse) wrote:

>
>Take five minutes to read this and it WILL change your life.
>
> The Internet has grown tremendously. It doubles in size every 4 months.
> think about it. You see those 'Make.Money.Fast' posts more and more.
> That's ... because it WORKS ! So I thought, all those new users might
> make it work. And I decided to try it out, a few months ago. Besides,
> whats $5.00, I spend more than that in the morning on my way to work on
> coffee and cigs for the day. So I sent in my money and posted.
> Everyone was calling it a scam, but there are SO many new users from
> AOL, Netcom, etc. they will join in and make it work for you.

If you believe for even a second that this is a legal practice, go read:

http://www.usps.gov/websites/depart/inspect/chainlet.htm

Participate in this scam and you'll likely have a visit from your local postal inspector, they take this crime pretty serious.. (experience speaking)..

2293. NORAD Two-Line Orbital Element Sets (TLE894)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <55luln$hga@blackbird.afit.af.mil>
Source record: 20971

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #894 -
Alouette 1
1 00424U 62049A 96305.12437023 .00000049 00000-0 46951-4 0 2395
2 00424 80.4636 149.6219 0024107 44.2007 316.1059 13.67879038700927
ATS 1
1 02608U 66110A 96308.43054147 -.00000188 00000-0 10000-3 0 9862
2 02608 14.5879 351.3349 0008636 103.5746 256.5120 1.00296395 26261
ATS 3
1 03029U 67111A 96309.22270594 -.00000113 00000-0 10000-3 0 5657
2 03029 14.9149 358.2766 0010959 268.0520 112.3216 1.00272995106174
Starlette
1 07646U 75010A 96305.25743366 -.00000129 00000-0 99929-5 0 82
2 07646 49.8303 331.7600 0205533 319.8108 38.7740 13.82191386 97782
LAGEOS
1 08820U 76039A 96306.24791237 .00000012 00000-0 00000+0 0 2357
2 08820 109.8532 72.9682 0043431 99.0496 261.4960 6.38664500222589
ETS-2
1 09852U 77014A 96304.27252795 -.00000073 00000-0 10000-3 0 822
2 09852 13.3987 31.3592 0006690 132.3454 227.6614 0.99997595 18990
GOES 2
1 10061U 77048A 96307.52197063 .00000050 00000-0 10000-3 0 7573
2 10061 12.5493 35.5127 0012729 123.6841 253.9999 1.00263117 15837
IUE
1 10637U 78012A 96309.24514567 -.00000149 00000-0 10000-3 0 2965
2 10637 35.6855 81.3176 1336091 61.5326 263.9476 1.00059029 21335
GOES 3
1 10953U 78062A 96308.25853563 -.00000117 00000-0 10000-3 0 7334
2 10953 11.5506 38.4331 0001879 152.8674 201.7434 1.00265857 20443

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SeaSat 1
1 10967U 78064A 96308.89892201 .00000013 00000-0 48734-4 0 5274
2 10967 107.9963 103.8210 0002535 240.1430 119.9460 14.38131287961536
Nimbus 7
1 11080U 78098A 96307.67870456 -.00000034 00000-0 68391-5 0 6245
2 11080 98.9262 163.0472 0009037 319.6427 40.4056 13.83690600910322
GOES 5
1 12472U 81049A 96307.41326962 .00000098 00000-0 10000-3 0 9605
2 12472 8.4126 48.7861 0006474 78.2006 281.8111 1.00271742 14480
Cosmos 1383
1 13301U 82066A 96306.23708282 .00000015 00000-0 36565-7 0 5394
2 13301 82.9327 33.3104 0025972 221.5052 138.4128 13.68077902716113
LandSat 4
1 13367U 82072A 96308.69646048 .00000044 00000-0 19607-4 0 174
2 13367 98.0576 355.2502 0008124 66.8778 293.3277 14.57189314760858
DMSP B5D2-1
1 13736U 82118A 96307.89405383 .00000050 00000-0 39394-4 0 1095
2 13736 98.6242 134.0505 0008806 349.6508 10.4493 14.25810067720833
IRAS
1 13777U 83004A 96309.15466150 .00000233 00000-0 19045-3 0 4800
2 13777 98.9652 131.6931 0013919 71.0888 289.1783 13.99258327372947
Cosmos 1447
1 13916U 83021A 96305.87055229 .00000018 00000-0 23024-5 0 6313
2 13916 82.9422 89.9468 0038618 129.2764 231.1846 13.74346754682511
TDRS 1
1 13969U 83026B 96309.23130895 -.00000290 00000-0 10000-3 0 6561
2 13969 9.1775 42.3048 0004253 158.7680 237.3851 1.00276774 22792
GOES 6
1 14050U 83041A 96309.23281563 -.00000142 00000-0 10000-3 0 5665
2 14050 7.2542 52.2912 0003930 79.4273 259.2743 1.00219532107597
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96307.59421549 .00000074 00000-0 26689-4 0 5610
2 14780 98.3166 5.2956 0001741 199.2027 160.9112 14.57061367674114
UO-11
1 14781U 84021B 96306.06727031 .00000135 00000-0 30696-4 0 9241
2 14781 97.8108 290.7871 0012446 17.3735 342.7885 14.69493353677759
Cosmos 1574
1 15055U 84062A 96305.60906457 .00000044 00000-0 30744-4 0 8311
2 15055 82.9541 145.3400 0027434 324.9702 34.9646 13.73641108619711
Cosmos 1602
1 15331U 84105A 96308.21546367 .00000191 00000-0 19628-4 0 5145
2 15331 82.5351 342.7772 0018932 204.3925 155.6395 14.84801265653602
ERBS
1 15354U 84108B 96308.75091858 -.00000166 00000-0 66804-5 0 2297
2 15354 56.9976 180.5126 0009673 105.2623 254.9455 14.94991548657713
NOAA 9
1 15427U 84123A 96308.76871895 .00000065 00000-0 57829-4 0 9035
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2 15427 98.9323 13.6684 0014053 280.9160 79.0428 14.13814364613355
Mir
1 16609U 86017A 96309.18146307 .00000838 00000-0 15311-4 0 7678
2 16609 51.6533 138.4186 0012963 353.8397 6.2429 15.62323330611882
SPOT 1
1 16613U 86019A 96308.24019418 -.00000045 00000-0 00000+0 0 08
2 16613 98.8251 15.9356 0001364 167.6515 192.4696 14.19990000240046
Cosmos 1766
1 16881U 86055A 96306.36004346 .00000194 00000-0 20563-4 0 4289
2 16881 82.5186 42.1797 0017257 243.3377 116.6072 14.83770160554180
EGP
1 16908U 86061A 96308.91813988 -.00000083 00000-0 10000-3 0 1288
2 16908 50.0098 287.4111 0011249 8.4559 351.6463 12.44415176133808
NOAA 10
1 16969U 86073A 96308.85854696 .00000002 00000-0 19041-4 0 8363
2 16969 98.5307 301.9760 0012712 311.8755 48.1337 14.25008249526491
MOS-1
1 17527U 87018A 96307.18900359 -.00000043 00000-0 00000+0 0 4808
2 17527 98.9280 6.0627 0017113 304.9737 54.9831 14.00458260494307
GOES 7
1 17561U 87022A 96297.23866760 -.00000163 00000-0 10000-3 0 1133
2 17561 3.3141 68.5067 0004365 310.3497 2.6628 1.00260238 18589
Kvant-1
1 17845U 87030A 96308.86163418 .00005986 00000-0 72119-4 0 8009
2 17845 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190545942
DMSP B5D2-3
1 18123U 87053A 96308.49225945 .00000012 00000-0 28576-4 0 6615
2 18123 98.7686 136.4949 0013361 215.3375 144.6917 14.15457521484202
RS-10/11
1 18129U 87054A 96307.79405288 .00000020 00000-0 51003-5 0 2813
2 18129 82.9247 46.0787 0012409 124.1744 236.0589 13.72370816469185
Meteor 2-16
1 18312U 87068A 96306.88955531 .00000019 00000-0 39297-5 0 5195
2 18312 82.5545 242.8459 0011243 189.0459 171.0499 13.84086488465227
Meteor 2-17
1 18820U 88005A 96309.07215979 -.00000030 00000-0 -39582-4 0 871
2 18820 82.5406 295.8212 0015158 255.2799 104.6637 13.84763483442884
DMSP B5D2-4
1 18822U 88006A 96309.16133924 -.00000003 00000-0 16796-4 0 3811
2 18822 98.3815 134.5447 0005848 323.8080 36.2700 14.23205214454481
Glonass 34
1 19163U 88043A 96305.61190605 .00000016 00000-0 10000-3 0 1256
2 19163 65.3194 81.2425 0006446 142.7117 217.3225 2.13102413 65140
Glonass 36
1 19165U 88043C 96307.54600579 .00000024 00000-0 10000-3 0 5363
2 19165 65.2944 81.1378 0002651 300.6903 59.2757 2.13102204 65806
METEOSAT 3
1 19215U 88051A 96301.58938397 -.00000157 00000-0 10000-3 0 2857
2 19215 3.5312 67.0093 0005804 118.7130 241.2944 0.96948815 18462
AO-13
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1 19216U 88051B 96308.61924261 .00355047 34275-4 39943-3 0 3217
2 19216 57.0358 80.5981 7358585 55.5906 353.3997 2.25322085 32813
OKEAN 1
1 19274U 88056A 96308.90224399 .00000148 00000-0 15430-4 0 1299
2 19274 82.5151 140.8236 0020967 27.7651 332.4682 14.82535594450073
Meteor 3-2
1 19336U 88064A 96307.43134827 .00000051 00000-0 10000-3 0 5238
2 19336 82.5373 68.5986 0015822 249.7169 110.2251 13.16979801397679
Glonass 39
1 19503U 88085C 96306.16883581 -.00000029 00000-0 10000-3 0 4150
2 19503 65.5376 320.0973 0009371 142.1205 218.0006 2.13101738 63261
NOAA 11
1 19531U 88089A 96308.79050691 -.00000009 00000-0 20195-4 0 7220
2 19531 99.1811 330.4955 0010991 206.7103 153.3503 14.13109108418166
TDRS 3
1 19548U 88091B 96308.93560063 -.00000193 00000-0 10000-3 0 2442
2 19548 2.7715 71.2138 0005870 149.6671 244.8202 1.00269267 16931
Glonass 40
1 19749U 89001A 96303.39052977 -.00000003 00000-0 10000-3 0 6312
2 19749 65.2620 80.8376 0003132 277.7430 82.1993 2.13101501 60714
Glonass 41
1 19750U 89001B 96308.60727609 .00000024 00000-0 10000-3 0 5382
2 19750 65.2807 80.7294 0007763 248.6558 111.2595 2.13101691 60849
GPS BII-01
1 19802U 89013A 96305.75648370 .00000024 00000-0 00000+0 0 3117
2 19802 55.3992 105.1991 0031869 121.3810 238.9876 2.00555862 56450
Akebono
1 19822U 89016A 96308.81425147 .00007066 00000-0 33446-3 0 8052
2 19822 75.0899 42.7063 3740200 0.7233 359.7353 7.94169029177765
Meteor 2-18
1 19851U 89018A 96306.16576880 .00000059 00000-0 39874-4 0 5170
2 19851 82.5223 171.8652 0014198 318.2708 41.7368 13.84419997387787
MOP-1
1 19876U 89020B 96308.49985389 -.00000095 00000-0 10000-3 0 2241
2 19876 2.2738 71.2703 0015870 285.4417 74.3074 0.97109954 7979
TDRS 4
1 19883U 89021B 96309.07963542 -.00000268 00000-0 00000+0 0 2698
2 19883 0.1690 90.1551 0008832 119.7426 181.4839 1.00269234200518
GPS BII-02
1 20061U 89044A 96308.09033085 -.00000030 00000-0 10000-3 0 2966
2 20061 54.1123 280.6590 0176577 221.4427 137.1939 2.00562442 54245
Nadezhda 1
1 20103U 89050A 96306.49255517 .00000015 00000-0 37527-7 0 9537
2 20103 82.9625 7.4200 0038737 32.7676 327.5871 13.73870452367539
GPS BII-03
1 20185U 89064A 96307.35398155 .00000039 00000-0 10000-3 0 3391
2 20185 55.1487 105.5137 0077928 323.2749 36.0582 2.00809883 52800
GMS 4
1 20217U 89070A 96308.08308449 -.00000369 00000-0 10000-3 0 4749
2 20217 2.0624 74.4728 0000328 236.2809 242.0864 1.00274231 26816
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INTERCOSMOS 24
1 20261U 89080A 96307.69195345 .00000319 00000-0 88682-4 0 5392
2 20261 82.5966 182.2615 1242490 86.7344 287.4769 12.47359816323173
GPS BII-04
1 20302U 89085A 96308.95852185 -.00000040 00000-0 10000-3 0 3270
2 20302 53.2031 220.3917 0028209 128.4579 231.7568 2.00570202 51639
Meteor 3-3
1 20305U 89086A 96309.18612247 .00000044 00000-0 10000-3 0 6796
2 20305 82.5516 27.7978 0007280 337.7958 22.2814 13.04428920336451
COBE
1 20322U 89089A 96305.83060850 .00000066 00000-0 69965-4 0 2552
2 20322 98.9404 318.7646 0009951 19.1257 341.0275 14.03456960356092
Kvant-2
1 20335U 89093A 96308.86163418 .00005986 00000-0 72119-4 0 7311
2 20335 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190394953
GPS BII-05
1 20361U 89097A 96305.48447968 -.00000060 00000-0 10000-3 0 1306
2 20361 56.0812 47.8992 0089172 137.2447 223.4638 2.00565361 41045
COSMOS 2054 (Altair-1)
1 20391U 89101A 96309.05223896 -.00000134 00000-0 00000+0 0 4472
2 20391 4.1014 62.4278 0004933 135.2076 208.6209 1.00270308 25396
SPOT 2
1 20436U 90005A 96308.22885567 -.00000044 00000-0 00000+0 0 1426
2 20436 98.7527 19.7856 0000552 48.8064 311.3160 14.20015808351578
UO-14
1 20437U 90005B 96305.21836980 .00000009 00000-0 20087-4 0 2218
2 20437 98.5362 25.6385 0010887 157.5382 202.6284 14.29936135353496
AO-16
1 20439U 90005D 96306.78041054 .00000027 00000-0 27127-4 0 190
2 20439 98.5519 29.6391 0011483 155.3807 204.7926 14.29988452353736
DO-17
1 20440U 90005E 96306.78899857 -.00000003 00000-0 15559-4 0 207
2 20440 98.5556 30.3622 0011612 153.5470 206.6308 14.30130429353768
WO-18
1 20441U 90005F 96307.27155566 -.00000029 00000-0 56887-5 0 247
2 20441 98.5534 30.7604 0012118 153.3237 206.8569 14.30099198353836
LO-19
1 20442U 90005G 96308.79589758 .00000036 00000-0 30797-4 0 204
2 20442 98.5565 32.8143 0012254 147.9016 212.2906 14.30210679354079
GPS BII-06
1 20452U 90008A 96307.37275340 .00000021 00000-0 10000-3 0 2334
2 20452 54.0439 161.1348 0062771 90.0734 270.7063 2.00550377 49580
MOS-1B
1 20478U 90013A 96309.23897297 .00000088 00000-0 10000-3 0 9921
2 20478 99.1128 16.9250 0004635 230.6597 129.4154 13.93969036264069
DEBUT
1 20479U 90013B 96306.01144561 -.00000005 00000-0 58597-4 0 198
2 20479 99.0199 305.0626 0540419 173.7144 187.1099 12.83345501315458
FO-20
1 20480U 90013C 96308.55435075 -.00000056 00000-0 -57265-4 0 9179
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2 20480 99.0233 306.8952 0540913 168.5655 192.8325 12.83234646315764
MOS-1B R/B
1 20491U 90013D 96307.81437889 -.00000014 00000-0 42583-4 0 2896
2 20491 99.0692 15.8484 0469983 329.9792 27.5124 13.02971707319914
LACE
1 20496U 90015A 96307.88244574 .00001325 00000-0 45074-4 0 6995
2 20496 43.1030 131.4286 0011259 244.5434 115.4254 15.36039987375157
Nadezhda 2
1 20508U 90017A 96308.84601151 .00000037 00000-0 23347-4 0 9559
2 20508 82.9492 140.1642 0044550 339.0292 20.9033 13.73514196335069
OKEAN 2
1 20510U 90018A 96308.51369891 .00000097 00000-0 10160-4 0 5370
2 20510 82.5218 96.3641 0017450 219.1055 140.8897 14.78639333360266
GPS BII-07
1 20533U 90025A 96307.25935414 -.00000029 00000-0 00000+0 0 2744
2 20533 54.4755 281.4913 0049032 77.7457 282.8012 2.00566782 48357
PegSat
1 20546U 90028A 96308.42742697 .00007454 00000-0 13085-3 0 9870
2 20546 94.1221 71.7548 0055935 184.0700 176.0071 15.48807252366545
HST
1 20580U 90037B 96308.93770833 .00000158 00000-0 43517-6 0 8809
2 20580 28.4697 40.1767 0005994 195.0503 122.9994 14.91101265159469
MACSAT 2
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2 20670 82.5444 236.6406 0014385 219.2917 140.7202 13.84128020321116
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2 21008 65.2436 80.1059 0009188 268.5892 91.3024 2.13098752 45902
AO-21
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2 21218 64.8627 318.9372 0010894 316.9132 43.0486 2.13102514 43314
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TDRS 5
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Meteor 3-5
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2 21854 65.2004 79.6614 0015428 20.7892 339.2714 2.13104729 37064
Glonass 55
1 21855U 92005C 96308.01858043 .00000022 00000-0 00000+0 0 3483
2 21855 65.2012 79.6600 0007837 196.1611 163.8095 2.13102000 37053
JERS-1
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Glonass 57
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Glonass 58
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GPS BIIA-18
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UFO F1
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GPS BIIA-20
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RADCAL
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Meteor 2-21
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UFO F2
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KO-25
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Meteor 3-6
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NOAA 14
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Glonass 73
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2 23579 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190 83265
GOES 9
1 23581U 95025A 96308.37667597 .00000078 00000-0 10000-3 0 2718
2 23581 0.1264 266.2181 0003890 331.7662 165.8519 1.00284147 5320
Helios 1A
1 23605U 95033A 96306.60545166 .00000100 00000-0 28239-4 0 3480
2 23605 98.1322 240.3975 0001568 73.5184 286.6199 14.63816440 70668
UPM SAT 1
1 23606U 95033B 96309.25233749 .00000242 00000-0 51508-4 0 2263
2 23606 98.1135 244.5189 0008661 95.7196 264.4996 14.67303332 71254
CERISE
1 23607U 95033C 96305.18660689 .00000094 00000-0 25498-4 0 1284
2 23607 98.1120 240.3085 0007134 108.0999 252.0995 14.66973379 70671
TDRS 7
1 23613U 95035B 96308.95844275 .00000098 00000-0 00000+0 0 2468
2 23613 0.9674 82.1235 0004362 167.5859 327.9429 1.00282661 4781
Glonass 74
1 23620U 95037A 96306.00032644 -.00000007 00000-0 00000+0 0 1977
2 23620 64.8138 199.3967 0018410 167.1039 193.0134 2.13102982 9929
Glonass 75
1 23621U 95037B 96308.99355717 -.00000007 00000-0 00000+0 0 2091
2 23621 64.8263 199.3025 0018032 177.2941 182.7836 2.13102210 9982
```

```
Glonass 76
1 23622U 95037C 96308.11311559 -.00000012 00000-0 00000+0 0 2133
2 23622 64.8155 199.3309 0036843 164.9445 195.2313 2.13102518 9968
Prognoz-M2
1 23632U 95039A 96298.18305820 -.00001948 00000-0 00000+0 0 884
2 23632 70.9220 248.7030 7990332 324.0940 14.4640 0.26343600 1191
SICH-1
1 23657U 95046A 96308.88521742 .00000078 00000-0 85548-5 0 1206
2 23657 82.5314 71.9738 0027800 319.5343 40.3798 14.73503769 63407
RADARSAT
1 23710U 95059A 96306.20247903 .00000142 00000-0 72025-4 0 2004
2 23710 98.5803 310.9502 0001209 62.6545 297.4763 14.29992207 51827
Glonass 79
1 23734U 95068A 96308.23105804 -.00000011 00000-0 00000+0 0 1833
2 23734 64.8192 199.2395 0018169 325.1423 34.8063 2.13102052 6932
Glonass 78
1 23735U 95068B 96306.08276647 -.00000008 00000-0 00000+0 0 1789
2 23735 64.8148 199.3051 0006867 210.9474 149.0818 2.13125059 6886
Glonass 77
1 23736U 95068C 96307.05773997 -.00000012 00000-0 00000+0 0 1581
2 23736 64.8043 199.2853 0007330 194.9714 165.0746 2.13102030 6909
XTE
1 23757U 95074A 96305.09269995 .00000639 00000-0 24359-4 0 964
2 23757 22.9830 206.6253 0013497 244.3691 115.5390 14.97716832 45862
Polar
1 23802U 96013A 96303.71293937 .00000077 00000-0 00000+0 0 675
2 23802 86.3024 24.9217 6337851 278.0853 22.2341 1.36212000 3395
1996010E
1 23824U 96010E 96306.70017815 .00062967 00000-0 22213-1 0 1272
2 23824 47.5743 215.5884 7300603 61.3697 353.0779 2.25109804 5678
GPS BIIA-25
1 23833U 96019A 96308.00230685 -.00000074 00000-0 00000+0 0 1010
2 23833 54.6561 342.3581 0023119 148.3326 211.8034 2.00564339 4462
Priroda
1 23848U 96023A 96308.86163418 .00005986 00000-0 72119-4 0 1723
2 23848 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190 30356
MSX
1 23851U 96024A 96307.48712796 -.00000047 00000-0 00000+0 0 1194
2 23851 99.3948 289.7414 0007856 129.7119 230.4681 13.97544224 26816
SAX
1 23857U 96027A 96301.36623386 .00001341 00000-0 56971-4 0 391
2 23857 3.9534 232.6567 0013980 100.5513 259.6135 14.91640201 26915
MSTI 3
1 23868U 96031A 96307.72959271 .00003700 00000-0 75913-4 0 746
2 23868 97.1222 135.7824 0012204 35.8627 323.6698 15.46595547 26222
TOMS-EP
1 23940U 96037A 96308.74675990 .00002032 00000-0 93357-4 0 546
2 23940 97.4334 212.4635 0011792 211.5891 148.4630 15.21480849 18850
GPS BIIA-26
1 23953U 96041A 96307.91706667 .00000040 00000-0 00000+0 0 689
```

```
2 23953 55.0830 102.7242 0023581 345.6922 14.2406 2.00566049 2251
Progress M-32
1 24071U 96043A 96308.86163418 .00005986 00000-0 72119-4 0 936
2 24071 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190 14874
ADEOS
1 24277U 96046A 96308.22775546 -.00000044 00000-0 00000+0 0 1003
2 24277 98.6214 23.1501 0002137 82.7458 277.3965 14.27635413 11123
FO-29
1 24278U 96046B 96306.24163215 -.00000011 00000-0 22798-4 0 318
2 24278 98.5743 12.1984 0352537 56.6205 306.8148 13.52627008 10303
Soyuz TM-24
1 24280U 96047A 96308.86163418 .00005986 00000-0 72119-4 0 763
2 24280 51.6507 140.0340 0012623 352.4083 7.6393 15.62326190 12256
FAST
1 24286U 96049B 96307.52836284 .00001649 00000-0 16063-3 0 364
2 24286 82.9957 144.4568 2207612 32.8289 339.2275 10.81890244 7902
Microsat
1 24291U 96050A 96308.78390401 .00039414 62015-5 25497-3 0 605
2 24291 62.7936 155.2463 0631581 117.3569 249.3217 14.63201715 9721
MO-30
1 24305U 96052B 96307.59666638 .00000204 00000-0 20364-3 0 377
2 24305 82.9367 162.0375 0031699 114.5988 245.8470 13.73085648 7966
GPS BIIA-27
1 24320U 96056A 96304.29262163 -.00000040 00000-0 00000+0 0 333
2 24320 54.7029 282.9984 0062535 92.5417 268.1425 2.00564715 830
1996058F
1 24503U 96058F 96309.04131474 .00005944 00000-0 10075-2 0 171
2 24503 47.4219 272.1337 7293874 10.4788 358.7762 2.27656405 618
FSW-2
1 24634U 96059A 96309.27741811 .00214054 81308-5 80507-4 0 644
2 24634 63.0382 27.5587 0121719 143.1119 217.8483 16.08345428 2419
Molniya 3-47
1 24640U 96060A 96307.62358598 .00000022 00000-0 -19006-2 0 150
2 24640 62.8296 155.9870 7368560 288.3263 9.4608 2.00481827 181
1996060B
1 24641U 96060B 96308.97341136 .00219112 74664-5 46119-3 0 171
2 24641 62.8163 118.5880 0238963 123.5770 238.8276 15.64116912 1645
1996060C
1 24642U 96060C 96309.16827346 .00679304 75355-5 59572-3 0 219
2 24642 62.8067 117.8633 0267807 119.8765 242.9183 15.68593414 1674
1996060D
1 24643U 96060D 96300.17176725 .00029140 00000-0 54458+0 0 31
2 24643 62.8804 157.0390 7404585 288.2435 86.9773 1.96534388 39
1996059C
1 24644U 96059C 96309.34412794 .30092023 75539-5 40968-2 0 16
2 24644 62.8803 27.5661 0238849 94.8971 267.9365 15.88259486 35
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

2294. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <55lvmu$hi7@blackbird.afit.af.mil>
Source record: 20972

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2295. Re: Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <55k65o$ipl@bbcnews.rd.bbc.co.uk>
Source record: 20973

dhend@cyberportal.net wrote:
: Just talked to John on Mir (KC5TZQ) and there is a great deal of confusion about the
: transmit recieve combination he wanted all to know
: we transmit on 145.800 and we terrestrials recieve on 145.200
: please try to get it togeather.. and there will be a lot of fun..
: Best Regards Dave N1PPP
:
: e-mail=dhend@cyberportal.net
: packet= N1PPP @ WA1WOK.FN43FE.NH.USA.NOAM zip 03743
:
: http://www.cyberportal.net/dhend/dave1.html
:
: Wear the world like a loose garment
:

On Saturday I heard R0MIR/R0MIR-1 talking to various european
packet stations on 145.8Mhz. I suppose that mean 'We receive terrestrials
on 145.2MHz???

J.

2296. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: ke4qiz@iu.net
Message-ID: <55joma$j2m@cc.iu.net>
Source record: 20974

bd703@scn.org (SCN User) wrote:

>In a previous article, dhend@cyberportal.net (Dave Hendrick) says:
>>Subject: new Mir frequency
>>
>>Since November 1 we'll have new frequency on Mir.
>>xPacket - 145.800
>>Voice - 145.800 Rx/145.200 Tx.
>>These frequencies are recommended us by the International amateur
>>conference in region 1.
>>We'll open for contacts on new frequency.
>>73 Mir crew

>145.200 isn't so good for folks in the Seattle, Everett, Bellingham areas
>of Washington State, USA. There is a wide coverage repeater near Mount
>Vernon, WA, with an output on 145.190 Mhz and It's close enough to 145.20
>that QRM is a real possibility.

>Kerwin
>N7JGW

This is not only a stupid choice, it is dangerous. We use 145.790 fo
APRS a packet system for emergancy ops.
Ke4qiz.... EOC Operation in Sebastian Florida
73 all!

2297. Re: ELECTRONICS TIMES publisher is sick?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: no6b@no6b.jpl.nasa.gov
Message-ID: <55lmo4$gn4@elroy.jpl.nasa.gov>
Source record: 20975
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

In <327E367D.318A@idecc.com>, Tim Hynde <tim_hynde@idecc.com> writes:
>>James Lee wrote:
>
>> Mike Mercado or KM6NP, who publishes the Electronics Times, even
>> installed transmitter just for the purpose of jamming KJ6TQ
>> operations and periodically broadcast warning to KJ6TQ repeater's
>> users.
>>
>> Ham radio operators pride themselves in being polite. Yeah right!
>
>Well, there are still plenty of gentlemen operators left.
>
>.... and all that wide open space on 6m and 220 MHz ??...

Excuse me, 'wide open space' on 222 MHz? Then why did the last 220 SMA meeting feature a hearing due to a denial of freq. coordination to a repeater on Blue Ridge, and why were there 2 freq. coordinators on 222 MHz in So. Cal. for a while? The 222 MHz band may not be used as much as 2 meters, but it's stuffed full of repeaters. There is some room on 6m, but it's awfully noisy.

I'm not sure we can blame Mike for the mess on 446.65. He is only a pawn of SCRRBA, which apparently decided that the frequency shall not have an 'open' repeater on it. The 'warning' transmitter cites references to SCRRBA coordination, but makes no mention of possible coordination of KJ6TQ by other freq. coordination entities, so it is not accurate to say that any other repeater on the freq. is uncoordinated.

Bob NO6B (KE6TZF)

2298. Re: What is MO-30?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: "Tom Clark (W3IWI)" <clark@tomcat.gsfc.nasa.gov>
Message-ID: <327D7345.5812@tomcat.gsfc.nasa.gov>
Source record: 21068

Stephan M. Anderman wrote:
>
> In the ARRL Keps posted last Tuesday, 24-Oct (ARLK077), the list included
> MO-30, which I had not previously seen. Is this the new designation for
> the new Mexican satellite UNAMSAT-B? I have not seen any information in the
> AMSAT Bulletins showing the assignment of "OSCAR 30". If this is true, can it
> be assumed that the "MO" means "Mexican OSCAR"?
>
> Can someone send me applicable frequencies?
>
> Many thanks!
>
> Stephan Anderman, WA3RKB
> Stillwater, NY
> sanderman@delphi.com

Yes, MO-30 is UNAMSAT-B. I hope that XE1TU/WD0E/W3IWI (that's me) can
make
an announcement about its status soon.

73, Tom

2299. @@@>> HOT COLLEGE BI-MALES!!! >PRIVATE< 1-900-825-6000 xt 9794

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: Str8.Man@Nice.Folks.com
Message-ID: <55kmto$a5n@juliana.sprynet.com>
Source record: 21069

HOT COLLEGE STR8, BI, AND GAY GUYS NEEDED FOR FRIENDS AND/OR
RELATIONSHIPS!

ALL AREAS! NOWHERE TO BIG OR SMALL FOR THE LOCATOR!
ALL PRIVATE!
ALL CONFIDENTIAL!
ALL AGES!
LADIES WELCOME!

THE LOCATOR
1 - 9 0 0 - 8 2 5 - 6 0 0 0 xt 9 7 9 4
1 - 9 0 0 - 8 2 5 - 6 0 0 0 xt 9 7 9 4
1 - 9 0 0 - 8 2 5 - 6 0 0 0 xt 9 7 9 4

2.99/min

2300. Re: ELECTRONICS TIMES publisher is sick?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-04 00:00:00 UTC
From: Tim Hynde <tim_hynde@idecc.com>
Message-ID: <327E367D.318A@idecc.com>
Source record: 21070
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

>James Lee wrote:

> Mike Mercado or KM6NP, who publishes the Electronics Times, even
> installed transmitter just for the purpose of jamming KJ6TQ
> operations and periodically broadcast warning to KJ6TQ repeater's
> users.
>
> Ham radio operators pride themselves in being polite. Yeah right!

Well, there are still plenty of gentlemen operators left.

... and all that wide open space on 6m and 220 MHz ??...

2301. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <327F1C2F.134C@mwt.net>
Source record: 20976

Dave Hendrick wrote:
>
> recieved from Mir today..
>
> [R 43]
> Stat : PR
> Posted : 10/29/96 18:29
> To : ALL
> From : R0MIR
> @ BBS :
> xID :
> Subject: new Mir frequency
>
> Since November 1...
>edited.... Dave N1PPP
> dhend@cyberportal.net
> http://www.cyberportal.net/dhend/dave1.html No flames from me, just a quick comment...actually, by rights, 145.8 to 146.0 is set up in the ARRL bandplan for satellite operations and the APRS people are 10KHz below this, so theoretically the doppler shift should not cause problems to either user. The approximate maximum doppler shift should be (according to The Satellite Experimenter's Handbook) +/- 3.76Khz. With today's rigs it shouldn't really be a factor. Happy satellite hunting!
--Scott, N0EDV--

--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

2302. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <327F1CAD.3700@mwt.net>
Source record: 20977

Dave Hendrick wrote:
>
> recieved from Mir today..
>
> [R 43]
> Stat : PR
> Posted : 10/29/96 18:29
> To : ALL
> From : R0MIR
> @ BBS :
> xID :
> Subject: new Mir frequency
>
> Since November 1...
>edited.... Dave N1PPP
> dhend@cyberportal.net
> http://www.cyberportal.net/dhend/dave1.html No flames from me, just a quick comment...actually, by rights, 145.8 to 146.0 is set up in the ARRL bandplan for satellite operations and the APRS people are 10KHz below this, so theoretically the doppler shift should not cause problems to either user. The approximate maximum doppler shift should be (according to The Satellite Experimenter's Handbook) +/- 3.76Khz. With today's rigs it shouldn't really be a factor. Happy satellite hunting!
--Scott, N0EDV--

--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

2303. test

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: spana@ix.netcom.com
Message-ID: <55mn0n$9t5@dfw-ixnews6.ix.netcom.com>
Source record: 20978

```
Test...
```

2304. Re: meteosat

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <E0E415.D3H@cix.compulink.co.uk>
Source record: 20979

Well, you might need a radio and an antenna too....

2305. Re: What is SICH 1?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <55nb1o$jg8@newsbf02.news.aol.com>
Source record: 20980

Hello Satellite Enthusiasts !

Here some data about SICH1:

The satellite was launched in August 1995 in Plesetsk by an
Tsiklon 3 launch vehicle. The satellite is operated by the
National Space Agency of Ukraine (NKAU). It was the
first ukrainian satellite so far and it has been built by the
ukrainian company NPO Yuzhnoe.

The satellite is a remote sensing radar satellite which delivers
"on demand" high resolution radar images of pre-programmed
spots of the world. The resolution of the radar images is reported
to be about 200 m when in Hi-Res mode. The images are transmitted
in simple analog APT format in the 137 MHz weather satellite band,
but are only transmitted when in range of Russia / Ukraine.
(Therefore they can only be received in Europe...)

A friend of mine (DL1CF) showed me some received pictures and
they are looking really pretty good......

73 de Oscar, DJ0MY
near Ulm
Germany

2306. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55nc3b$du@news.mhv.net>
Source record: 20981

In article <19961103.131559.6871.0.doslover@juno.com>, doslover@juno.COM (Jason K Baack) wrote:
>Greetings all..
>I would love to get this whole freq debate straight.
>
>I was under the impression that the NEW frequencies for two meters were
>the following:
> packet 145.800
>
> voice 145.200 UP
> 145.800 DN (therefore I would hear
> MIR HERE..)
>
>However, today @ 18:08 (11/3/96) I heard John (KC5PZQ) on the 145.200
>frequency handling qso's (which should be OUR up freq) after he was on
>the 145.800 frequency (our correct down) telling EVERYONE to change to
>145.200 up and 145.800 down.
>
>What is going on? And what will the correct frequency pattern (up / down
>) be..
>
>Jason N1RWY
>Amsat # 31356 "thoroughly confused...."

Well Jason that makes 2 of us! Although Dave (N1PPP) said that 145.200 is
the downlink a day or 2 ago. I heard John yesterday on 145.200 .....
The Mir crew said the opposite a few days before the change was made.....
For now I'll stay with the .200 downlink until this is cleared up .

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2307. Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: elewis@dsp.com
Message-ID: <327f64ea.1786947@news.wco.com>
Source record: 20982

I have been ablo to get a connected to R0MIR twice now on 145.800 mhz.
I don't use packett much, but shouldn't I than receive a menu like I
do with my local BBS. All I am able to do is connect .

2308. Basic Sat. antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: Jay Harmor <JayHarmor@sprintmail.com>
Message-ID: <327F6DBF.56B4@sprintmail.com>
Source record: 20983

I have caught the bug. Last night I heard my voice transmission on the 10m downlink of RS10. I was wondering what would be some good basic antenns to work RS10 and RS15. I was using a vert. ground plane for the 2m SSB uplink and a horizontal rotateable dipole for 10m. I currently do not have all-mode capability on 70cm but, antenna sugestions would also be welcome.
I am looking for omni-directional antennas as my first choice.

While I am here would anyone like to try and sked a contact on either RS10 or RS15.

Thanks,

Jay (KEA6GLA)
Sacramento, CA

2309. Re: New Mir 2 meter freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: William Vynck <creart.vynck@unicall.be>
Message-ID: <327F51E1.2B80@unicall.be>
Source record: 20984

trandall@mhv.net wrote:
>
> Just picked off of packet, As of Nov. 1st these are the new 2 meter Mir
> freqs.:
>
> Voice: Downlink: 145.800, Uplink: 145.200
> Packet: 145.800 simplex
>
> Just for everyone's info! Not sure if it was posted yet....
>
> 73!
>
> Tom

Wanted : More "space" frequenties for 2meter & 70cm

THX

73's
William

2310. NEW Yaesu SAT rig to replace FT-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: rmra@inconnect.com
Message-ID: <55o855$ls4@news.inconnect.com>
Source record: 20985

Anyone have any specs, info, piks of this new rig, suposedly, being brought out for sale at Dayton next year.....

2311. Re: Basic Sat. antennas

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: kf8bex@oeonline.com
Message-ID: <55oin6$hg3@s0a.oeonline.com>
Source record: 20986

Jay Harmor <JayHarmor@sprintmail.com> wrote:

>I have caught the bug. Last night I heard my voice transmission on the
>10m downlink of RS10. I was wondering what would be some good basic
>antenns to work RS10 and RS15. I was using a vert. ground plane for the
>2m SSB uplink and a horizontal rotateable dipole for 10m. I currently do
>not have all-mode capability on 70cm but, antenna sugestions would also
>be welcome.
>I am looking for omni-directional antennas as my first choice.

The antennas you are using sound like the same ones I used to get WAS CW on these satellites (except Hawaii, which I had to use AO-10 and beams to get). They are also fully capable for RS-15 DX work. The only other piece of equipment you may need is a 10-Meter preamplifier, preferrably one that is switchable.

Verticals are good for satellite passes that are less than about 40 degrees. For satellite elevations above 40 degrees, an M2 Eggbeater will do pretty nicely.

Mike
kf8bex@oeonline.com

2312. Re: FO-29 on 10 meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <55on7q$af@newsbf02.news.aol.com>
Source record: 20987

Maybe the reason was that someone confused the satellite
names "RS12" and "FO12".....that's the only possibility
since FO12 doesn't carry a 10 metre band transmitter.....

73 de Oscar, DJ0MY

near Ulm, Germany

2313. ARLK081 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk081.1996@arrl.org>
Source record: 20988
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK081
ARLK081 Keplerian data

ZCZC SK81
QST de W1AW
Keplerian Bulletin 81 ARLK081
From ARRL Headquarters
Newington, CT November 5, 1996
To all radio amateurs

SB KEP ARL ARLK081
ARLK081 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96310.12709792 -.00000005 00000-0 -22336-4 0 02946
2 18129 82.9252 44.3553 0012629 118.5314 241.7123 13.72370451469505
UO-11
1 14781U 84021B 96310.49323031 .00000137 00000-0 30949-4 0 9259
2 14781 97.8111 295.0221 0012214 3.7490 356.3804 14.69494983678405
RS-12/13
1 21089U 91007A 96310.01493916 .00000004 00000-0 -11925-4 0 09312
2 21089 82.9202 84.9049 0028145 199.9411 160.0631 13.74074278288371
AO-13
1 19216U 88051B 96309.94742917 .00400803 19843-4 43214-3 0 3233
2 19216 57.0621 80.2794 7350241 55.7148 353.4370 2.26420360 32841
UO-14
1 20437U 90005B 96310.11649634 .00000030 00000-0 28364-4 0 02244
2 20437 98.5363 30.4417 0010969 143.0817 217.1122 14.29936960354197
RS-15
1 23439U 94085A 96310.03291376 -.00000039 00000-0 10000-3 0 01772
2 23439 64.8168 155.3158 0156762 173.9500 186.3361 11.27529075076668
AO-16
1 20439U 90005D 96309.71917916 .00000016 00000-0 22937-4 0 00366
2 20439 98.5513 32.5254 0011645 147.4032 212.7877 14.29988782354150
```

```
DO-17
1 20440U 90005E 96310.07729400 -.00000003 00000-0 15606-4 0 00382
2 20440 98.5555 33.5944 0011895 144.1092 216.0893 14.30130734354234
WO-18
1 20441U 90005F 96309.72034003 -.00000008 00000-0 13487-4 0 00381
2 20441 98.5532 33.1664 0012266 146.1406 214.0569 14.30099523354181
LO-19
1 20442U 90005G 96310.12513470 .00000025 00000-0 26468-4 0 00266
2 20442 98.5572 34.1227 0012429 143.8229 216.3794 14.30210687354260
FO-20
1 20480U 90013C 96310.03579003 -.00000028 00000-0 59358-5 0 09269
2 20480 99.0234 308.0950 0540975 165.2077 196.5587 12.83234830315954
AO-21
1 21087U 91006A 96310.15074738 .00000094 00000-0 82657-4 0 07733
2 21087 82.9405 217.3732 0034458 170.4932 189.6884 13.74573230289371
UO-22
1 21575U 91050B 96310.11680344 .00000043 00000-0 28661-4 0 07432
2 21575 98.3364 12.1984 0007116 199.6005 160.4910 14.37042819278305
KO-23
1 22077U 92052B 96310.05747813 -.00000037 00000-0 10000-3 0 06420
2 22077 66.0771 254.5092 0015353 264.1499 95.7768 12.86298323198921
KO-25
1 22828U 93061F 96310.15596828 .00000042 00000-0 34104-4 0 05082
2 22828 98.5655 23.3420 0009977 158.7612 201.3986 14.28157650130235
IO-26
1 22826U 93061D 96310.13817842 .00000013 00000-0 22799-4 0 05287
2 22826 98.5708 23.2580 0008533 175.5483 184.5775 14.27817243162118
AO-27
1 22825U 93061C 96310.15260347 .00000021 00000-0 26220-4 0 05226
2 22825 98.5709 23.0803 0008086 174.7855 185.3391 14.27708117162102
FO-29
1 24278U 96046B 96310.16192688 -.00000025 00000-0 87515-5 0 00606
2 24278 98.5737 15.5970 0352667 46.5256 316.4664 13.52626822010837
MO-30
1 24305U 96052B 96310.07424109 .00000204 00000-0 20364-3 0 00616
2 24305 82.9360 160.2082 0031584 108.5976 251.8608 13.73085360008307
SICH 1
1 23657U 95046A 96309.90382030 .00000044 00000-0 33206-5 0 01246
2 23657 82.5315 71.0361 0027638 316.0862 43.8144 14.73503576063553
Mir
1 16609U 86017A 96310.14093152 .00001037 00000-0 17511-4 0 07794
2 16609 51.6513 133.5761 0013084 357.4659 2.6270 15.62326975612031

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
November 9, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2314. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: kc7gnm@primenet.com
Message-ID: <55p6jb$ci5@nnrp1.news.primenet.com>
Source record: 20989

elewis@dsp.com (Edward Lewis) wrote:

>I have been ablo to get a connected to R0MIR twice now on 145.800 mhz.
>I don't use packett much, but shouldn't I than receive a menu like I
>do with my local BBS. All I am able to do is connect .

Connect to R0MIR-1. That is the PBBS on the packet system up there.
Connecting to just R0MIR will only get you the welcome message and
that is all. I've done both and the -1 is the hardest to connect to
since only one user is allowed at a time.

2315. RESULTS: New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bbcb69$cdab97c0$01a447cc@desktop>
Source record: 20990
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

What just about everyone has said is that these new 2 piece connectors are
AOK for use.

At about 6.50 each at HRO - they had better be!

I still find the traditional type easier to use - at least with 9913.

Thanks for all who replied.

73

bob puharic <wf3h@enter.net> wrote in article
<55e8me$9k1@news.enter.net>...
> "Bob Smith" <bsmith@msn.com> wrote:
>
> >Are those new N connectors that look like PL259's OK. I have a few and
> >they pretty easy to work with. But then again the standard ones now
seem
> >just as easy to use.
>
> >Thanks and 73 de Bob.
>
> N connectors are a pain in the ass. I just spent a few hours at 100'
> for the K3ANS contest station replacing the female end of an N on
> rg213. the female side had splayed out and became intermittent even
> though it was nailed down pretty tight. And they are supposed to be
> loose...if you can rotate them thats no problem. but they are a drag
> to maintain.
>
>

2316. Re: What is SICH 1?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <55mtt4$nqv@bbcnews.rd.bbc.co.uk>
Source record: 20991

Stephan M. Anderman (sanderman@delphi.com) wrote:
: FolLows text from NASA SPACEWARN back issue:
:
: 1995-046A
: SICH 1 is a Ukrainian remote sensing satellite that was launched from
: Plesetsk cosmodrome by a Tsiklon-3 rocket at 13:50 UT. The spacecraft and
: instruments on board are similar to those of the Soviet Okean series. Its
: main mission is to monitor objects of several hundred meters in size, such as
: Arctic ice. A second payload, FASAT-ALPHA, which is a Chilean spacecraft of
: 50 kg mass, could not be separated from SICH 1, and so had to be muted.
: Initial orbital parameters were period 98.7 min, apogee 682 km, perigee
: 651 km, and inclination 82.53 km.
:
: **********
:
: Don Horton N1ISB
:
: Amateur Radio: http://www.vgernet.net/dhorton/nobarc.html
: Weather : http://www.vgernet.net/dhorton/wx.html
: Satellites : http://www.vgernet.net/dhorton/birdhunt.html
: N1ISB/Rover : http://www.vgernet.net/dhorton/rover.html
:
:

Try my webpage for some pics from Sich-1. Sich-1 became very sick as of
yesterday. Let's hope they manage to fix it.

J.

http://www.drig.com/~johnb/index.html

2317. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: Jim Devenport <jdevenport@lanl.gov>
Message-ID: <327FAE34.3817@lanl.gov>
Source record: 20992

Edward, I too have connected several times to MIR and never gotten a
complete response. Generally you usually get just a "busy" response
from MIR or you get connected and then nothing else gets through.
This is because the "connect" packet response is very short and thus
relatively easy to accomplish while subsequent packets are longer, such
as the bbs menu, etc, and never get through since the QRM prevents the
payload from hearing your ACK or MIR never hears YOUR ACK to the
"connected" frame and since the pass is SO short and the QRM is SO high
it generally goes out of range before you ever get another successful
packet through to it. I've watched other connects also as it goes over
and rare is the user who gets any more than you or I have done.

Edward Lewis wrote:
>
> I have been ablo to get a connected to R0MIR twice now on 145.800 mhz.
> I don't use packett much, but shouldn't I than receive a menu like I
> do with my local BBS. All I am able to do is connect .

--
|---|
|Jim Devenport WB5AOX |
|All Standard Disclaimers Disclaimed |
|My views rarely (if ever) reflect those of my employers|
http://nis-www.lanl.gov/~jdport/

2318. Re: New 'N' Connectors OK?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-05 00:00:00 UTC
From: Rolfe Tessem <rolfe@ldp.com>
Message-ID: <327F879E.3F78@ldp.com>
Source record: 20993
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.space

bob puharic wrote:
>
> "Bob Smith" <bsmith@msn.com> wrote:
>
> >Are those new N connectors that look like PL259's OK. I have a few and
> >they pretty easy to work with. But then again the standard ones now seem
> >just as easy to use.
>
> >Thanks and 73 de Bob.
>
> N connectors are a pain in the ass. I just spent a few hours at 100'
> for the K3ANS contest station replacing the female end of an N on
> rg213. the female side had splayed out and became intermittent even
> though it was nailed down pretty tight. And they are supposed to be
> loose...if you can rotate them thats no problem. but they are a drag
> to maintain.

Hmmm. I think an N connector is easier to install than a PL259, all
other things being equal. The trick is to use only Kings connectors and
toss the Amphenols in the trash. A properly installed Kings type N
connector will *not* work loose on it's own.

Rolfe
W3VH

--
Rolfe Tessem | Lucky Duck Productions, Inc.
rolfe@ldp.com | 96 Morton Street
(212) 463-0029 | New York, NY 10014

2319. Re: ELECTRONICS TIMES publisher is sick?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-06 00:00:00 UTC
From: jnavarr3@BitSmart.Com
Message-ID: <55pem2$40l@zook.lafn.org>
Source record: 20994
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

I leave in Eagle Rock and always used the MARS repeater using high
power mobile rig. Lately I can't even make a call. You people are the
ones who are suppose to go to 222 MHz because those people got their
first. I too got intimimated with that QST, gave a call to one of MARS
people, it's phony. I wouldn't even give a damn to SCARA or whoever in
that Santiago Peak group. Oh well, Mr. Dengler, KE6TZF is Sunset Ridge
Repeater group. You're one of those people jamming. I was wondering
may be you people are getting a lot high power RF's being radiated
right in your head like those guys at 147.435? If you've been using
MARS 446.650, would this mess will make you happy? I should say 73 but
don't which is appropriate this time. May be KJ6TQ would no better...
(=:
:DE KE6FPK
In article <55lmo4$gn4@elroy.jpl.nasa.gov>, no6b@no6b.jpl.nasa.gov
says...
>
>In <327E367D.318A@idecc.com>, Tim Hynde <tim_hynde@idecc.com> writes:
>>>James Lee wrote:
>>
>>> Mike Mercado or KM6NP, who publishes the Electronics Times, even
>>> installed transmitter just for the purpose of jamming KJ6TQ
>>> operations and periodically broadcast warning to KJ6TQ repeater's
>>> users.
>>>
>>> Ham radio operators pride themselves in being polite. Yeah right!
>>
>>Well, there are still plenty of gentlemen operators left.
>>
>>.... and all that wide open space on 6m and 220 MHz ??...
>
>Excuse me, 'wide open space' on 222 MHz? Then why did the last 220
SMA meeting
>feature a hearing due to a denial of freq. coordination to a repeater
on Blue
>Ridge, and why were there 2 freq. coordinators on 222 MHz in So. Cal.
for a
>while? The 222 MHz band may not be used as much as 2 meters, but it's
stuffed
>full of repeaters. There is some room on 6m, but it's awfully noisy.
>
>I'm not sure we can blame Mike for the mess on 446.65. He is only a
pawn of

>SCRRBA, which apparently decided that the frequency shall not have an
'open'
>repeater on it. The 'warning' transmitter cites references to SCRRBA
>coordination, but makes no mention of possible coordination of KJ6TQ
by other
>freq. coordination entities, so it is not accurate to say that any
other
>repeater on the freq. is uncoordinated.
>
>Bob NO6B (KE6TZF)
>

KE6TZF SUNSET RIDGE REPEATER GROUP LIC ISU 15-MAY-1995
CLUB P. O. BOX 412 LIC EXP 15-MAY-2005
WALNUT CA 91788-0412 LST UPD 15-MAY-1995
NO6B DENGLER, ROBERT J IS RESPONSIBLE

NO6B DENGLER, ROBERT J LIC ISU 27-OCT-1987
EXTRA 10946 KANE AVE LIC EXP 27-OCT-1997
DOB 4-JUL-1963 WHITTIER CA 90604 LST UPD 27-OCT-1987
(PREVIOUSLY WA6ZGQ, ADVANCED)

2320. Re: new Mir Frequencies.. Comments?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-06 00:00:00 UTC
From: Kees Leune <s722413@kubstu.kub.nl>
Message-ID: <55pkaq$9fa@mailnews.kub.nl>
Source record: 20995

scott <acepilot@mwt.net> wrote:
:: 146.0 is set up in the ARRL bandplan for satellite operations and the
:: APRS people are 10KHz below this, so theoretically the doppler shift
:: should not cause problems to either user. The approximate maximum
:: doppler shift should be (according to The Satellite Experimenter's
:: Handbook) +/- 3.76Khz. With today's rigs it shouldn't really be a
:: factor. Happy satellite hunting!

146.0 is not allowed for amateur in IARU region one. We are allowed to use
144.0 - 145.98 Mhz in the 2m band.

-Kees, PE1RHP
--
Kees Leune

2321. Re: Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-06 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55q1a0$cdi@news.mhv.net>
Source record: 20996

In article <55k65o$ipl@bbcnews.rd.bbc.co.uk>, boyer@rd.bbc.co.uk (John Boyer) wrote:
>dhend@cyberportal.net wrote:
>: Just talked to John on Mir (KC5TZQ) and there is a great deal of confusion
> about the
>: transmit recieve combination he wanted all to know
>: we transmit on 145.800 and we terrestrials recieve on 145.200
>: please try to get it togeather.. and there will be a lot of fun..

>On Saturday I heard R0MIR/R0MIR-1 talking to various european
>packet stations on 145.8Mhz. I suppose that mean 'We receive terrestrials
>on 145.2MHz???

I heard John nearly all day yesterday working stations like crazy. The
RECIEVE is on 145.200. Val gets on all the time as well.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2322. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-06 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <32807396.1854605@news.monad.net>
Source record: 20997

On Tue, 05 Nov 1996 16:07:15 GMT, elewis@dsp.com (Edward Lewis) wrote:

>I have been ablo to get a connected to R0MIR twice now on 145.800 mhz.
>I don't use packett much, but shouldn't I than receive a menu like I
>do with my local BBS. All I am able to do is connect .

You must connect to R0MIR-1 to get the the PMS (Personal Message Service) and get the bbs prompt, however it is a single user system so watch for someone to disconnect or timeout , or for a R0MIR>CQ bbs line for an opportunity to connect make sure your equipment it working at its peak and make it as quick as possible as shifting polarity and weak signals tend to cause people to be able to connect and then lose the signal and drop out.. send a message to the cosmonauts and get the message number to send to Dave N6JLH for a qsl card.. good luck.. DAVE N1PPP

dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

2323. Radio Meteor Obs. Bull. October 1996 Orionids

Newsgroup: rec.radio.amateur.space
Date: 1996-11-06 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.86.32810A76@vvs.innet.be>
Source record: 20998

Radio Meteor Observation Bulletin No. 39 November 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: E.P.Bus
Location: Groningen, The Netherlands (6 33' E, 53 13' N)
Frequency: 72.11 MHz
Transmitter Location:
Breslau, Poland, 130 kW, distance 740 km
Antenna: Yagi, 3 elements, azimuth 106 o (=ESE), elevation 12 o
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 microvolt
Observing method: listening

Draconids 1996

Raw counts of reflections during one hour starting at UT:

1996 | UT
| 6h 7 8 9 10 11-11.30
------+-------------------------------------
Sep 22 | 209 172 148 107 114 53

Oct 6 | 170 173 130 105 96 50

Oct 8 | 161 155 172 137 130 66

Oct 12 | - - - - 108 68
Oct 13 | - 138 131 94 - -

The most favourable antenna geometry for detecting Draconids is around 10 h
and 23 h UT.

After correction for sporadic activity and Observability Function (after
Hines) the Draconids showed (weak) activity.
A maximum is monitored on October 8 around 9h UT almost at the point the
Earth passed the node of the orbit of comet 21P/Giacobini-Zinner,
195.398 degrees (2000.0).

Peter Bus / via Ton Schoenmaker

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00

66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)
66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

October 1996
Orionids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Oct	UT										
1996	20h	21	22	23	00	01	02	03	04	05	06	07
1- 2	8	13	8	29	7	26	32	33	47	64	64	-
2- 3	21	13	14	25	37	37	44	47	40	67	105	-
3- 4	16	12	9	18	33	39	35	51	44	51	96	-
4- 5	14	37	50	48	59	54	79	76	109	104	2%	-
5- 6	12	12	24	31	34	39	33	31	37	48	53	-
6- 7	5	14	15	14	15	21	24	23	21	23	25	-
7- 8	6	8	21	23	37	40	25	36	23	23	23	-
8- 9	5	7	18	39	27	32	41	37	61	40	53	-
9-10	13	19	26	41	25	19	20	17	21	47	54	-
10-11	16	14	20	27	33	42	36	51	41	67	46	-
11-12	13	20	20	21	22	39	34	54	-	59	51	-
12-13												
13-14	21	12	18	28	33	48	44	52	50	52	36	-
14-15	21	32	51	69	78	97	89	100	96	98	78	-
15-16												
16-17	4	15	11	23	53	31	22	102	34	93	30	-
17-18	6	14	23	19	41	38	61	59	51	87	32	-
18-19	9	12	18	35	35	36	46	46	47	65	55	-
19-20	13	12	26	38	53	49	52	63	53	60	37	-
20-21	16	20	28	40	45	77	70	72	&	83	114	-
21-22	11	37	26	135?	52	69	83	84	116	107	61	-
22-23	8	26	24	32	10	10	63	90	82	96	73	-
23-24	15	19	32	33	39	54	55	68	64	107	49/	
24-25	9	19	23	23	35	34	54	53	61	63	44	-

```
25-26 |
26-27 | 6 17 14 19 50 31 38 39 33 34 46 38
27-28 | - 12 11 15 20 42 36 42 18 43 30 26
28-29 | - 4 11 9 19 23 26 30 26 23 24 30
29-30 | - 15 17 13 26 16 32 31 34 34 37 32
30-31 | - 12 25 32 28 32 30 34 40 45 51 34
31-01 | - 7 18 25 16 10 10 46 32 63 50 35
------+------------------------------------------------------------
1996 | 20h 21 22 23 00 01 02 03 04 05 06 07
Oct |
```

Notes:

. until October 26: local time = UT + 2 hours.
from October 27: local time = UT + 1 hour
. % transmitter outage?
. /= half hour only
. & interference
. Orionid activity between Oct 19-25

Maurice De Meyere

Observer: Werfried Kuneth
Location: near Villach, Austria (13 37' E, 46 45 ' N)
Antenna: 3 element Yagi
Receiver: AR-8000 at 48.25000 MHz, SSB mode
Narrow passband filter, no preamplifier.
Transmitter: 250 kW TV video carrier in Madrid (Spain),
distance 1550 km, southwest.
Observing method: the audio signal is fed into a real time FFT display
(FFTDSP42t program from AF9Y) on the PC where 20 channels of 2 Hz width
are recorded and stored continuously. The sensitivity of each 2 Hz wide
channel is about -171 dBm. Every meteor reflection (in SSB mode)
produces a distinct whistle, which is recorded easily by the real time
FFT program and saved in .GIF pictures of 200 seconds each.
More details see http://www.net4you.co.at/user/kuneth/info.html

The following figures show the total length of the meteor reflections
during one hour, expressed as a percentage. The number here shows
10 times this value. (e.g. 100 means 10 percent).

```
| Oct 1996
UT | 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26
----+-----------------------------------------------------
0 | , 24, , 24, , 34, 50, 20, 23, 24, 36, 45, 40
1 | , 38, , 23, , , 48, 76, 32, 44, 48, 63, 60
2 | , 45, , 24, , 24, 34, 48, 52, 52, 40, 58, 77
3 | , 35, , 26,158, 23, 55, 26, 25, 51, 46, 56, 67
4 | , 55, , 57, , 42, 57, 62,125, 80, 34, 56, 56
5 | , 60, 86, 63, ,110, 75, 40, 85, 80, 49, 45, 56
6 | 24, 37, 38, 89, 48, 34, 97, 88, 73, 49, 51, 53, 44
```

```
7 | 40, 96, 39, 80, 55, 58, 80, 54, 70, 47, 77, 61,
8 | 28, 37, 41, 34, 42, 69, , 74, 57, 35, 33, 33,
9 | 45, 35, 54, 72, 41, 57, , 44, 40, 42, 23, 56,
10 | 38, 37, 61, 43, 65, , , 28, 34, 56, 33, 47,
11 | 34, 62, 45, 38, 44, , , 44, 24, 19, 28, 35,
12 | 33, 59, 63, 39, , , , 32, 47, 39, 31, 38,
13 | , , 33, 61, , , , 19, 43, 23, 26, 29,
14 | , 29, 25, , , , , 21, 20, 24, 16, 42,
..
20 | , , , , , 15, 18, , , 47, 27, 29,
21 | 21, , 42, , , 17, 22, 20, 24, 20, 18, 18,
22 | 37, , 42, , 24, 20, 43, 34, 33, 18, 21, 23,
23 | , , , , 34, 34, 17, 69, 24, 41, 32, 34,
----+-------------------------------------------------
UT | 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26
| Oct 1996
```

Notes:
. blank value means either no data available, interference, sporadic "E", power failure, or transmitter shutdown.
. local time conversion: 2 hours ahead of UT (06h00 UT is 08h00 local).
. the Orionids did show up well on Oct 20-23.

Werfried Kuneth

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07' N)
Frequency: 81.4 MHz
Transmitter Location: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were recorded on a pen-recorder chart.

September Perseids

```
Sep | UT
1996 | 19 20 21 22 23 0 1 2 3 4 5 6 7 8 9 10
-----+-----------------------------------------------------------
6/7 | 18 17 18 15 13 15 8 10 10 7 8 6 4 7 7 10
7/8 | 21 20 20 20 20 13 12 10 5 8 5 9 4 5 6 6
8/9 | 14 15 32 20 20 12 10 6 7 7 7 6 4 3 2 9
```

```
Oct | UT
1996 | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---------------------------------------------+-----------
1 | 14 14 12 15 8 12 15 19 23 20 21 | 12.5 19.6
2 | 5 11 10 15 8 16 19 17 13 20 22 16 | 10.8 17.8
3 | 9 20 18 7 13 15 19 17 15 30 30 26 | 13.7 22.8
4 | 6 14 21 11 18 | 14.0
5 | 13 8 20 19 8 9 11 19 10 17 15 21 | 12.8 15.5
```

```
6 | 14 13 9 16 14 13 18 20 22 15 25 | 13.2 20.0
7 | 12 12 22 12 15 16 18 22 16 20 26 19 | 14.8 20.2
8 | 18 14 26 17 16 21 28 25 32 | 19.3 23.2
9 | 13 16 18 19 21 16 14 14 13 21 23 18 | 17.2 17.2
10 | 17 25 14 29 16 12 | 18.8
11 | x
12 | x
13 | x
14 | 9 16 12 10 13 13 12 15 13 14 8 12 | 12.2 12.3
15 | 16 20 8 11 12 3 19 17 17 10 10 12 | 11.7 14.2
16 | 5 7 10 11 7 16 13 7 9 10 11 17 | 9.3 11.2
17 | 11 12 10 15 19 19 21 26 25 17 33 26 | 14.3 24.7
18 | 11 14 18 21 21 24 21 22 29 22 30 26 | 18.2 25.0
19 | 14 19 32 22 18 30 32 27 27 34 30 25 | 22.5 29.2
20 | 10 30 33 30 23 41 32 35 35 39 | 27.8 35.3
21 | 16 27 32 25 28 26 41 22 22 24 30 29 | 25.7 28.0
22 | 15 23 26 27 30 31 32 25 26 37 26 33 | 25.3 29.8
23 | 11 15 21 23 23 26 34 22 31 22 22 24 | 19.8 25.8
24 | 15 14 19 24 31 27 25 17 28 26 23 26 | 21.7 24.2
25 | 13 19 18 20 22 19 28 21 35 24 20 26 | 18.5 25.7
26 | 14 21 27 18 31 24 32 15 26 25 30 42 | 22.5 28.3
27 | 14 31 27 19 18 25 20 25 30 23 | 22.3 24.5
28 | 13 25 19 15 13 21 21 24 25 24 26 25 | 17.7 24.2
29 | 14 20 27 17 11 16 16 15 24 24 28 20 | 17.5 21.2
30 | 20 22 23 12 15 19 27 25 | 18.5 26.0
31 | 18 21 26 14 22 20 17 23 23 24 27 28 | 20.2 23.7
-----+-------------------------------------------------+-----------
1996 | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
Oct | UT
```

* (1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

- local time = JST = UT + 9 hours

Chikara Shimoda

Observer: Kazuhiro Suzuki
HARO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz
Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates:

```
Oct | UT
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+------------------------------------------------------------------------
30- 1 | @16 15 12 22 21
1- 2 | 24 39 48 31 33 49 42 42 29 38 35 30 24 23 21 18 16 18 12@16 14 22 36 29
2- 3 | 26 26 36 37 36 33 26 47 28 27 28 27 22 18 17 19 12 16 12@19 12 18 19 22
3- 4 | 21 32 34 35 38 38 41 29 31 26 36 31 25 29 27 18 22 12 12 16 17 29 18 24
4- 5 | 19 36 34 22 27 29 31 34 32 39 24 24 22 18 18 24 19 13 13@16 18 30 22 40
5- 6 | 32 36 34 36 22 21 21 34 33 30 19 36 20 19 20 15 16 18 17 21 25 29@39 37
6- 7 | 38 45 29 44 29 40 33 32 30 34 33 25 27 26 21 17 16 16 12@18 20 28 31 34
7- 8 | 35 34 31 38 41 46 34 36 29 29 29 28 25 19 17 17 18 12 11@15
8- 9 | 15 30 27 28
9-10 | 26 39 39 44 31 48 36 37 35 31 25 23 20 22 15 14 13 10 13 12 15 26 18 26
10-11 | 29 36 48 41 29 29 31 37 32 27 29 34 18 22 20 18 12 11 15@15 15 21 34 36
11-12 | 34 36 33 37 39 43 48 37 34 35 30 26 28 18 22 26 22 16 13@17@19 22 31 34
12-13 | 27 28 28 36 35 32 44 37 36 26 27 19 25 25 28 21 19 18 18@18 22 22 22 23
13-14 | 26 29 27 34 35 25 26 33 26 25 20 28 29 18 17 22 13 13 12@18@16 19 24 18
14-15 | 23 36 45 32 40 47 35 28 32 34 26 22 22 21 22 15 15 18 11@17 20 26 36 25
15-16 | 22 37 52 32 36 36 29 29 43 34 29 25 22 20 19 17 17 12 14 14 14 25 26 30
16-17 | 27 47 50 47 47 34 38 31 31 29 30 30 19 17 20 20 16 21 18@18@18 25 27 30
17-18 | 39 43 57 52 42 44 46 40 34 31 37 24 20 19 17 19 17 14 12 18@18 28 44 33
18-19 | 29 25 40 38 51 46 42 29 40 29 37 24 25 26 24 17 21 17 15 21 18 30 32 32
19-20 | 27 35 26 24 42 45 46 32 40 35 29 22 22 25 20 18 18 15 15@16 20 29 40 27
20-21 | 49 58 66 74 50 53 52 50 61 37 40 26 32 25 20 17 17 14 16@21@16 21 32 36
21-22 | 39 49 51 53 46 50 74 42 31 32 28 35 30 23 23 20 16 15 13@17 20 31 26 36
22-23 | 39 50 46 46 60 51 55 46 39 30 33 26 31 23 27 24 13 20 12 20 14 22 26 37
23-24 | 39 44 60 49 58 50 46 46 36 37 34 26 29 23 20 22 16 18 12 15 21 19 41 31
24-25 | 24 35 40 38 36 36 34 36 30 32 33 21 23 17 18 19 15 12 16 19 22 20 34 45
25-26 | 25 28 35 40 35 45 40 42 25 30 30 26 26 19 18 15 13 15 13 17@18 28 35 29
26-27 | 33 47 44 41 46 48 42 45 48 38 40 28 21 16 22 16 18 16 12@16 19 32 33 34
27-28 | 26 48 41 52 52 47 48 30 35 28 33 24 25 20 18 18 13 17 12 19 21 25 30 39
28-29 | 31 41 37 39 29 34 30 28 35 37 24 28 20 22 20 19 20 19 14@21@23 25 31 35
29-30 | 31 37 33 37 45 36 24 37 30 24 26 22 24 23 20 17 18 14 18@23@17 32 27 21
30-31 | 22 28 26 35 34 39 24 34 28 29 32 19 19 15 17 15 12 13 13 16@21 30 23 33
------+------------------------------------------------------------------------
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
Oct | UT
```

Notes:

- local time = JST = UT + 9 hours.
- @ means converted hourly rate.
- activity of Orionids started on October 15. The maximum activity of Orionids was probably in the early morning (local time) on October 21.

Long echoes on October 22:

02h10m40s 70 s
03h20m55s 80 s
04h38m40s 120 s
08h24m15s 150 s the longest echo of all

Kazuhiro Suzuki

Observer: Jeroen Van Wassenhove
Location: Nazareth, Belgium (3 36' E , 50 58' N)
Frequency: 72.110 MHz, transmitter: Wroclaw Poland
Antenna: 4-elements Yagi antenna, horizontal polarized
azimuth : 270 deg Elevation: 45 deg
antenna amplifier: 20 dB
Receiver: RP27, sensitivity: 0.5 muV for 20 dB S/N ratio at 3 kHz deviation.
Observing method: listening.

First reception:
30 Oct 96: 20 reflections during one hour interval starting at 20 h UT

The setup will be automated by the end of the year.

Jeroen Van Wassenhove

Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

| 1996
UT | 18 Oct 19 Oct 20 Oct 21 Oct
----+----------------------------------
0 | 321 378 308 396
1 | 328 348 342 399
2 | 357 392 380 427
3 | 298 406 348 445
4 | 337 382 317 391
5 | 415 324 355 341
6 | 357 373 324 307
7 | 260 321 401 358
8 | 235 257 260 323
9 | 243 277 374 288
10 | 190 264 229 278
11 | 192 204 145 289
12 | 144 133 133 200
13 | 146 168 194 187
14 | 149 237 160 147
15 | 173 & 154 171

16 | 136 113 121 170
17 | & 135 172 160
18 | 152 147 212 226
19 | 273 217 234 226
20 | 288 289 263 312
21 | 338 308 317 359
22 | 389 293 393 433
23 | 347 328 470 424
----+-----------------------------------
UT | 18 Oct 19 Oct 20 Oct 21 Oct
| 1996

Note: & aurora on Oct 18-19

Ilkka Yrjola / via M. De Meyere

2. ANNOUNCEMENTS

Leonids: call for observations

Based on radio observations of the previous years, the Leonids maximum is expected on November 17 around 8-10h UT. Due to their high speed, the Leonids are very effective in scattering radio waves, and are more prominent in radio observations than in visual ones. Moreover, the stream might be stronger than the previous years (with a possible storm in 1998 or 1999). This is a morning stream, and radio observers can track its activity until at least local noon (depending on the observer's latitude).

MDM/CSt

3. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio meteor scatter observations and data reduction. It started in August 1993 in order to spread rapidly the Perseid results via E-mail. Since then, it has appeared monthly, and it has gradually been expanded. In regularly publishing summaries of observations, potential radio observers are kept up to date of existing installations, possibilities and limitations of radio meteor observations. In the long run, there should be sufficient observing stations to cover the whole globe, allowing to detect stream outbursts which may remain unnoticed visually.

RMOB contains typically: summaries of recent observations, equipment data, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

Article Unavailable

2324. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: tunedin@arcos.org
Message-ID: <55remb$9ik_002@ppp22.arcos.org>
Source record: 20999
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
"James S. Kaplan" <kg7fu@combined.com> wrote:
>ARRL lawyer to sue member
>
>The following is a copy of a message I received today from
>ARRL General Counsel Christopher D. Imlay N3AKD:
>
>
>To: James S. Kaplan, KG7FU
>Copies: Mary Lou Brown, NM7N
> Terry Baun
> John Poray
>Date: July 16, 1996
>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
>**
>
> Jim, I have just finished reading your article in the July,
>1996 Water Cooled Newsletter, page 6. In it, you argue that two of
>my clients, the American Radio Relay League, Inc. and the Society
>of Broadcast Engineers, Inc. should cooperate in certain government
>relations projects, specifically spectrum protection. You note that
>I serve as the General Counsel for both organizations. You then
>jump from that argument to the following, which I quote:
>
> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
> perhaps both ARRL and SBE should be seeking more
> effective counsel. No offense Chris, but we have work to
> do. We should not only be sending a message to the FCC
> and Congress, but to other radio industries.
>
> (emphasis in original)
>
>It is not useful for me to educate you on the subject of your
>article to correct the errors in it, and I do not intend to do so.
>What I do intend, however, is for you to print a retraction, in
>unambiguous terms, in a form acceptable to me, and to furnish to
>me, in writing, an assurance that such will be printed in the next
>Chapter Newsletter for Chapter 124. Failing that, I am going to sue
>you in the District of Columbia for libel.
>
> I have no intention of allowing you to falsely allege that I
>have a conflict of interest in representing two of my best clients,

>especially in an SBE publication. You are not entitled to damage my
>reputation as a lawyer, which you have done in your article, or to
>infer (without any basis at all) that I have violated the canons of
>ethics governing attorneys, by which I govern my actions.
>
> I will await your response.
>
>Chris Imlay, N3AKD
>
Great response! People need to express their thoughts and opinions without the threat of legal action!

Dave
tunedin@arcos.org

2325. Re: Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <55rn30$bda@news.onramp.net>
Source record: 21000

> I heard John nearly all day yesterday working stations like
>crazy. The RECIEVE is on 145.200. Val gets on all the time as well.

I think if we used the term UPlink and Downlink
we would have less problems, since both parties have a RECIEVE :-)

73

2326. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: rapp@tiac.net
Message-ID: <328258f1.6223240@news.tiac.net>
Source record: 21001
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

tunedin@arcos.org (.) wrote (with possible editing):

>In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> "James S. Kaplan" <kg7fu@combined.com> wrote:
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>>of Broadcast Engineers, Inc. should cooperate in certain government
>>relations projects, specifically spectrum protection. You note that
>>I serve as the General Counsel for both organizations. You then
>>jump from that argument to the following, which I quote:
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>> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
>> perhaps both ARRL and SBE should be seeking more
>> effective counsel. No offense Chris, but we have work to
>> do. We should not only be sending a message to the FCC
>> and Congress, but to other radio industries.
>>
>> (emphasis in original)
>>
>>It is not useful for me to educate you on the subject of your
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>>What I do intend, however, is for you to print a retraction, in
>>unambiguous terms, in a form acceptable to me, and to furnish to
>>me, in writing, an assurance that such will be printed in the next
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>>especially in an SBE publication. You are not entitled to damage my
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>> I will await your response.
>>
>>Chris Imlay, N3AKD
>>
>Great response! People need to express their thoughts and opinions without the threat
>of legal action!
>
>Dave
>tunedin@arcos.org

Imagine that - a lawyer concerned about his reputation! As if they
had any. Give him a break, Imlay - get a life.

L. M. Rappaport

2327. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: stevec@rain.org
Message-ID: <55s29c$ij9@news2.snfc21.pacbell.net>
Source record: 21002
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Damned lawyers - Typical attitude. I doubt that his livelihood depends on a few crummy dollars a year from the wireheads (ARRL/SBE). He'd be much better off just ignoring a few comments in a newletter with a tiny circulation.

stevech@pacbell.net

Stevech@pacbell.net If Computers Are The Answer...
WB6CSZ What Was The Question?

2328. Re: where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <55spda$65o@faatcrl.faa.gov>
Source record: 21003

I ment to type 145.550 not 145.00,

2329. Re: where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <55spv2$65o@faatcrl.faa.gov>
Source record: 21004

and 145.800. Sorry about any confusion about this already
confusing subject.

73 Jeff

2330. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: rogerjb@ibm.net
Message-ID: <55st91$31ie$3@news-s01.ca.us.ibm.net>
Source record: 21005
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <328258f1.6223240@news.tiac.net>, rapp@tiac.net (L. M. Rappaport) writes:
>
>Imagine that - a lawyer concerned about his reputation! As if they
>had any. Give him a break, Imlay - get a life.
>
>L. M. Rappaport
>

Alas, it is arrogance of that sort that gives the profession a bad name among the public. Pretty unfortunate.

Roger J. Buffington
W6VZV
rogerjb@ibm.net

USC Law School, Class of '97

"I want to die peacefully, in my sleep, like my Grandfather."
"Not screaming, and in terror, like his passengers."

2331. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: "news.primenet.com" <dannyh@primenet.com>
Message-ID: <01bbccca$ec017840$db06f5cc@primenet.primenet.com>
Source record: 21006
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

L. M. Rappaport <rapp@tiac.net> wrote in article
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> >>Chris Imlay, N3AKD
> >>
> >Great response! People need to express their thoughts and opinions
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> >of legal action!
> >
> >Dave
> >tunedin@arcos.org
>
> Imagine that - a lawyer concerned about his reputation! As if they
> had any. Give him a break, Imlay - get a life.
>
> L. M. Rappaport
>
>
And they wonder why the trade has such a lousy reputation and is the scorn
of jokes!

2332. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Len SantaMaria <lenny@slip.net>
Message-ID: <32821C04.40C9@slip.net>
Source record: 21007
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Kent Winrich wrote:
>
> L. M. Rappaport wrote:
> >
> > tunedin@arcos.org (.) wrote (with possible editing):
> >
> > >In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> > > "James S. Kaplan" <kg7fu@combined.com> wrote:
> > >>ARRL lawyer to sue member
> > >>
> > >>The following is a copy of a message I received today from
> > >>ARRL General Counsel Christopher D. Imlay N3AKD:
> > >>
> > >>
> > >>To: James S. Kaplan, KG7FU
> > >>Copies: Mary Lou Brown, NM7N
> > >> Terry Baun
> > >> John Poray
> > >>Date: July 16, 1996
> > >>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
> > >>**
> > >>
> > >> Jim, I have just finished reading your article in the July,
> > >>1996 Water Cooled Newsletter, page 6. In it, you argue that two of
> > >>my clients, the American Radio Relay League, Inc. and the Society
> > >>of Broadcast Engineers, Inc. should cooperate in certain government
> > >>relations projects, specifically spectrum protection. You note that
> > >>I serve as the General Counsel for both organizations. You then
> > >>jump from that argument to the following, which I quote:
> > >>
> > >> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
> > >> perhaps both ARRL and SBE should be seeking more
> > >> effective counsel. No offense Chris, but we have work to
> > >> do. We should not only be sending a message to the FCC
> > >> and Congress, but to other radio industries.
> > >>
> > >> (emphasis in original)
> > >>
> > >>It is not useful for me to educate you on the subject of your
> > >>article to correct the errors in it, and I do not intend to do so.
> > >>What I do intend, however, is for you to print a retraction, in
> > >>unambiguous terms, in a form acceptable to me, and to furnish to

> > >>me, in writing, an assurance that such will be printed in the next
> > >>Chapter Newsletter for Chapter 124. Failing that, I am going to sue
> > >>you in the District of Columbia for libel.
> > >>
> > >> I have no intention of allowing you to falsely allege that I
> > >>have a conflict of interest in representing two of my best clients,
> > >>especially in an SBE publication. You are not entitled to damage my
> > >>reputation as a lawyer, which you have done in your article, or to
> > >>infer (without any basis at all) that I have violated the canons of
> > >>ethics governing attorneys, by which I govern my actions.
> > >>
> > >> I will await your response.
> > >>
> > >>Chris Imlay, N3AKD
> > >>
> > >Great response! People need to express their thoughts and opinions without the threat
> > >of legal action!
> > >
> > >Dave
> > >tunedin@arcos.org
>
> I noticed that Chris did not include his email so we could write to him
> with a few opinions!
>
> Kent, NI9U

I think www.switchboard.com is a wonderful thing. (see below)

Imlay, Christphr D...2140 Edgeware St...Silver Spring, MD 20905-4215
Phone: (301)236-5629

2333. where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <55sm0b$4jf@faatcrl.faa.gov>
Source record: 21008

Has MIR moved to yet another frequency ? Tryed 145.00 for paket
yesterday and once again this morning, and heard nothing.
Anybody have a clue ?

2334. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.961107151759.23410B-100000@spacelink>
Source record: 21009

On Thu, 7 Nov 1996 trandall@mhv.net wrote:
(Edit)

> This is so true. I connected to the keyboard 2 days ago and finally got a
> quick hello to ack but that's all. You have to act FAST once connected. Of
> coarse part of the problem is the few folks who think they HAVE to connect on
> EVERY pass. There's 2 I can think of and they know who they are. I wish some
> of these people would give us lower power stations a chance.
>
> Tom
>
Amen to that! Many hams here in the northeast are very angry about the
two guys who push the rest of us off without so much as a thought.
These guys are the real problem for the rest of us getting into MIR.
I'm willing to bet that at least one off them is running 200 watts and uses
a tracking antenna as well. You would think these clowns would show a little
consideration to others. The worst part of this is that one of these guys
does alot of carping about QRM and interference, and is probably a pretty
knowledgeable person, otherwise.

---------- Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

2335. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55snet$rhp@news.mhv.net>
Source record: 21010

In article <327FAE34.3817@lanl.gov>, jdevenport@lanl.gov wrote:
>Edward, I too have connected several times to MIR and never gotten a
>complete response. Generally you usually get just a "busy" response
>from MIR or you get connected and then nothing else gets through.
>This is because the "connect" packet response is very short and thus
>relatively easy to accomplish while subsequent packets are longer, such
>as the bbs menu, etc, and never get through since the QRM prevents the
>payload from hearing your ACK or MIR never hears YOUR ACK to the
>"connected" frame and since the pass is SO short and the QRM is SO high
>it generally goes out of range before you ever get another successful
>packet through to it. I've watched other connects also as it goes over
>and rare is the user who gets any more than you or I have done.

This is so true. I connected to the keyboard 2 days ago and finally got a quick hello to ack but that's all. You have to act FAST once connected. Of coarse part of the problem is the few folks who think they HAVE to connect on EVERY pass. There's 2 I can think of and they know who they are. I wish some of these people would give us lower power stations a chance.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2336. DOVE 17 Fixed?!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55t87h$j55@news.mhv.net>
Source record: 21011

I copied the following this morning at the near end of a DOVE 17 pass,
looks like she's back to normal (I hope!):

11/07/96 16:43:09 DOVE-1*>TLM: <UI>:
21:88 22:6F 23:22 24:17 25:36 26:00 27:03 28:00 29:02 2A:00 2B:7A
2C:01 2D:61 2E:54 2F:A0 30:D0 31:A0 32:00 33:01 34:AC 35:AB 36:AB
37:AC 38:88
11/07/96 16:43:10 DOVE-1*>STATUS: <UI>:
80 00 00 7C 0A 18 BB 02 00 50 00 00 08 0A 3C 05 1C 00 0F 04 01
11/07/96 16:43:10 DOVE-1*>LSTAT: <UI>:
I P:0x3000 o:0 l:14140 f:14140, d:0 st:0
11/07/96 16:43:11 SWITCH*>SWITCH: <DM>:
11/07/96 16:43:11 SWITCH*>SWITCH: <DM>:

There's another pass here in N.Y. at 1810, I'll copy that whole pass...

Congrats to the DOVE-17 team!!! Nice to see her back!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2337. Re: where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55snj8$rhp@news.mhv.net>
Source record: 21012

In article <55sm0b$4jf@faatcrl.faa.gov>, Jeff Griffin <griffinj@admin.tc.faa.gov> wrote:
>Has MIR moved to yet another frequency ? Tryed 145.00 for paket
>yesterday and once again this morning, and heard nothing.
>Anybody have a clue ?

Mir never used 145.000, it was 145.550.
The new VOICE downlink is 145.200, the uplink is 145.800 and
145.800 simplex for packet.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2338. First Light

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Michael Kaminer PR <mkpr@interport.net>
Message-ID: <32825AA1.4887@interport.net>
Source record: 21013

Seven years before THE HOT ZONE became a publishing sensation, Richard Preston turned his attention to the cosmos in FIRST LIGHT: The Search for the Edge of the Universe. Now, we wanted to let you know about a revised edition of what many consider one of the best books ever written on astronomy.

FIRST LIGHT is an intriguing portrait of astronomers at the Palomar Observatory in California and their quest to solve the riddle of the creation of the universe.

The Hale Telescope, aka "the Big Eye," is at the center of Preston's story. But like THE HOT ZONE, FIRST LIGHT is a testament to ordinary men and women engaged in an extraordinary undertaking. Preston imbues their science with humanity -- and strikingly debunks the notion that astronomy is a dry, staid science.

The New York Times Book Review says FIRST LIGHT "beautifully depicts astronomers deepened understanding of earth as the merest speck in time and space. Preston has created a witty and illuminating portrait of scientists in action and a luminous story of what modern astronomy is all about."

For more information about FIRST LIGHT, please e-mail Judd Blaise <news@mkpr.com> or Michael Kaminer <michael@mkpr.com>, Michael Kaminer PR, 212/627-8098; or Amy Cook <acook@randomhouse.com>, Random House, 212/940-7881.

2339. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: n1ist@netcom.com
Message-ID: <n1istE0I9rn.2L4@netcom.com>
Source record: 21014
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <3281F7F9.44FA@execpc.com> Kent Winrich <kwin@execpc.com> writes:
[Revival of this old blather...]

-I noticed that Chris did not include his email so we could write to him
-with a few opinions!

I don't know why someone just brought this thread back; it made the rounds
back in the summer (and I thought got bashed to death...)

Try calling the League; I'm sure they have Chris's address. It might be
cimlay@arrl.org, but I haven't tried that one.
/mike

--
\|/ Michael L. Ardai N1IST n1ist@netcom.com \|/
-*- === Boston Amateur Radio Club: http://www.barc.org/barc === -*-
/|\ or send "info barc-list" to listserv@majordomonetcom.com /|\

2340. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-07 00:00:00 UTC
From: Kent Winrich <kwin@execpc.com>
Message-ID: <3281F7F9.44FA@execpc.com>
Source record: 21015
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

L. M. Rappaport wrote:
>
> tunedin@arcos.org (.) wrote (with possible editing):
>
> >In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> > "James S. Kaplan" <kg7fu@combined.com> wrote:
> >>ARRL lawyer to sue member
> >>
> >>The following is a copy of a message I received today from
> >>ARRL General Counsel Christopher D. Imlay N3AKD:
> >>
> >>
> >>To: James S. Kaplan, KG7FU
> >>Copies: Mary Lou Brown, NM7N
> >> Terry Baun
> >> John Poray
> >>Date: July 16, 1996
> >>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
> >>**********
> >>
> >> Jim, I have just finished reading your article in the July,
> >>1996 Water Cooled Newsletter, page 6. In it, you argue that two of
> >>my clients, the American Radio Relay League, Inc. and the Society
> >>of Broadcast Engineers, Inc. should cooperate in certain government
> >>relations projects, specifically spectrum protection. You note that
> >>I serve as the General Counsel for both organizations. You then
> >>jump from that argument to the following, which I quote:
> >>
> >> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
> >> perhaps both ARRL and SBE should be seeking more
> >> effective counsel. No offense Chris, but we have work to
> >> do. We should not only be sending a message to the FCC
> >> and Congress, but to other radio industries.
> >>
> >> (emphasis in original)
> >>
> >>It is not useful for me to educate you on the subject of your
> >>article to correct the errors in it, and I do not intend to do so.
> >>What I do intend, however, is for you to print a retraction, in
> >>unambiguous terms, in a form acceptable to me, and to furnish to
> >>me, in writing, an assurance that such will be printed in the next
> >>Chapter Newsletter for Chapter 124. Failing that, I am going to sue

> >>you in the District of Columbia for libel.
> >>
> >> I have no intention of allowing you to falsely allege that I
> >>have a conflict of interest in representing two of my best clients,
> >>especially in an SBE publication. You are not entitled to damage my
> >>reputation as a lawyer, which you have done in your article, or to
> >>infer (without any basis at all) that I have violated the canons of
> >>ethics governing attorneys, by which I govern my actions.
> >>
> >> I will await your response.
> >>
> >>Chris Imlay, N3AKD
> >>
> >Great response! People need to express their thoughts and opinions without the threat
> >of legal action!
> >
> >Dave
> >tunedin@arcos.org

I noticed that Chris did not include his email so we could write to him
with a few opinions!

Kent, NI9U

2341. Re: What is SICH 1?!?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: Brian Heaton <bheaton@txdirect.net>
Message-ID: <01bbcdad$8cf4a460$c25c39cc@bheaton>
Source record: 20921

Unfortunately it has been reported that SICH-1s radar failed recently..

BDH

Dj0my <dj0my@aol.com> wrote in article
<55nb1o$jg8@newsbf02.news.aol.com>...
>
> Hello Satellite Enthusiasts !
>
> Here some data about SICH1:

2342. Re: WT GPS info

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: ken.thompson_at_symbios.com@no.spam
Message-ID: <ken.thompson_at_symbios.com.1439.000E983D@no.spam>
Source record: 20922

In article <jacob055-0811961022100001@news.tc.umn.edu> jacob055@maroon.tc.umn.edu (Jacobson) writes:
>From: jacob055@maroon.tc.umn.edu (Jacobson)
>I am interested in building a better antenna for my GPS, but have not
>found what freqs and polarisations used by the GPS system. Any info or
>pointers to it would be appreciated. Please also copy as email as my news
>feed has fast deletion and I may miss it.

>
1575 Mhz ; right hand circular

2343. Re: Mir question ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: Erik Skovgaard <Erik.Skovgaard@bc.sympatico.ca>
Message-ID: <01bbcd3a$eb516d40$4cc56cce@default>
Source record: 20923

Brian,

You can work MIR on a simple vertical, although it may drop out when MIR is right overhead, but it is not often a problem.

MIR uses a regular FM radio, so you can use that as well. They use an ordinary 1200 baud TNC for packet. Try listening for the beacon.

73 de VE7MDL ....Erik.

Brian Bennett <bbennett@smartt.com> wrote in article <3282bbc3.335042@news.smartt.com>...
> Hi all ! Sorry if this question seems silly, but
> I'm building a 2M beam to hopefully listen to/contact
> Mir. My question is do I need an all-mode rig (ssb) for
> contact? How about packet? I was going to use my HT
> with a 20W amp & 5 element beam.
> Thanks in advance.
>
> Brian VE7IJQ
>

2344. test

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: Charles.Mccurdy@1492.conchbbs.com
Message-ID: <e72_9611082135@conchbbs.com>
Source record: 20924

```
* Original Area: REC.RADIO.AMATEUR.ANTENNA
* Original To : All (1:106/1492)

test

--
|Fidonet: Charles Mccurdy 1:106/1492
|Internet: Charles.Mccurdy@1492.conchbbs.com
|
| Standard disclaimer: The views of this user are strictly his own.
```

2345. Conencting to Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: dhend@cyberportal.net
Message-ID: <3283a3be.2029643@news.monad.net>
Source record: 20925

There is some confusion about connecting to R0MIR.
I would like to try and clear this up..
R0MIR is the keyboard, this crew has not used the keyboard at all, it is the same as your TNC at home if you are there you can talk on your keyboard and if you are not people leave messages in your mailbox usually a X1XXX -1 or -5 this is what Mir has they seldom use the keyboard and messages left there quickly scroll off their screen. The result is that there is little point in connecting to R0MIR except to tell people you were able to, I connect to R0MIR for two reasons,
1. I see they are on the keyboard and are transmitting information packets from R0MIR
2. to see if Mir is hearing me and although I can hear Mir fine sometimes it doesn't hear you well.
Hope you all get a qsl card..

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

2346. Dove back in business!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55u66c$pa0@news.mhv.net>
Source record: 21016

I copied good telemetry from Dove today at the 1810 pass!
Seems they have her fixed! Nice to see it back to normal, I missed her!

Congrats to the Dove team!!!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2347. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: baack@maine.maine.edu
Message-ID: <55vi93$1jdg@sol.caps.maine.edu>
Source record: 21017
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <3281F7F9.44FA@execpc.com>, Kent Winrich <kwin@execpc.com> wrote:
>Path:
> sol.caps.maine.edu!cam-news-feed2.bbnplanet.com!news.bbnplanet.com!cam-news-hu
>b1.bbnplanet.com!howland.erols.net!newspump.sol.net!posts.execpc.com!usenet
>From: Kent Winrich <kwin@execpc.com>
>Newsgroups:
> rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,
>rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,r
>ec.radio.amateur.policy,rec.radio.amateur.space
>Subject: Re: ARRL lawyer to sue member

[BIG snip]..

yep... we really need to see this here in rec.radio.space..... geezz.

Jason N1RWY

2348. mir uhf heard

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32835B1D.398F@wco.com>
Source record: 21018

heard mir uhf repeater,1500 gmt in cm88

73 steve

2349. WT GPS info

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: jacob055@maroon.tc.umn.edu
Message-ID: <jacob055-0811961022100001@news.tc.umn.edu>
Source record: 21019

I am interested in building a better antenna for my GPS, but have not found what freqs and polarisations used by the GPS system. Any info or pointers to it would be appreciated. Please also copy as email as my news feed has fast deletion and I may miss it.

TNX
de KA0ZIL
Steve Jacobson
jacob055@maroon.tc.umn.edu

2350. Dove-17 is back!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-08 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <55vbl9$82p@news.mhv.net>
Source record: 21020

I'll try this again since I didn't see my post posted:

I copied good telemetry from DOVE-17 yesterday! She's back!
Nice to hear from her again!

Congrats to the DOVE team!!!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2351. PTS 160 MHz Synthesizers 4 sale

Newsgroup: rec.radio.amateur.space
Date: 1996-11-09 00:00:00 UTC
From: Wave@mindspring.com
Message-ID: <5626ke$21a@camel0.mindspring.com>
Source record: 20926
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.swap,sci.electronics.equipment

I have a copuple of PTS synthesizers for sale. These units are the 160 MHz version. Here are some of the specs:

Frequency range .100 000 MHz to 159.999 999 MHz
Resolution 1 Hz to 100KHz in decades
Accuracy 1 x 10^-8/day +/- 1 x 10^-6/0 - 50 C
Control Local by 10 position dial; remote by ttl level parallel entry BCD or GPIB

Switching time 20 to 5 microseconds
Output level +3 to 13 dBm (metered in dBm and volts)
Flatness +/- 0.5
Impedance 50 ohms
Harmonics -40dBc
Discrete spurs -75dBc

Phase Noise -63 dBc (0.5 Hz to 15 KHz) incl. effects of internal STD
100Hz/105dBc, 1KHz/115dBc, 10KHz/123 dBc,
100KHz/127 dBc
Noise Floor -135 dBc/Hz
External drive 10 MHz or 5 MHz (internal TCXO included)
Weight 35 Lbs
Mounting Rack chassis

I have scanned images of the price sheet and specs/picture sheet. These are available upon request. These units sell new (with all the included options) for over $8000. I am selling them for $500. They all have minor cosmetic scratches but are in full working condition. If interested please e-mail me at:

Pieter Ibelings
N4IP
wave@mindspring.com

73's
Thanks

2352. Re: Mir question ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-09 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <56227s$iss@news.mhv.net>
Source record: 20927

In article <3282bbc3.335042@news.smartt.com>, bbennett@smartt.com (Brian Bennett) wrote:
>Hi all ! Sorry if this question seems silly, but
>I'm building a 2M beam to hopefully listen to/contact
>Mir. My question is do I need an all-mode rig (ssb) for
>contact? How about packet? I was going to use my HT
>with a 20W amp & 5 element beam.
>Thanks in advance.
>
>Brian VE7IJQ

No you don't need an all mode rig, just an FM rig. Same with packet. Your
set-up should work fine...

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2353. ARLK082 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-09 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk082.1996@arrl.org>
Source record: 20928
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK082
ARLK082 Keplerian data

ZCZC SK82
QST de W1AW
Keplerian Bulletin 82 ARLK082
From ARRL Headquarters
Newington, CT November 9, 1996
To all radio amateurs

SB KEP ARL ARLK082
ARLK082 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96312.75177120 .00000036 00000-0 22863-4 0 02904
2 18129 82.9253 42.4160 0012815 111.8570 248.3949 13.72370884469864
UO-11
1 14781U 84021B 96313.01262191 .00000110 00000-0 26420-4 0 09406
2 14781 97.8114 297.4329 0012034 356.1368 3.9742 14.69495461678770
RS-12/13
1 21089U 91007A 96313.87426539 .00000033 00000-0 18546-4 0 9313
2 21089 82.9201 82.0420 0028270 188.8534 171.2128 13.74074481288904
AO-13
1 19216U 88051B 96313.89312063 .00417018 -34462-4 31520-3 0 3268
2 19216 57.0375 79.3729 7327594 56.1063 353.0407 2.29694122 32939
UO-14
1 20437U 90005B 96313.82507625 .00000018 00000-0 23795-4 0 2236
2 20437 98.5361 34.0772 0011104 132.2592 227.9515 14.29937320354726
RS-15
1 23439U 94085A 96313.66935129 -.00000039 00000-0 10000-3 0 1742
2 23439 64.8153 149.4346 0156704 173.2869 187.0201 11.27529174 77079
AO-16
1 20439U 90005D 96313.14774173 .00000009 00000-0 20316-4 0 00297
2 20439 98.5513 35.8929 0011784 137.5677 222.6420 14.29989082354646
```

```
DO-17
1 20440U 90005E 96313.15569775 -.00000019 00000-0 94050-5 0 00334
2 20440 98.5556 36.6208 0012082 135.4282 224.7878 14.30130829354677
WO-18
1 20441U 90005F 96313.14863652 -.00000002 00000-0 16152-4 0 00333
2 20441 98.5534 36.5350 0012387 136.6812 223.5348 14.30099905354679
LO-19
1 20442U 90005G 96313.20336681 .00000014 00000-0 22038-4 0 217
2 20442 98.5559 37.1470 0012510 134.9047 225.3161 14.30211030354708
FO-20
1 20480U 90013C 96313.07663411 -.00000027 00000-0 73081-5 0 9182
2 20480 99.0234 310.5569 0541122 158.3176 204.1807 12.83234896316343
AO-21
1 21087U 91006A 96314.22705309 .00000094 00000-0 82657-4 0 7572
2 21087 82.9402 214.3561 0034701 159.0024 201.2566 13.74573341289934
UO-22
1 21575U 91050B 96313.18042188 .00000023 00000-0 22074-4 0 07373
2 21575 98.3361 15.1651 0007267 189.0682 171.0368 14.37043130278747
KO-23
1 22077U 92052B 96313.16748913 -.00000037 00000-0 10000-3 0 06304
2 22077 66.0772 247.9982 0015321 263.9497 95.9773 12.86298403199328
KO-25
1 22828U 93061F 96313.16856127 .00000021 00000-0 25688-4 0 05058
2 22828 98.5654 26.2976 0010079 149.7472 210.4300 14.28157892130667
IO-26
1 22826U 93061D 96313.15148898 -.00000022 00000-0 87174-5 0 05202
2 22826 98.5708 26.2142 0008819 166.0786 194.0629 14.27817105162541
AO-27
1 22825U 93061C 96313.16614354 .00000012 00000-0 22531-4 0 05176
2 22825 98.5704 26.0347 0008199 164.8759 195.2652 14.27708442162539
FO-29
1 24278U 96046B 96313.12062572 -.00000006 00000-0 29321-4 0 00433
2 24278 98.5734 18.1617 0352676 38.8520 323.7413 13.52627209011237
Mir
1 16609U 86017A 96314.17065871 .00001468 00000-0 22252-4 0 7794
2 16609 51.6503 113.2448 0013133 11.7758 348.3464 15.62348439612665

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
November 12, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2354. RE: FO-29 on 10 meters?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-09 00:00:00 UTC
From: David.Bate@p1.f622.n229.z1.gryn.org
Message-ID: <bf1_9611092136@tor250.org>
Source record: 20929

sanderman@delphi.com wrote in a message to All:

sd> FO-29 as posted in your header, or FO-12 (?) as posted in your
sd> message?
sd> If you mean FO-29, maybe someone else here can answer. IF you mean
sd> FO-12, I didn't know there was such an animal.
sd>
sd> I'm still trying to find out what MO-30 and SICH 1 are, as listed
sd> on the ARRL Keps from Tuesday, 10/29.

FO-12 - FijiOscar (Oscar flight 12) Didn't live long...
FO-29 - FijiOscar (Oscar flight 29)
MO-30 - MexicoOscar (Oscar flight 30)

There was a message posted earlier about SICH-1, a soviet flight.

Dave...
david.bate@lodgeware.gryn.org
dbate@sbase.com

2355. Re: Mir question ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-10 00:00:00 UTC
From: Jsapyta@getnet.com
Message-ID: <32854a1b.1329823@news.getnet.com>
Source record: 20930

On Fri, 08 Nov 1996 04:54:48 GMT, bbennett@smartt.com (Brian Bennett)
wrote:

>Hi all ! Sorry if this question seems silly, but
>I'm building a 2M beam to hopefully listen to/contact
>Mir. My question is do I need an all-mode rig (ssb) for
>contact? How about packet? I was going to use my HT
>with a 20W amp & 5 element beam.
>Thanks in advance.
>
>Brian VE7IJQ

I've connected to MIR using using a 5w HT, or a 50w's ft-5100, both on
a Ventanna Atenna. Lot of local people kid me about HOGGING the MIR
mailbox each time it passes. And they're only using verticles to try
to connect but can't... :)

John
N7XLQ

2356. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-10 00:00:00 UTC
From: seven@datasync.com
Message-ID: <5642os$9ou@osh2.datasync.com>
Source record: 20931

> This is so true. I connected to the keyboard 2 days ago and finally got a
>quick hello to ack but that's all. You have to act FAST once connected. Of
>coarse part of the problem is the few folks who think they HAVE to connect on
>EVERY pass. There's 2 I can think of and they know who they are. I wish some
>of these people would give us lower power stations a chance.

>Tom

I agree. I have tried for several weeks about a month ago. According
to the keps I had(a week old at worst) MIR was directly overhead and
so therefore figured It was my turn and other 5's as well. But sure
enough there were tons of 3's 2's and some 0's trying left and right.

So, I gave up until I can pump some watts up yonder and make a solid
connect. And yes, I did write down every call that was way north that
gave us down yonder a heck of a time getting on when it was only
logical that 6's 5's and 4's should be given priority access to try a
connect.

I too wish the big guns with multiple arrays and kilowatts would wait
their logical turn and show some courtesy for their fellow operators.

My two cents worth.

KC5WCP

2357. Re: where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-10 00:00:00 UTC
From: orion@capital.net
Message-ID: <32862018.8629684@news.capital.net>
Source record: 20932

> Mir never used 145.000, it was 145.550.
>The new VOICE downlink is 145.200, the uplink is 145.800 and
>145.800 simplex for packet.

I heard their downlink a few days ago on 145.800. Have they moved it
again?

73,
Butch N2YMJ

2358. Re: Mir question ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-10 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <565i5r$slp@paperboy.ids.net>
Source record: 20933

In article <3282bbc3.335042@news.smartt.com> Brian Bennett,
bbennett@smartt.com writes:
>Hi all ! Sorry if this question seems silly, but
>I'm building a 2M beam to hopefully listen to/contact
>Mir. My question is do I need an all-mode rig (ssb) for
>contact? How about packet? I was going to use my HT
>with a 20W amp & 5 element beam.

Mir is exclusively FM - both for 2 meters and 70 cm. No SSB equipment is
needed.

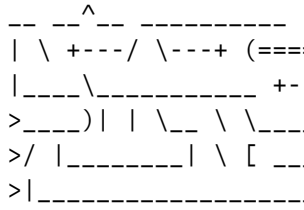
And you don't need a 20 watt amp to listen to anything. An amp is only
for TRANSMITTING - not receiving.

A preamp (which does work with signals you receive) never hurts though ...

However -- you can EASILY hear Mir on your handheld with a Rubber-duckie.
No need to go with a beam, or anything else. I've done it on many
occasions -- comes in loud and clear.

What's especially nice about using a handheld is you can move your radio
around (experiment!) to try different antenna orientations. Yes, a
rubber-duckie isn't much of an antenna, but it does have a pattern which
is better in certain orientations.

Mir has a linear antenna, but it's rather difficult to know its
orientation, unless you've got a direct contact with the Korolev control
center in Russia! So it's hard to predict which polarization a beam
antenna should use. But with a handheld you can just keep twisting your
wrist until you get the strongest signal.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET

Roger, go at throttle up CHR$(32) the final frontier

2359. Re: where is MIR ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: William Vynck <creart.vynck@unicall.be>
Message-ID: <3286EE18.7DC2@unicall.be>
Source record: 20934

Jeff Griffin wrote:
>
> I ment to type 145.550 not 145.00,

5 min. ago i monitor Mir's packet on 148.200 here in Belgium.

William

2360. FS:Kiron SatTrak IV

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <E0pKKG.9Hz@iglou.com>
Source record: 20935
Cross-posted to: rec.radio.amateur.space,rec.radio.swap

I have for sale a Kiron SatTrak IV antenna controller.
Similar to the TAPR Trakbox, but MUCH more capable.
4 line x 20 lighted LCD. Holds up to 100 sats.
Controls Rotor and ICOM/YAESU/KENWOOD radios.
Like new condx. Has upgrade clock speed for
pacsat usage.

Cost 400, asking 325.00 + ship.

Charlie KB8BWE
rubenc@iglou.com

2361. Best tracking software??

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: Gene <geneo@amaranth.com>
Message-ID: <328732EB.3FD7@amaranth.com>
Source record: 20936

I've been following this newsgroup for a while and haven't noted much discussion on software. What is the best software? Any opinions on logsat pro?

Thanks.
--

gene oleson geneo@amaranth.com
amateur radio ~ n7eo

2362. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: "Thomas W. Castle" <afn17891@afn.org>
Message-ID: <Pine.A32.3.95.961111014114.20942A-100000@freenet3.afn.org>
Source record: 20937
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

How do you damage the reputation of a Lawer??????????????????????

The only difference I know between a Lawyer, Politician & a Crook is:

1. A politician is Lawyer, who is usually a Crook, who must be elected
to screw the public...

2. A Lawyer is a Crook who knows how the system is used to screw anyone...

3. A crook is a person who hasn't figured out how to become a lawyer or
politician - YET.....!

De Tom....

2363. Little LEOs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: james119@iu.net
Message-ID: <567o6a$q8t@cc.iu.net>
Source record: 20938

The recent discussion by some ARRL correspondence about the proposal to use 144 and 440 Mhz for little LEOs seems to be of the opinion that this is a poor technical idea and should never happen, and should be pooh poohed as such. However, is it any coincidence that all the major manufacturers of VHF/UHF transceivers have quietly started offering DUAL BAND models, 2m and 70cm, 9600 baud packet ready, advertised in QST and other major ham magazines? Does the average ham really need dual band coverage with 9600 baud capability? I have often wondered where the demand is in the ham community for such capability. Could the proponents of little LEOs see these existing products as being readily available for service as LEO terminals? Could the manufacturers have been posturing themselves over the past 2 years for future sales of their transceivers to the open public for use as little LEO terminals? Is it any coincidence that the technical discussions of little LEOs mention AX.25 as a potential protocol? Maybe these guys aren't as stupid as we would like to think. They must be licking their chops about the prospect of selling their existing FM transceivers (repackaged as "LEO terminals") to millions and millions of users. We should indeed be very concerned about this little LEO proposal, and must do whatever it takes to stop it. It may be too late. Unfortunately, we as hams may have been unknowingly subsidizing its development!

Jim Miller N4BE

2364. FCC Regulation info

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: chrisbond1@aol.com
Message-ID: <19961111223000.RAA09214@ladder01.news.aol.com>
Source record: 20939

Hello! I'm working with a small satellite group at the University of Alabama in Huntsville (SEDSAT). With our development going well, we've turned an eye towards developing ground software... and hit a stumbling block.

We would like to use the internet to allow for a client-server based station, with each of our clients individual stations capable of talking with our satelitte and being commanded by a central server. The idea is to spread enough client stations around the globe that the server is constantly recieving data - i.e, lots of stations who handle passes being controled from a central location.

We have recently been told that such remote operation is illegal under current FCC regulations. I'm interested in obtaining a copy of these regs, or in anyone who can tell me if there is a way around them. This seems like such a logical way to merge the internet with the amateur radio community, and it would be rather depresisng to find it shot down by legal issues. Any help/advise would be appreciated.

Thank you,
Chris Bond

2365. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <3425034173.193371595@midnet.com>
Source record: 20940

Tom,

Don't get me started on lawyers!

Joke:
What do you call 200 lawyers on the sea bed?

A start!

73

Colin, G8FRA

2366. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-11 00:00:00 UTC
From: "Thomas W. Castle" <afn17891@afn.org>
Message-ID: <Pine.A32.3.95.961111020210.20942B-100000@freenet3.afn.org>
Source record: 20941
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Fun to watch - guys....

Question: DO YOU know how to "look" up his call in QRZ or Sams' an
write him a letter..?

What is the difference between a: lawyer, politician & a crook???

HINT: [NONE!]

De Tom...

2367. Re: Best tracking software??

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: aikido@magicnet.net
Message-ID: <3287c4d8.148494609@news.magicnet.net>
Source record: 20942

Yes, it sure is a quite group... I've tried several tracking programs, and prefer by far LogSat Professional. There's no comparison with the others, like Nova for Windows & STS or Instant Track for DOS. It's very easy to use, but yet extremely powerful, full of options and very customizeable. I think it's well worth the (low!) price.

Matt

ps - Last time I checked their home page (http://www.logsat.com) they had a fully functional demo available for download.

On Mon, 11 Nov 1996 08:06:35 -0600, Gene <geneo@amaranth.com> wrote:

>I've been following this newsgroup for a while and haven't noted much
>discussion on software. What is the best software? Any opinions on
>logsat pro?
>
>Thanks.
>--
>
> gene oleson geneo@amaranth.com
> amateur radio ~ n7eo

2368. Trakbox

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: kb4qzh@pipeline.com
Message-ID: <568inf$b0t@camel1.mindspring.com>
Source record: 20943

Hello All,
I need a little help with Trackbox. I have built Trakbox and
everything works fine,but I am having trouble getting the mic click to
work. I am using the Yaesu FT-726R And the DSP-2232 , what I need is
detailed info on how to hook up the Trakbox up to use the mic click
with the 726R , I think the 736 is the same mic hook up ?
Thank You 73 Fred KB4QZH
kb4qzh@pipeline.com

2369. Contrawound Toroidal Helical Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: dbellerive@aol.com
Message-ID: <19961112013900.UAA13531@ladder01.news.aol.com>
Source record: 20944

The Center for Industrial Research has an interesting web page describing the Contrawound Toroidal Helical Antenna.

The address is http://www.cira.wvu.edu/cur_proj.html

I have never heard of this type of antenna before. Could it be useful with the OSCARs?

Darrell
VE7CLA

2370. New P3D Book?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: dbellerive@aol.com
Message-ID: <19961112013400.UAA13419@ladder01.news.aol.com>
Source record: 20945

Andrew Skattebo, KA0SNL, in his article "Phase 3D and Me" in Oct 96 CQ-VHF magazine, mentioned a new book on P3D to be available soon.

Has anyone heard of this book and if so, where can one buy a copy?

Thanks!
Darrell
VE7CLA

2371. Re: Best tracking software??

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <568jc7$q56@news.onramp.net>
Source record: 20946

Orbitrack

One of the best tracking programs out.
For an extra $50 you get a Mac plus to run it on :-)

2372. Re: New P3D Book!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <568ksb$hj7@paperboy.ids.net>
Source record: 20947

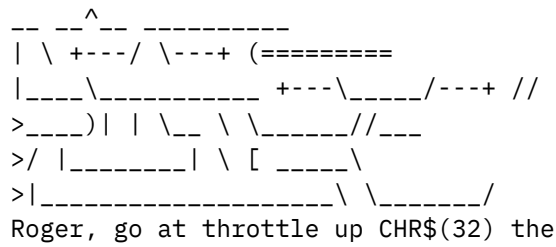
In article <19961112013400.UAA13419@ladder01.news.aol.com> ,
dbellerive@aol.com writes:
>Andrew Skattebo, KA0SNL, in his article "Phase 3D and Me" in Oct 96 CQ-VHF
>magazine, mentioned a new book on P3D to be available soon.
>
>Has anyone heard of this book and if so, where can one buy a copy?

I forgot who's working on it but there is a Phase 3-D user's guide which
will be published by AMSAT. It should be available by the time Phase 3-D
launches.

You can purchase copies through your local friendly neighborhood Martha.

check the AMSAT WWW page at http://www.amsat.org/ for updates and an
announcement when the book becomes available.

Philip Chien, Earth News - space writer and consultant PCHIEN@IDS.NET



Roger, go at throttle up CHR$(32) the final frontier

2373. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: orion@capital.net
Message-ID: <3288080d.45875454@news.capital.net>
Source record: 20948
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

"Thomas W. Castle" <afn17891@afn.org> wrote:

>How do you damage the reputation of a Lawer??????????????????????
>
>The only difference I know between a Lawyer, Politician & a Crook is:
>
>1. A politician is Lawyer, who is usually a Crook, who must be elected
>to screw the public...
>
>2. A Lawyer is a Crook who knows how the system is used to screw anyone...
>
>3. A crook is a person who hasn't figured out how to become a lawyer or
>politician - YET.....!
>
>De Tom....
>
>
Do you know why a shark will never bite a lawyer?

Professional Courtesy.

--
73,
Butch N2YMJ

2374. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: orion@capital.net
Message-ID: <32881175.48284309@news.capital.net>
Source record: 20949

dhend@cyberportal.net (Dave Hendrick) wrote:

<snip>
>I summation, I am sorry to have offended and upset anyone, I didn't
>mean to, but knew that this was coming and inevitable that my constant
>presence was going to cause jealousy. I should be less visible in the
>future... 73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

I wouldn't worry too much about it, Dave. Amateur Radio has a large
group of crybabies and moaners who aren't happy unless they are
wailling about something.

--
73,
Butch N2YMJ

2375. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: Mike Willis <mjw@rcru.rl.ac.uk>
Message-ID: <32883836.4DD2@rcru.rl.ac.uk>
Source record: 20950
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Thomas W. Castle wrote:
>
> Fun to watch - guys....
>
> Question: DO YOU know how to "look" up his call in QRZ or Sams' an
> write him a letter..?
>
> What is the difference between a: lawyer, politician & a crook???
>
> HINT: [NONE!]
>
> De Tom...

Never heard of an, "Honest crook" then?

2376. FO-29

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: elewis@dsp.com
Message-ID: <3288a088.3089192@news.wco.com>
Source record: 20951

is the FO-29 digitalker on 435.910 fm.

2377. Re: Trakbox

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <3807.198568464@midnet.com>
Source record: 20952

kb4qzh@pipeline.com,Internet writes:
I need a little help with Trackbox. I have built Trakbox and
everything works fine,but I am having trouble getting the mic click to
work.

Sorry to be so stupid but what is 'Trakbox'?

Colin, G8FRA

2378. Re: FO-29

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <56aa40$ka@bbcnews.rd.bbc.co.uk>
Source record: 20953

Edward Lewis (elewis@dsp.com) wrote:
: is the FO-29 digitalker on 435.910 fm.

If by FO-29 you mean jas-2 then yes, but it doesn't appear to be on very
often. I've managed to catch it once, and all I heard was a computerised
oriental sounding voice anouncing Japanese Amateur Satellite 2.

J.

2379. Re: Contrawound Toroidal Helical Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: dbellerive@aol.com
Message-ID: <19961112183800.NAA00204@ladder01.news.aol.com>
Source record: 20954

After receiving an email suggesting a look at rec.radio.amateur.antenna, I am sorry I asked this question. Be warned, its brutal. In the interest of sanity, I retract my question.

I guess some antennas are just more controversial than others!

Darrell
VE7CLA

2380. Re: Mir Packett

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: seven@datasync.com
Message-ID: <56ap6p$ob1@osh2.datasync.com>
Source record: 20955

No one is crying about not connecting due to the constant QRM caused by a select few. I can't speak for the others but I just can't understand why someone would want to waste bandwidth with a joke d'jour or schedulingt school contacts on the air when I am sure the Russian embassy would probably be glad to forward the request through channels with less hassle.
I'm just peeved cause it is taking me a great deal of time to make one succesful connect just so I can get my QSL and move on so that others may have the opportunity.
I can appreciate scheduling school contacts. That is a nice thing to do. BUT there are better ways to do it and without causing QRM. Sarcastic attitudes on both sides of the issue make us all look like children. If someone is complaining about your operating behavior provig their theory that you are inconsiderate with sarcasm and childish retorts does no good.
If the gentleman who is attempting to schedule contacts for schools needs some help i that area, I'd be glad to call the embassy and see what I could do to easy his burden.

All in all folks just use common sense. If you are using tracking software and MIR is over the Northern US and you live in the South, wait till it passes your way. AND VICE VERSE. If you're not using tracking software, you should. Sure it is an effort to get the programs setup and finding keps and then deciffering them. But anything worth doing is worth doing at least halfway right :)

Best of luck to all and 73's

KC5WCP
ERIC

2381. ARLK083 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk083.1996@arrl.org>
Source record: 20956
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK083
ARLK083 Keplerian data

ZCZC SK83
QST de W1AW
Keplerian Bulletin 83 ARLK083
From ARRL Headquarters
Newington, CT November 12, 1996
To all radio amateurs

SB KEP ARL ARLK083
ARLK083 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96316.76168830 .00000021 00000-0 61938-5 0 02874
2 18129 82.9258 39.4535 0012970 101.4758 258.7853 13.72371042470415
UO-11
1 14781U 84021B 96316.96193663 .00000087 00000-0 22497-4 0 09403
2 14781 97.8118 301.2129 0011988 342.9970 17.0837 14.69496178679357
RS-12/13
1 21089U 91007A 96316.85978109 .00000043 00000-0 30025-4 0 09518
2 21089 82.9203 79.8282 0028310 180.4188 179.6950 13.74074771289317
AO-13
1 19216U 88051B 96317.35278621 .00524599 -14116-4 42122-3 0 3306
2 19216 57.0496 78.5587 7301901 56.4677 352.9351 2.32924913 33018
UO-14
1 20437U 90005B 96317.18378926 .00000009 00000-0 20192-4 0 02439
2 20437 98.5362 37.3700 0011252 122.6949 237.5321 14.29937619355204
RS-15
1 23439U 94085A 96317.03970805 -.00000039 00000-0 10000-3 0 02041
2 23439 64.8130 143.9828 0156368 172.7025 187.6226 11.27529147077457
AO-16
1 20439U 90005D 96317.13606881 .00000038 00000-0 31505-4 0 00328
2 20439 98.5500 39.8075 0011741 125.7086 234.5252 14.29989849355214
```

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DO-17
1 20440U 90005E 96316.79380903 .00000004 00000-0 18128-4 0 00335
2 20440 98.5554 40.1967 0011946 124.9361 235.2945 14.30131426355190
WO-18
1 20441U 90005F 96316.78682719 .00000006 00000-0 19166-4 0 00307
2 20441 98.5542 40.1117 0012333 125.9136 234.3193 14.30100363355198
LO-19
1 20442U 90005G 96317.26103312 .00000030 00000-0 28453-4 0 226
2 20442 98.5564 41.1374 0012597 122.5375 237.7023 14.30211750355281
FO-20
1 20480U 90013C 96317.52092785 -.00000010 00000-0 42832-4 0 9198
2 20480 99.0234 314.1551 0541208 148.2628 215.2325 12.83235205316915
AO-21
1 21087U 91006A 96317.57544399 .00000094 00000-0 82657-4 0 7584
2 21087 82.9406 211.8779 0035117 149.8939 210.4235 13.74573634290397
UO-22
1 21575U 91050B 96317.14920090 .00000009 00000-0 17408-4 0 07380
2 21575 98.3354 19.0076 0007301 177.8884 182.2365 14.37043383279316
KO-23
1 22077U 92052B 96317.05500337 -.00000037 00000-0 10000-3 0 06313
2 22077 66.0773 239.8597 0015264 261.4373 98.4915 12.86298296199824
KO-25
1 22828U 93061F 96317.16199738 -.00000016 00000-0 10876-4 0 05058
2 22828 98.5652 30.2145 0010288 137.8198 222.3769 14.28157933131234
IO-26
1 22826U 93061D 96317.14587621 .00000008 00000-0 20657-4 0 05201
2 22826 98.5704 30.1317 0008988 153.7674 206.3965 14.27817671163113
AO-27
1 22825U 93061C 96317.16083557 .00000014 00000-0 23300-4 0 05172
2 22825 98.5697 29.9507 0008230 151.9428 208.2195 14.27708859163109
FO-29
1 24278U 96046B 96317.18882672 -.00000083 00000-0 -48991-4 0 00445
2 24278 98.5733 21.6886 0352578 28.3224 333.6585 13.52626335011788
MO-30
1 24305U 96052B 96317.06974412 .00000204 00000-0 20364-3 0 00585
2 24305 82.9336 155.0368 0031739 89.5354 270.9434 13.73085661009268
SICH 1
1 23657U 95046A 96317.37357298 .00000231 00000-0 32044-4 0 1228
2 23657 82.5317 64.1607 0026479 290.9093 68.9280 14.73506238 64658
Mir
1 16609U 86017A 96317.56070278 .00002529 00000-0 33912-4 0 7870
2 16609 51.6499 96.1420 0013438 24.5211 335.6396 15.62372594613193

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
November 16, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2382. Re: MIR is deaf

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <56a145$2m8@faatcrl.faa.gov>
Source record: 20957

Mir is there, but it is deaf. I connected about 8 or 10 times over the weekend. only to get replys scrambled by the interference from 145.790. I got 2 email's from people asking me why I connect and don't leave a message. I even tryed this morning at 4 somthing AM same result. Maybe if we keep the negative posts coming about the frequency change they will move it up 10k. That would help alot.

73 Jeff kb2wqm@juno.com (nites and weekends)

2383. Re: mir uhf heard also

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <56a082$2ao@faatcrl.faa.gov>
Source record: 20958

I hear the UHF repeater also. I try a contact, I think
someone is attempting to reply, but there is not enough signal
to copy callsigns or QTH's. I'm using a vertical dual band
antenna. I'm located in FM29PE.
Jeff kb2wqm@juno.com

2384. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: measures@mail.vcnet.com
Message-ID: <measures-ya023180001211961704110001@news.vcnet.com>
Source record: 20959
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <55remb$9ik_002@ppp22.arcos.org>, tunedin@arcos.org (.) wrote:

> In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> "James S. Kaplan" <kg7fu@combined.com> wrote:
> >ARRL lawyer to sue member
> >
> >The following is a copy of a message I received today from
> >ARRL General Counsel Christopher D. Imlay N3AKD:
> >
> >
> >To: James S. Kaplan, KG7FU
> >Copies: Mary Lou Brown, NM7N
> > Terry Baun
> > John Poray
> >Date: July 16, 1996
> >Re: Your article, SBE Chapter 124 Newsletter, July, 1996
> >**
> >
> > Jim, I have just finished reading your article in the July,
> >1996 Water Cooled Newsletter, page 6. In it, you argue that two of
snip....

Failing that, I am going to sue
> >you in the District of Columbia for libel.

In California, it is against the law to threaten to sue.

--
--Rich-- ag6k, 805.386.3734

2385. Re: FCC Regulation info

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: bpaul@qualcomm.com
Message-ID: <56b8nq$9fa@qualcomm.com>
Source record: 20960

In article <19961111223000.RAA09214@ladder01.news.aol.com>,
chrisbond1@aol.com wrote:
>Hello! I'm working with a small satellite group at the University of
>Alabama in Huntsville (SEDSAT). With our development going well, we've
>turned an eye towards developing ground software... and hit a stumbling
>block.
>
>We would like to use the internet to allow for a client-server based
>station, with each of our clients individual stations capable of talking
>with our satelitte and being commanded by a central server. The idea is to
>spread enough client stations around the globe that the server is
>constantly recieving data - i.e, lots of stations who handle passes being
>controled from a central location.
>
The concept of having one station talk to another station via satellite by
itself is not illegal. There must be some more information that you didn't
mention that makes your project illegal, so here are a few questions:

What is the purpose for communicating over sats.? Are you trying to provide
access to the internet?

What sort of information will you be sending? Business related data is illegal
in the amatuer bands.

You mentioned "our satellite". Are you refering to an exsisting amatuer sat,
or a commercial sat? What sort of orbit is it in?

In general, if you are attemping to make money by using ham bands, it's
illegal. Even if this is some kind of no money involved type of deal, a
liscensed amatuer must be in control of what goes over the air.
Reading between the lines of your message, it sounds like you are lacking some
basic satellite communication and amatuer radio knowledge.
The rules covering amatuer radio is Part 97 of the Code of Federal
Regulations. You can buy a paperback version at your local ham radio store.
If you post some more specifics as to what your goal is, I can help you
further.

-BP

>We have recently been told that such remote operation is illegal under
>current FCC regulations. I'm interested in obtaining a copy of these regs,
>or in anyone who can tell me if there is a way around them. This seems
>like such a logical way to merge the internet with the amateur radio
>community, and it would be rather depresisng to find it shot down by legal
>issues. Any help/advise would be appreciated.
>

>Thank you,
>Chris Bond

Bill Paul KF6BBL San Diego, CA bpaul@qualcomm.com
Disclaimer:
The above post is the opinion of Bill Paul, not Qualcomm Inc.

2386. NORAD Two-Line Orbital Element Sets (TLE898)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <56b03p$ses@blackbird.afit.af.mil>
Source record: 20961

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #898 -
Alouette 1
1 00424U 62049A 96313.60906549 .00000041 00000-0 37956-4 0 2411
2 00424 80.4642 141.2510 0023980 23.2544 336.9675 13.67879599702082
ATS 1
1 02608U 66110A 96308.43054147 -.00000188 00000-0 10000-3 0 9862
2 02608 14.5879 351.3349 0008636 103.5746 256.5120 1.00296395 26261
ATS 3
1 03029U 67111A 96317.19740284 -.00000109 00000-0 10000-3 0 5712
2 03029 14.9157 358.1924 0010085 259.3172 119.9221 1.00273139106253
Starlette
1 07646U 75010A 96314.07835929 -.00000127 00000-0 13187-4 0 101
2 07646 49.8295 296.9500 0205500 348.9650 10.6769 13.82191632 99003
LAGEOS
1 08820U 76039A 96314.39065369 .00000001 00000-0 00000+0 0 2372
2 08820 109.8559 75.7591 0043315 97.4924 263.0517 6.38664525223109
ETS-2
1 09852U 77014A 96310.27248828 -.00000024 00000-0 10000-3 0 838
2 09852 13.4048 31.2955 0006743 133.1639 226.8602 0.99997827 19058
GOES 2
1 10061U 77048A 96309.33994142 .00000053 00000-0 10000-3 0 7581
2 10061 12.5515 35.4935 0012847 124.4979 189.4110 1.00263764 15847
IUE
1 10637U 78012A 96317.24329328 -.00000110 00000-0 10000-3 0 3029
2 10637 35.6996 81.1902 1338578 61.8161 264.8351 1.00057783 21414
GOES 3
1 10953U 78062A 96316.19730052 -.00000109 00000-0 10000-3 0 7389
2 10953 11.5641 38.3425 0004911 102.9805 237.3587 1.00265724 20524

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SeaSat 1
1 10967U 78064A 96317.24591216 -.00000053 00000-0 26926-4 0 5291
2 10967 107.9971 121.0952 0002439 239.6962 120.3938 14.38132334962739
Nimbus 7
1 11080U 78098A 96316.57278288 -.00000071 00000-0 -26641-4 0 6264
2 11080 98.9244 171.4880 0008720 295.9978 64.0291 13.83690025911553
GOES 5
1 12472U 81049A 96315.39100403 .00000109 00000-0 10000-3 0 9637
2 12472 8.4258 48.7100 0007065 83.8445 276.1412 1.00275087 14564
Cosmos 1383
1 13301U 82066A 96314.28208182 .00000028 00000-0 15749-4 0 5417
2 13301 82.9343 27.4143 0026394 198.1565 161.8646 13.68078284717216
LandSat 4
1 13367U 82072A 96314.73906887 .00000023 00000-0 14966-4 0 198
2 13367 98.0572 1.0956 0008042 49.9949 310.1955 14.57189956761735
DMSP B5D2-1
1 13736U 82118A 96316.52562096 .00000034 00000-0 32685-4 0 1133
2 13736 98.6238 142.5419 0008414 324.4664 35.5954 14.25811132722066
IRAS
1 13777U 83004A 96316.51971534 .00000398 00000-0 30349-3 0 4874
2 13777 98.9649 138.9020 0013967 50.3016 309.9377 13.99265385373974
Cosmos 1447
1 13916U 83021A 96313.87887641 .00000080 00000-0 68192-4 0 6338
2 13916 82.9422 84.0219 0039127 107.5287 253.0151 13.74348006683612
TDRS 1
1 13969U 83026B 96315.17515942 -.00000283 00000-0 00000+0 0 6603
2 13969 9.1903 42.2563 0003725 166.0702 215.7689 1.00273807 22856
GOES 6
1 14050U 83041A 96317.20532135 -.00000128 00000-0 10000-3 0 5704
2 14050 7.2685 52.2207 0004289 82.6023 252.6197 1.00218886107679
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96317.20826648 .00000019 00000-0 14416-4 0 5645
2 14780 98.3152 14.8882 0002193 168.2020 191.9230 14.57062251675517
UO-11
1 14781U 84021B 96314.51063837 .00000078 00000-0 20966-4 0 9264
2 14781 97.8118 298.8672 0012025 351.0874 9.0117 14.69495521678990
Cosmos 1574
1 15055U 84062A 96314.05851393 .00000015 00000-0 13880-6 0 8332
2 15055 82.9540 139.1090 0026755 300.6622 59.1906 13.73641048620873
Cosmos 1602
1 15331U 84105A 96316.50453880 .00000184 00000-0 18732-4 0 5162
2 15331 82.5344 335.0097 0019766 175.2961 184.8450 14.84803576654830
ERBS
1 15354U 84108B 96316.03953755 .00001801 00000-0 18492-3 0 2317
2 15354 56.9933 151.3803 0009592 114.5646 245.6434 14.94996237658807
NOAA 9
1 15427U 84123A 96316.76572731 .00000069 00000-0 60012-4 0 9123
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2 15427 98.9326 21.6571 0013980 256.6722 103.2890 14.13816099614489
Mir
1 16609U 86017A 96317.30485066 .00003449 00000-0 44052-4 0 7865
2 16609 51.6515 97.4337 0013130 23.2437 336.9169 15.62374421613157
SPOT 1
1 16613U 86019A 96314.79321034 -.00000045 00000-0 00000+0 0 27
2 16613 98.8240 22.4630 0001438 155.2121 204.9122 14.19990794240975
Cosmos 1766
1 16881U 86055A 96315.26180071 .00000174 00000-0 18106-4 0 4309
2 16881 82.5198 33.8396 0017731 210.5548 149.4632 14.83772873555504
EGP
1 16908U 86061A 96317.19043312 -.00000083 00000-0 10000-3 0 1307
2 16908 50.0102 261.9788 0011280 29.6352 330.5120 12.44415334134838
NOAA 10
1 16969U 86073A 96316.86304742 .00000038 00000-0 34425-4 0 8457
2 16969 98.5313 309.7576 0012235 286.8908 73.0929 14.25009335527638
MOS-1
1 17527U 87018A 96315.19077940 -.00000043 00000-0 00000+0 0 4821
2 17527 98.9294 13.8807 0017001 281.1667 78.7586 14.00457764495425
GOES 7
1 17561U 87022A 96316.18774737 -.00000145 00000-0 10000-3 0 1377
2 17561 3.3518 68.3086 0005879 275.6926 38.5504 1.00282147 18772
Kvant-1
1 17845U 87030A 96316.98504630 .00023259 00000-0 26146-3 0 8074
2 17845 51.6526 99.0476 0013104 22.6461 337.5753 15.62394200547211
DMSP B5D2-3
1 18123U 87053A 96316.55071642 .00000005 00000-0 25127-4 0 6727
2 18123 98.7684 144.4192 0013625 191.1335 168.9539 14.15458002485349
RS-10/11
1 18129U 87054A 96316.25133424 .00000043 00000-0 30208-4 0 2834
2 18129 82.9256 39.8304 0012906 102.8831 257.3744 13.72371257470341
Meteor 2-16
1 18312U 87068A 96315.27526595 .00000048 00000-0 29807-4 0 5212
2 18312 82.5553 236.1954 0011688 163.9968 196.1567 13.84087292466387
Meteor 2-17
1 18820U 88005A 96316.22542733 .00000049 00000-0 30046-4 0 938
2 18820 82.5400 290.1278 0015027 233.4887 126.4886 13.84764490443876
DMSP B5D2-4
1 18822U 88006A 96317.17599354 .00000018 00000-0 26242-4 0 3872
2 18822 98.3810 142.1761 0005607 298.8752 61.1863 14.23206256455621
Glonass 34
1 19163U 88043A 96310.30451569 .00000021 00000-0 10000-3 0 1264
2 19163 65.3201 81.0848 0006476 143.8257 216.2142 2.13102407 65246
Glonass 36
1 19165U 88043C 96316.46195310 .00000012 00000-0 10000-3 0 5385
2 19165 65.2976 80.8313 0002810 11.8898 348.1006 2.13102295 65994
METEOSAT 3
1 19215U 88051A 96313.96656928 -.00000080 00000-0 10000-3 0 2876
2 19215 3.5559 66.9496 0005796 120.1529 239.7611 0.96947859 18582
AO-13
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1 19216U 88051B 96316.92439951 .00479585 -21416-4 42542-3 0 3292
2 19216 57.0602 78.6371 7304629 56.5151 354.0606 2.32453150 33002
OKEAN 1
1 19274U 88056A 96313.01934521 .00000146 00000-0 15109-4 0 1305
2 19274 82.5146 136.9688 0020678 15.0878 345.0951 14.82536400450687
Meteor 3-2
1 19336U 88064A 96315.86417943 .00000051 00000-0 10000-3 0 5259
2 19336 82.5381 62.6314 0015986 226.9947 132.9836 13.16979993398785
Glonass 39
1 19503U 88085C 96312.26923901 .00000002 00000-0 10000-3 0 4160
2 19503 65.5363 319.8916 0008701 141.4615 218.6406 2.13101725 63393
NOAA 11
1 19531U 88089A 96316.79148083 .00000012 00000-0 31307-4 0 7334
2 19531 99.1764 338.6934 0011465 183.0869 177.0233 14.13110140419299
TDRS 3
1 19548U 88091B 96316.71090480 -.00000183 00000-0 10000-3 0 2481
2 19548 2.7893 71.1468 0005917 155.0085 166.2350 1.00267958 17000
Glonass 40
1 19749U 89001A 96316.52984228 .00000012 00000-0 10000-3 0 6346
2 19749 65.2679 80.3884 0006769 250.7991 109.1091 2.13101492 60997
Glonass 41
1 19750U 89001B 96308.60727609 .00000024 00000-0 10000-3 0 5382
2 19750 65.2807 80.7294 0007763 248.6558 111.2595 2.13101691 60849
GPS BII-01
1 19802U 89013A 96312.73676038 .00000052 00000-0 00000+0 0 3127
2 19802 55.4013 104.9212 0032251 121.9413 238.3867 2.00556449 56590
Akebono
1 19822U 89016A 96317.25112651 .00008756 00000-0 41150-3 0 8084
2 19822 75.0871 37.7790 3739945 354.3165 2.4600 7.94287978178438
Meteor 2-18
1 19851U 89018A 96314.91080687 .00000007 00000-0 -66452-5 0 5196
2 19851 82.5221 164.8942 0013387 291.9604 68.0133 13.84420072388992
MOP-1
1 19876U 89020B 96316.73680354 -.00000092 00000-0 10000-3 0 2259
2 19876 2.2902 71.1679 0015870 285.7059 73.8109 0.97109701 8051
TDRS 4
1 19883U 89021B 96316.01604167 -.00000258 00000-0 00000+0 0 2717
2 19883 0.1840 88.4327 0009036 128.4462 158.3512 1.00267083200588
GPS BII-02
1 20061U 89044A 96316.06796693 -.00000029 00000-0 10000-3 0 3029
2 20061 54.1000 280.3367 0162459 221.1141 137.6341 2.00562108 54401
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2 20103 82.9620 359.9563 0038326 4.8802 355.2722 13.73870736368928
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2 20185 55.1268 105.1255 0122542 316.2672 42.6816 2.00812236 52982
GMS 4
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2 20217 2.0878 74.3481 0000870 257.9048 53.9423 1.00270049 26890
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2 20261 82.5969 177.1431 1242221 68.4829 304.3938 12.47361800324176
GPS BII-04
1 20302U 89085A 96316.93561698 .00000025 00000-0 10000-3 0 3343
2 20302 53.1988 220.0625 0028267 130.6673 229.6975 2.00571056 51799
Meteor 3-3
1 20305U 89086A 96316.24276684 .00000044 00000-0 10000-3 0 6860
2 20305 82.5440 22.9041 0007917 325.2910 34.7643 13.04420377337370
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2 20322 98.9396 326.8893 0009328 356.6039 3.5060 14.03464385357252
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1 20335U 89093A 96316.98504630 .00023259 00000-0 26146-3 0 7375
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2 20439 98.5513 37.9546 0012024 131.6589 228.5622 14.29989357354946
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2 20442 98.5564 41.1374 0012597 122.5375 237.7023 14.30211750355281
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2 20452 54.0426 160.8528 0065168 90.3662 270.4727 2.00551137 49723
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2 20478 99.1118 23.3689 0003896 216.9988 143.0904 13.93968624264972
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2 20608 89.9285 172.1648 0103420 269.6379 89.2986 14.64953019347514
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1 20619U 90045A 96316.89719184 -.00000006 00000-0 10000-3 0 3386
2 20619 65.1315 318.9114 0024173 210.8319 149.0652 2.13102541 50459
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Kristall
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2 20638 52.9924 10.2894 0012945 196.4196 163.6335 15.07487538354044
Meteor 2-19
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2 20670 82.5448 230.3257 0014642 195.7690 164.3017 13.84128860322217
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2 21006 65.2646 79.8918 0056823 186.6643 173.2534 2.13102802 46048
Glonass 48
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2 21007 65.2622 79.8196 0035018 177.5720 182.4256 2.13101208 46131
Glonass 49
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2 21008 65.2479 79.7574 0009015 267.2746 92.6089 2.13098739 46123
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2 21087 82.9402 214.3561 0034701 159.0024 201.2566 13.74573341289934
RS-12/13
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2 21140 0.8189 78.6025 0003878 121.0899 68.8724 1.00281062 23044
Nadezhda 3
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Glonass 50
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2 21216 64.8704 318.4126 0011906 189.4184 170.5882 2.13103215 43657
Glonass 51
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2 21218 64.8572 318.3811 0008313 296.6211 63.3221 2.13102576 43657
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1 21225U 91027B 96315.81548751 .00002201 00000-0 40342-4 0 4025
2 21225 28.4614 241.5716 0003696 92.3923 267.7120 15.44524021192620
Meteor 3-4
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1 21578U 91050E 96317.25180482 .00000183 00000-0 72784-4 0 9246
2 21578 98.3658 26.7089 0004425 170.1949 189.9323 14.39268075279639
TDRS 5
1 21639U 91054B 96316.64077027 .00000091 00000-0 00000+0 0 1124
2 21639 0.0832 85.9273 0003611 161.1775 220.3047 1.00272621 19345
Meteor 3-5
1 21655U 91056A 96315.84701643 .00000051 00000-0 10000-3 0 9313
2 21655 82.5543 216.8715 0012400 158.5098 201.6546 13.16849453251973
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2 21701 56.9864 236.6326 0005628 108.3355 251.8290 14.96549784282528
DMSP B5D2-6
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2 21798 98.9399 334.2142 0012590 165.9248 194.2271 14.14002922255796
Glonass 53
1 21853U 92005A 96313.29556078 .00000007 00000-0 10000-4 0 1331
2 21853 65.1976 79.4859 0006604 201.8251 158.1328 2.13102315 37198
Glonass 54
1 21854U 92005B 96316.86558076 .00000011 00000-0 00000+0 0 3676
2 21854 65.2038 79.3617 0015280 20.8775 339.1493 2.13103888 37257
Glonass 55
1 21855U 92005C 96314.58820810 .00000006 00000-0 00000+0 0 3508
2 21855 65.2022 79.4384 0008039 197.0638 162.8949 2.13102188 37194
JERS-1
1 21867U 92007A 96317.22436347 .00076875 00000-0 63354-2 0 31
2 21867 97.6753 32.3244 0002151 113.4915 246.6495 14.98684452260032
GPS BIIA-12
1 21890U 92009A 96315.76735719 .00000020 00000-0 00000+0 0 8865
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2 21930 55.6899 343.0806 0025536 188.1156 171.8970 2.00551936 33363
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1 21987U 92031A 96316.24003741 .00000728 00000-0 23566-4 0 5841
2 21987 28.4331 274.1458 0009559 221.1097 138.8777 15.19968871246076
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1 22014U 92039A 96316.51390649 .00000089 00000-0 00000+0 0 7909
2 22014 54.8579 162.7000 0095631 331.9517 27.6095 2.00568981 25362
Glonass 56
1 22056U 92047A 96316.36259069 -.00000006 00000-0 00000+0 0 2812
2 22056 64.7064 318.4195 0006530 265.8756 94.0836 2.13103794 33329
Glonass 57
1 22057U 92047B 96317.12871497 -.00000007 00000-0 00000+0 0 2500
2 22057 64.7110 318.4287 0009145 310.9740 48.9699 2.13103059 33312
Glonass 58
1 22058U 92047C 96317.06813323 -.00000007 00000-0 10000-3 0 1535
2 22058 64.7154 318.4283 0008931 273.2125 86.7103 2.13102661 33360
TOPEX
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2 22076 66.0422 273.5648 0007441 261.8266 98.1905 12.80931156198568
KO-23
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S80/T
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GPS BIIA-17
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TDRS 6
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GPS BIIA-18
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Glonass 59
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Glonass 60
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2 22513 65.2151 79.2408 0007860 189.7424 170.2295 2.13102852 29024
Glonass 61
1 22514U 93010C 96316.81455612 .00000011 00000-0 00000+0 0 9883
2 22514 65.2334 79.2368 0011385 184.0656 175.9090 2.13101951 29030
ASTRO-D
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2 22521 31.1035 203.0654 0056148 193.5343 166.3780 15.03160021204713
UFO F1
1 22563U 93015A 96309.84302912 -.00000189 00000-0 00000+0 0 5356
2 22563 25.0594 286.4034 0010303 261.8182 98.0400 0.99251176 17477
GPS BIIA-19
1 22581U 93017A 96315.53056828 -.00000041 00000-0 10000-3 0 6019
2 22581 55.1678 342.1040 0066066 36.2304 324.2742 2.00575705 26551
GPS BIIA-20
1 22657U 93032A 96316.15899512 -.00000041 00000-0 00000+0 0 7649
2 22657 55.2060 341.9688 0080789 237.3855 121.8859 2.00566205 21896
RADCAL
1 22698U 93041A 96315.38582947 .00000072 00000-0 26308-4 0 5318
2 22698 89.5400 263.7657 0089364 209.1839 150.4344 14.21383365175193
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2 22700 54.1556 222.4864 0054395 2.7462 357.3233 2.00561961 24613
NOAA 13
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2 22739 99.0611 272.2704 0010282 168.5868 191.5532 14.10976929167749
GPS BIIA-22
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Meteor 2-21
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UFO F2
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2 22787 4.0085 327.5834 0004895 234.0746 245.6895 1.00273362 10294
SPOT 3
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2 22823 98.7514 26.5225 0001117 56.1957 303.9323 14.20016054161912
STELLA
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2 22824 98.5691 27.3290 0006108 158.2618 201.8824 14.27105900162763
AO-27
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HEATHSAT
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2 22827 98.5677 28.1407 0009003 145.5180 214.6582 14.27955465162851
KO-25
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2 22828 98.5650 27.8770 0010073 144.8921 215.2925 14.28158138130896
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Meteor 3-6
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TUBSAT-B
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2 23051 0.3207 87.4729 0005276 138.0202 143.4350 1.00262063 16836
MSTI 2
1 23101U 94028A 96315.08231577 .00004687 00000-0 70319-4 0 3721
2 23101 97.0765 146.9913 0011287 133.9055 226.3134 15.55340177141961
STRV-1A
1 23125U 94034B 96315.67225494 .00008028 00000-0 31399-2 0 3456
2 23125 7.0106 174.7851 7234647 186.7607 151.3850 2.32945172 19525
STRV-1B
1 23126U 94034C 96316.99688153 .00001799 00000-0 61794-3 0 3044
```

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2 23126 7.0751 173.5830 7235846 188.5052 141.0472 2.33037007 19607
Nadezhda 4
1 23179U 94041A 96315.88687434 .00000092 00000-0 78961-4 0 2328
2 23179 82.9460 127.8828 0037936 73.7512 286.7813 13.75687312116963
Glonass 65
1 23203U 94050A 96316.61990116 .00000066 00000-0 00000+0 0 3575
2 23203 64.7572 199.1709 0007188 142.6292 217.5205 2.13102296 17544
Glonass 66
1 23204U 94050B 96314.97641429 .00000060 00000-0 00000+0 0 3768
2 23204 64.7432 199.2556 0015191 350.5969 9.4671 2.13102211 17503
Glonass 67
1 23205U 94050C 96316.26656391 .00000066 00000-0 00000+0 0 3606
2 23205 64.7556 199.1918 0001372 304.5508 55.5296 2.13102899 17536
DMSP B5D2-7
1 23233U 94057A 96316.74918408 .00000096 00000-0 74887-4 0 9931
2 23233 98.8089 13.2396 0013264 119.6638 240.5854 14.12750863113663
OKEAN 1-7
1 23317U 94066A 96313.89623905 .00000097 00000-0 11322-4 0 1963
2 23317 82.5412 285.8926 0026202 334.0940 25.8957 14.74052561111852
ELEKTRO
1 23327U 94069A 96316.73083926 -.00000095 00000-0 00000+0 0 2221
2 23327 0.3300 103.5983 0002614 90.3728 196.5734 1.00272808 7488
RESURS 1-3
1 23342U 94074A 96314.89537686 .00000048 00000-0 16069-4 0 6055
2 23342 97.9491 8.3490 0001164 79.6180 280.5157 14.69874240108217
Glonass 68
1 23396U 94076A 96316.11045001 .00000008 00000-0 00000+0 0 3380
2 23396 65.1514 79.2931 0030428 189.4957 170.4463 2.13103808 15375
Glonass 69
1 23397U 94076B 96314.87899372 .00000006 00000-0 00000+0 0 3232
2 23397 65.1401 79.3543 0011141 316.6743 43.2003 2.13101715 15348
Glonass 70
1 23398U 94076C 96313.35496125 .00000007 00000-0 00000+0 0 3437
2 23398 65.1220 79.3706 0002384 263.4068 96.5530 2.13101945 15326
LUCH (Altair-2)
1 23426U 94082A 96316.02965310 -.00000264 00000-0 00000+0 0 4246
2 23426 1.1369 266.0216 0002135 353.3366 256.5398 1.00282860 6979
RS-15
1 23439U 94085A 96313.66935129 -.00000039 00000-0 10000-3 0 1742
2 23439 64.8153 149.4346 0156704 173.2869 187.0201 11.27529174 77079
NOAA 14
1 23455U 94089A 96316.85773581 .00000055 00000-0 54723-4 0 8161
2 23455 98.9605 261.9961 0008959 179.6860 180.4317 14.11623876 96288
Glonass 71
1 23511U 95009A 96316.59776483 -.00000007 00000-0 00000+0 0 2562
2 23511 64.6085 319.0242 0008326 226.9957 132.9605 2.13104014 13111
Glonass 72
1 23512U 95009B 96314.37172610 -.00000003 00000-0 00000+0 0 2644
2 23512 64.5981 319.1139 0007360 303.3569 56.6088 2.13101842 13065
Glonass 73
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1 23513U 95009C 96316.54013372 -.00000007 00000-0 00000+0 0 2807
2 23513 64.6073 319.0503 0014920 209.6308 150.3166 2.13103148 13118
GMS 5
1 23522U 95011B 96309.56782186 -.00000288 00000-0 10000-3 0 1748
2 23522 0.4389 15.3877 0000778 205.2984 167.6718 1.00265189 5860
DMSP B5D2-8
1 23533U 95015A 96316.60719127 .00000057 00000-0 54326-4 0 7437
2 23533 98.8447 317.2030 0007676 5.5915 354.5337 14.12761581 84441
OSC 1
1 23545U 95017A 96316.15561092 .00000372 00000-0 12258-3 0 1776
2 23545 69.9722 189.1115 0013681 327.2570 32.7712 14.45431660 84892
OSC 2
1 23546U 95017B 96317.08961971 .00000257 00000-0 90055-4 0 2113
2 23546 69.9782 187.1148 0013729 318.5999 41.4099 14.45433960 85031
Microlab 1
1 23547U 95017C 96315.71630698 .00000123 00000-0 51781-4 0 1485
2 23547 69.9791 190.0113 0013724 321.3420 38.6727 14.45608491 84840
OFEQ 3
1 23549U 95018A 96314.54488725 .00009145 00000-0 20826-3 0 3659
2 23549 143.3628 36.1759 0213680 285.3913 72.3325 15.19030238 88431
GFZ-1
1 23558U 86017JE 96313.49670201 .00002640 00000-0 34231-4 0 1728
2 23558 51.6518 104.9082 0006594 52.3741 307.7821 15.63098272612573
ERS-2
1 23560U 95021A 96316.82546762 -.00000031 00000-0 46224-5 0 2988
2 23560 98.5431 28.7566 0001065 73.7879 286.3421 14.32250291 81706
Spektr
1 23579U 95024A 96316.98504630 .00023259 00000-0 26146-3 0 4905
2 23579 51.6526 99.0476 0013104 22.6461 337.5753 15.62394200 84533
GOES 9
1 23581U 95025A 96311.28123366 .00000084 00000-0 10000-3 0 2732
2 23581 0.1184 266.7637 0003954 330.4185 135.2938 1.00285200 5359
Helios 1A
1 23605U 95033A 96316.99545161 .00000090 00000-0 26189-4 0 3556
2 23605 98.1326 250.6512 0001611 67.0044 293.1339 14.63819438 72183
UPM SAT 1
1 23606U 95033B 96313.41211338 .00000178 00000-0 40133-4 0 2277
2 23606 98.1134 248.6366 0008992 85.2609 274.9620 14.67304690 71860
CERISE
1 23607U 95033C 96313.37160539 .00000113 00000-0 28781-4 0 1306
2 23607 98.1131 248.4101 0007474 85.8171 274.3887 14.66975830 71876
TDRS 7
1 23613U 95035B 96310.43617787 .00000102 00000-0 00000+0 0 2477
2 23613 0.9705 82.1152 0004403 168.2886 140.7499 1.00283266 4801
Glonass 74
1 23620U 95037A 96314.91626189 .00000060 00000-0 00000+0 0 2002
2 23620 64.8116 199.0993 0018521 165.3011 194.8438 2.13103171 10114
Glonass 75
1 23621U 95037B 96316.97099805 .00000066 00000-0 00000+0 0 2130
2 23621 64.8288 199.0305 0017902 176.6681 183.4435 2.13102458 10154
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Glonass 76
1 23622U 95037C 96316.09055655 .00000066 00000-0 00000+0 0 2162
2 23622 64.8164 199.0621 0036789 164.5430 195.6662 2.13102570 10131
Prognoz-M2
1 23632U 95039A 96313.16734000 -.00001774 00000-0 00000+0 0 894
2 23632 71.6000 248.1560 7929919 324.8280 354.4960 0.26379700 1232
SICH-1
1 23657U 95046A 96313.36707093 .00000051 00000-0 45250-5 0 1218
2 23657 82.5315 67.8481 0026969 304.4226 55.4436 14.73503711 64061
RADARSAT
1 23710U 95059A 96316.06842163 .00000142 00000-0 72025-4 0 2042
2 23710 98.5793 320.6753 0001090 85.5420 274.5885 14.29970927 53238
Glonass 79
1 23734U 95068A 96316.67777744 .00000067 00000-0 00000+0 0 1872
2 23734 64.8215 198.9580 0017925 325.4056 34.5830 2.13102244 7117
Glonass 78
1 23735U 95068B 96316.40539081 .00000067 00000-0 00000+0 0 1829
2 23735 64.8189 198.9531 0006637 209.3437 150.7171 2.13125355 7101
Glonass 77
1 23736U 95068C 96315.03517810 .00000061 00000-0 00000+0 0 1615
2 23736 64.8080 199.0154 0007270 193.0926 166.9777 2.13102233 7078
XTE
1 23757U 95074A 96314.88592170 .00000551 00000-0 17076-4 0 988
2 23757 22.9799 139.9575 0013177 4.3847 355.6757 14.97720831 47335
Polar
1 23802U 96013A 96303.71293937 .00000077 00000-0 00000+0 0 675
2 23802 86.3024 24.9217 6337851 278.0853 22.2341 1.36212000 3395
1996010E
1 23824U 96010E 96312.90783047 .00060339 00000-0 21834-1 0 1299
2 23824 47.5768 213.8441 7294077 63.0246 351.8600 2.25845627 5816
GPS BIIA-25
1 23833U 96019A 96313.98530246 -.00000043 00000-0 00000+0 0 1037
2 23833 54.6542 342.1157 0023707 149.9710 210.2248 2.00564614 4584
Priroda
1 23848U 96023A 96316.98504630 .00023259 00000-0 26146-3 0 1787
2 23848 51.6526 99.0476 0013104 22.6461 337.5753 15.62394200 31624
MSX
1 23851U 96024A 96316.07832574 -.00000047 00000-0 00000+0 0 1253
2 23851 99.3964 298.5148 0010205 141.8856 218.3003 13.97533649 28017
SAX
1 23857U 96027A 96312.19727845 .00001103 00000-0 33930-4 0 418
2 23857 3.9509 153.3822 0014215 258.8095 101.0916 14.91648087 28531
MSTI 3
1 23868U 96031A 96316.59367462 .00000814 00000-0 18046-4 0 787
2 23868 97.1185 144.4920 0011393 5.7637 354.3753 15.46603844 27593
TOMS-EP
1 23940U 96037A 96316.30997614 .00001757 00000-0 81053-4 0 562
2 23940 97.4344 219.9352 0012434 182.1663 177.9533 15.21505737 20006
GPS BIIA-26
1 23953U 96041A 96316.39286299 .00000035 00000-0 00000+0 0 735
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2 23953 55.0805 102.3892 0017441 336.7605 23.1461 2.00564708 2426
Progress M-32
1 24071U 96043A 96316.98504630 .00023259 00000-0 26146-3 0 990
2 24071 51.6526 99.0476 0013104 22.6461 337.5753 15.62394200 16143
ADEOS
1 24277U 96046A 96315.86708514 -.00000044 00000-0 00000+0 0 1035
2 24277 98.6221 30.6831 0002000 82.5411 277.5997 14.27637004 12212
FO-29
1 24278U 96046B 96315.19171147 -.00000055 00000-0 -20893-4 0 330
2 24278 98.5733 19.9571 0352626 33.4836 328.8054 13.52626731 11517
Soyuz TM-24
1 24280U 96047A 96316.98504630 .00023259 00000-0 26146-3 0 828
2 24280 51.6526 99.0476 0013104 22.6461 337.5753 15.62394200 13524
FAST
1 24285U 96049A 96315.59624051 .00001090 00000-0 10584-3 0 324
2 24285 82.9827 140.6577 2208991 18.7246 348.3425 10.81569014 8785
Microsat
1 24291U 96050A 96316.57280912 .00050486 63605-5 31690-3 0 662
2 24291 62.8108 130.2224 0629509 118.4194 248.1818 14.63958659 10861
MO-30
1 24305U 96052B 96314.59217064 .00000204 00000-0 20364-3 0 392
2 24305 82.9343 156.8676 0031468 96.5948 263.8770 13.73085865 8925
GPS BIIA-27
1 24320U 96056A 96311.27221314 -.00000034 00000-0 00000+0 0 368
2 24320 54.6927 282.7159 0046891 96.2127 264.3376 2.00565630 980
FSW-2
1 24634U 96059A 96317.21823508 .00428647 80996-5 28616-3 0 886
2 24634 63.0347 356.0528 0094443 138.0034 222.8400 16.07031275 3694
Molniya 3-47
1 24640U 96060A 96316.59761429 .00000007 00000-0 -29525-2 0 304
2 24640 62.8688 154.6649 7364185 288.3263 9.4885 2.00621627 366
1996060B
1 24641U 96060B 96316.50831581 .00278354 75309-5 53731-3 0 276
2 24641 62.8130 90.4302 0225931 124.6299 237.6431 15.67976208 2821
1996060C
1 24642U 96060C 96316.85235371 .00892318 77429-5 63908-3 0 409
2 24642 62.8021 88.7458 0220663 120.2245 242.0739 15.81011021 2889
1996060D
1 24643U 96060D 96300.17176725 .00029140 00000-0 54458+0 0 31
2 24643 62.8804 157.0390 7404585 288.2435 86.9773 1.96534388 39
1996059C
1 24644U 96059C 96309.34412794 .30092023 75539-5 40968-2 0 16
2 24644 62.8803 27.5661 0238849 94.8971 267.9365 15.88259486 35
SAC-B/HETE
1 24645U 96061A 96314.64246210 .00000781 00000-0 46642-4 0 141
2 24645 37.9770 94.0508 0048753 338.8695 21.0058 15.14753711 754
1996062B
1 24649U 96062B 96317.14078497 .00151092 -29550-5 52287-3 0 98
2 24649 25.3284 100.3042 2562200 290.6029 43.8763 10.48377210 448
1996062D
```

1 24651U 96062D 96314.75819955 .00155251 -29941-5 56491-3 0 37
2 24651 25.3185 108.1818 2564083 277.1275 54.7493 10.47633949 288
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2387. Re: Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-12 00:00:00 UTC
From: dbraun@ichips.intel.com
Message-ID: <56acr3$e1m@news.jf.intel.com>
Source record: 20962

trandall@mhv.net wrote:

: I heard John nearly all day yesterday working stations like crazy. The
: RECIEVE is on 145.200. Val gets on all the time as well.

Does this mean MIR receives on 145.2, or the ground station
receives on 145.2? This sort of ambiguous wording is what started
all this confusion in the first place!!! The original bulletins
from the SAFEX people in Germany had the same problem...

If you are describing sat frequencies, use the terms UPLINK and
DOWNLINK!!! The only time this could be confusing is if the
satellite is sitting at the bottom of the ocean. :-)

Doug Braun
N1OWU

2388. Re: NORAD Two-Line Orbital Element Sets (TLE898)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: Allan Spitzer <aspitzer@mail.bcpl.lib.md.us>
Message-ID: <Pine.SOL.3.95.961113095224.11138C-100000@mail>
Source record: 20821

How can I determine if which satellites are still operational? The information at NORAD and NASA Goddard do not comment on the operational status.

Thanks,

Allan

2389. Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: kevinm@eden.com
Message-ID: <56bbbe$74j@boris.eden.com>
Source record: 20963
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

I have uploaded to Simtel.Net:

http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes

sbfft11.zip Sound Blaster spectral display and filtering

Features:
* Sound Blaster 16 (or 100% compatible) input and output.
* Band widths of 2K, 4K, 8K or 16K Hz.
* Spectral resolutions of 1 Hz to 16 Hz per pixel.
* Display of power spectral density with any of 4 color maps in either
linear or logarithmic scale.
* Define and use as many as to six filters simultaneously -- band pass,
band stop, low pass, and high pass.
* Filters are defined graphically by mouse movement based upon
the displayed spectrum. Once you see a signal, you can
quickly define a pass or stop filter around the signal by clicking
and dragging the mouse.
* Net filter passband is displayed at all times.
* Filters can be selectively enabled and disabled by a single
keystroke.

Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
VESA modes 101, 105, mouse.

Copyrighted Freeware. Uploaded by the author.

Kevin - KW5Q

kevinm@eden.com

$$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
Kevin McWilliams
KW5Q
Applied Mathematician

2390. Sound Blaster Spectral Display & FIltering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: kevinm@eden.com
Message-ID: <56bgio$93j@boris.eden.com>
Source record: 20964
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave

I have uploaded to Simtel.Net:

http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes

sbfft11.zip Sound Blaster spectral display and filtering

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* Display of power spectral density with any of 4 color maps in either
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* Define and use as many as to six filters simultaneously -- band pass,
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* Filters are defined graphically by mouse movement based upon
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* Net filter passband is displayed at all times.
* Filters can be selectively enabled and disabled by a single
keystroke.

Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
VESA modes 101, 105, mouse.

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Kevin - KW5Q

kevinm@eden.com

$$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
Kevin McWilliams
KW5Q
Applied Mathematician

2391. Sound Blaster Spectral Display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: kevinm@eden.com
Message-ID: <56bkem$93j@boris.eden.com>
Source record: 20965
Cross-posted to: rec.radio.amateur.space,rec.radio.shortwave

I have uploaded to Simtel.Net:

http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes

sbfft11.zip Sound Blaster spectral display and filtering

Features:
* Sound Blaster 16 (or 100% compatible) input and output.
* Band widths of 2K, 4K, 8K or 16K Hz.
* Spectral resolutions of 1 Hz to 16 Hz per pixel.
* Display of power spectral density with any of 4 color maps in either
linear or logarithmic scale.
* Define and use as many as to six filters simultaneously -- band pass,
band stop, low pass, and high pass.
* Filters are defined graphically by mouse movement based upon
the displayed spectrum. Once you see a signal, you can
quickly define a pass or stop filter around the signal by clicking
and dragging the mouse.
* Net filter passband is displayed at all times.
* Filters can be selectively enabled and disabled by a single
keystroke.

Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
VESA modes 101, 105, mouse.

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Kevin - KW5Q

kevinm@eden.com

$$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
Kevin McWilliams
KW5Q
Applied Mathematician

2392. Weather satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: cloud78572@aol.com
Message-ID: <19961113063900.BAA16393@ladder01.news.aol.com>
Source record: 20966

Does anyone know of any active weather satellites operating in the 137 Mhz area (other than NOAA12+14,Meteor3-5) that are able to be monitored in New England? Also, has anyone had any luck with the German program WXSAT.EXE in decoding infrared pictures? I get visible light pictures great, but IR looks like hell. Thanks!

2393. Re: Weather satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <56btr3$mko@bbcnews.rd.bbc.co.uk>
Source record: 20967

cloud78572@aol.com wrote:
: Does anyone know of any active weather satellites operating in the 137
: Mhz area (other than NOAA12+14,Meteor3-5) that are able to be monitored in
: New England? Also, has anyone had any luck with the German program
: WXSAT.EXE in decoding infrared pictures? I get visible light pictures
: great, but IR looks like hell. Thanks!

Try http://www.rig.org.uk/index.html for info on frequncies and how to
receive the sats.

Try http://www.drig.com/~johnb/index.html for some pics.

Regards J.

2394. Re: Weather satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <56btte$mko@bbcnews.rd.bbc.co.uk>
Source record: 20968

cloud78572@aol.com wrote:
kOh yeh. To answer you first question you can sometime hear Okean 1-7 or
Sich 1 on 137.4, but usually near Western Russia.

J.

2395. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: tyler@cyberia.com
Message-ID: <56clho$8cp$4@news3.microserve.net>
Source record: 20969
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

This is really getting off topic, but I couldn't resist:
What's the difference between a dead dog on the road and a dead lawer on the road?

There are skid marks in front of the dog!
Tyler

2396. Re: MIR is deaf

Newsgroup: rec.radio.amateur.space
Date: 1996-11-13 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <56clse$2lp@news.mhv.net>
Source record: 20970

In article <56a145$2m8@faatcrl.faa.gov>, Jeff Griffin <griffinj@admin.tc.faa.gov> wrote:
>Mir is there, but it is deaf. I connected about 8 or 10 times
>over the weekend. only to get replys scrambled by the
>interference from 145.790. I got 2 email's from people asking
>me why I connect and don't leave a message. I even tryed
>this morning at 4 somthing AM same result. Maybe if we keep
>the negative posts coming about the frequency change they will
>move it up 10k. That would help alot.
>
>73 Jeff kb2wqm@juno.com (nites and weekends)

I think it's a combo of the APRS on .790 and other stations trying to get
in. I have YET to get into the PBBS in the past 2 years. I am able to get into
the keyboard fairly easily but it's hard to get a quick message acked back. I
think they DO need to move the freqs.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2397. Re: Mir on Voice

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <56e2d0$mjs@news.mhv.net>
Source record: 20822

In article <56acr3$e1m@news.jf.intel.com>, dbraun@ichips.intel.com (Douglas Braun) wrote:
>trandall@mhv.net wrote:
>
>: I heard John nearly all day yesterday working stations like crazy. The
>: RECIEVE is on 145.200. Val gets on all the time as well.
>
>Does this mean MIR receives on 145.2, or the ground station
>receives on 145.2? This sort of ambiguous wording is what started
>all this confusion in the first place!!! The original bulletins
>from the SAFEX people in Germany had the same problem...
>
>If you are describing sat frequencies, use the terms UPLINK and
>DOWNLINK!!! The only time this could be confusing is if the
>satellite is sitting at the bottom of the ocean. :-)
>
>Doug Braun
>N1OWU

I originally used DOWNLINK/UPLINK but that confused a person or 2.

OUR UPLINK IS 145.800
OUR DOWNLINK IS 145.200

To those still confused WE LISTEN on 145.200 and TRANSMIT on 145.800

73,
Tom

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2398. Re: FO-29

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: elewis@dsp.com
Message-ID: <328b4dd6.779870@news.wco.com>
Source record: 20823

boyer@rd.bbc.co.uk (John Boyer) wrote:

>Edward Lewis (elewis@dsp.com) wrote:
>: is the FO-29 digitalker on 435.910 fm.
>
>If by FO-29 you mean jas-2 then yes, but it doesn't appear to be on very
>often. I've managed to catch it once, and all I heard was a computerised
>oriental sounding voice anouncing Japanese Amateur Satellite 2.
>
>
>J.
>
According to the JARL news, JAS-2 digi-talker would be operated
between November 9 and 13. I monitored the frequency a few times, but
I heard nothing. They were offering qsl cards for reports. the
digi-talker was to broadcast in Japanese than English

2399. Re: MIR is deaf

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: elewis@dsp.com
Message-ID: <328b89cc.335028@news.wco.com>
Source record: 20824

trandall@mhv.net wrote:

>In article <56a145$2m8@faatcrl.faa.gov>, Jeff Griffin <griffinj@admin.tc.faa.gov> wrote:
>>Mir is there, but it is deaf. I connected about 8 or 10 times
>>over the weekend. only to get replys scrambled by the
>>interference from 145.790. I got 2 email's from people asking
>>me why I connect and don't leave a message. I even tryed
>>this morning at 4 somthing AM same result. Maybe if we keep
>>the negative posts coming about the frequency change they will
>>move it up 10k. That would help alot.
>>
>>73 Jeff kb2wqm@juno.com (nites and weekends)
>
> I think it's a combo of the APRS on .790 and other stations trying to get
>in. I have YET to get into the PBBS in the past 2 years. I am able to get into
>the keyboard fairly easily but it's hard to get a quick message acked back. I
>think they DO need to move the freqs.
>
>Tom
>
>
> Tom Randall Amateur Radio - KB2SMS
> trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
> Member: AAVSO Solar Division
> "Hoof hearted, Ice melted!"
>
> Opinions herein are mine and may not be that of MHV.NET!
I haven't had any trouble connecting to the mir mailbox. I have
connected 4 times in the last week , and posted one message. I am
using a RS HTX-202 a 20 watt amp and a 3 el yagi. Trying at night or
early morning may help. also use passe's that are higher in elevation
so that you have more time to work mir. The biggest problem I have had
is that there are usually 3 or 4 stations trying to connect . I watch
my screen and as soon as one operator completes his connection I
start sending. 73 and good luck

2400. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: Dave Booth <booth@pactitle.com>
Message-ID: <328BAB18.446B@pactitle.com>
Source record: 20825
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

Sounds good!
http://www.geocities.com/Hollywood/5860
kc6wfs

KW5Q wrote:
>
> I have uploaded to Simtel.Net:
>
> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
>
> sbfft11.zip Sound Blaster spectral display and filtering
>
> Features:
> * Sound Blaster 16 (or 100% compatible) input and output.
> * Band widths of 2K, 4K, 8K or 16K Hz.
> * Spectral resolutions of 1 Hz to 16 Hz per pixel.
> * Display of power spectral density with any of 4 color maps in either
> linear or logarithmic scale.
> * Define and use as many as to six filters simultaneously -- band pass,
> band stop, low pass, and high pass.
> * Filters are defined graphically by mouse movement based upon
> the displayed spectrum. Once you see a signal, you can
> quickly define a pass or stop filter around the signal by clicking
> and dragging the mouse.
> * Net filter passband is displayed at all times.
> * Filters can be selectively enabled and disabled by a single
> keystroke.
>
> Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
> VESA modes 101, 105, mouse.
>
> Copyrighted Freeware. Uploaded by the author.
>
> Kevin - KW5Q
>
> kevinm@eden.com
>
> $$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
> Kevin McWilliams

> KW5Q
> Applied Mathematician

2401. Re: mir uhf heard also

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: Rod Adkins <rod@mail.border.com>
Message-ID: <328BEFB0.BC@mail.border.com>
Source record: 20826

Jeff Griffin wrote:
>
> I hear the UHF repeater also.
> Jeff kb2wqm@juno.com

Would someone be kind enough to post the UHF frequencies for packet &
voice ??

TIA, Rod, VE3INE

2402. FS:PacComm Eqpt.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: "Robert D." <robert@dewdropinn.com>
Message-ID: <328BF2A6.2CEC@dewdropinn.com>
Source record: 20827

FOR SALE. PacComm Narrowband DFM TNC and a PacComm PSK-1 modem.
Bought new from Bob Myers Communications one year ago. Never used.
Paid $547 for them, am selling them for half price - $275 firm.
Cannot answer any technicakl questions about them. Didn't have time to
learn them! Mint condition. In original boxes with manuals, cables
etc. Sorry, no trades. Must sell both. Add shipping and they're
yours. 73 de Robert, KF9ZK
P.S. E-mail only please.

2403. FS:SatGear

Newsgroup: rec.radio.amateur.space
Date: 1996-11-14 00:00:00 UTC
From: "Robert D." <robert@dewdropinn.com>
Message-ID: <328BF5F1.2B7@dewdropinn.com>
Source record: 20828

```
FOR SALE: Complete Mode S setup.
- Majara dish (Mode S) (exc. cond.) was $210,...$99 firm
- SHF downconverter, preamplifier. was $393,...$249 firm
- SASI Frequency manager (cable) was $389,...$249 firm
and Nova software to run it.
- PacComm Narrowband DFM TNC was $547,...$275 firm
- PacComm PSK-1 satellite modem (incl w/above)
- - - - - - - - - or everything for $799
SHIPPING INCLUDED!
Can't answer any technical questions - didn't learn them.
Sorry, no trades.
All equipment in excellent condition. Works fine. Just giving up
satellite "work".
Please reply via e-mail only ... 73 de KF9ZK
```

2404. Ham Radio.FAQ

Newsgroup: rec.radio.amateur.space
Date: 1996-11-15 00:00:00 UTC
From: john@wd1v.mv.com
Message-ID: <john-1511960625090001@wd1v.mv.com>
Source record: 20829

Announcing NEW Ham Radio.FAQ

This file started as a regular USENET posting called "rec.radio.amateur
.misc Frequently Asked Questions".

The evolving file was distributed far and wide thanks to passionate
contributors. The file was abandoned in 1994 and has been resurrected
now on the WWW for currency and convenience.

Ham Radio.FAQ contains 3 chapters and many, many links to radio
related sites!

1 - Introduction to the Ham Radio.FAQ
2 - Amateur Radio Organizations, Services, and Data Sources
3 - Amateur Radio Advanced and Technical Questions

Please provide a copy of the Ham Radio.FAQ to any new or soon-to-be Hams
that you know or share with them the URL to this site:

http://www.mv.com/ipusers/wd1v

John D. Seney
http://www.mv.com/ipusers/wd1v

2405. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-15 00:00:00 UTC
From: nrhblack <nrhblack@condate.com>
Message-ID: <01bbd345$d788ede0$46d6e9ce@nrhblack.mpath.com>
Source record: 20830
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

R. L. Measures <measures@mail.vcnet.com> wrote in article
<measures-ya023180001211961704110001@news.vcnet.com>...
> In article <55remb$9ik_002@ppp22.arcos.org>, tunedin@arcos.org (.) wrote:
> Failing that, I am going to sue
> > >you in the District of Columbia for libel.
>
> In California, it is against the law to threaten to sue.
>
> --
> --Rich-- ag6k, 805.386.3734
>

hmmm, interesting, I'm not finding that!
California's laws are in the hierarchy starting at
http://www.leginfo.ca.gov/calaw.html
Perhaps I have overlooked the relevant code?

Henry Black G4NOC

2406. Re: mir uhf heard also

Newsgroup: rec.radio.amateur.space
Date: 1996-11-15 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <328D0031.6D85@wco.com>
Source record: 20831

Rod Adkins wrote:
>
> Jeff Griffin wrote:
> >
> > I hear the UHF repeater also.
> > Jeff kb2wqm@juno.com
>
> Would someone be kind enough to post the UHF frequencies for packet &
> voice ??
>
> TIA, Rod, VE3INE

rod,uplink 435.750 downlink 437.950 pl 141.3 voice

i have worked do33 and dn40 from cm88 on uhf mir,good luck
73 steve

2407. Re: FO-29

Newsgroup: rec.radio.amateur.space
Date: 1996-11-15 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <56hg3m$5fp@bbcnews.rd.bbc.co.uk>
Source record: 20832

Edward Lewis (elewis@dsp.com) wrote:
: boyer@rd.bbc.co.uk (John Boyer) wrote:
:
: >Edward Lewis (elewis@dsp.com) wrote:
: >: is the FO-29 digitalker on 435.910 fm.
: >
: >If by FO-29 you mean jas-2 then yes, but it doesn't appear to be on very
: >often. I've managed to catch it once, and all I heard was a computerised
: >oriental sounding voice anouncing Japanese Amateur Satellite 2.
: >
: >
: >J.
: >
: According to the JARL news, JAS-2 digi-talker would be operated
: between November 9 and 13. I monitored the frequency a few times, but
: I heard nothing. They were offering qsl cards for reports. the
: digi-talker was to broadcast in Japanese than English

--
It's due at 11:05 today. I'll listen out for it.
J.

2408. HELP!!!!! w/ WinOrb & KEPS

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: seven@datasync.com
Message-ID: <56juud$lf6@osh2.datasync.com>
Source record: 20833

Ok, I am using WWinOrb for a tracker and I have most of the KEP data down. The only questions that remain are:
What is the EPHEMERIS?
What is the 1 DERIV ?
What is the 2 DERIV ?
hat is the BSTAR ?
Is the EPOCH REV: the orbit number ?
Where does the CHECKSUM go if anywhere ?

I have everything else down pat from the obvious tittles in the AMSAT set of KEPS. But these pieces have me befuddled a wee bit. As is I get pretty good tracks. The MIR station comes up within 30 seconds of projected AOS and seems to follow the predicted track. I just wanna have this set perfect So I KNOW FER SURE when she is directly overhead so that when I try a connect I don't knock them guys up north off unless of course she is overhead :) In which case they should wait their turn :)

Peace and Joy in this holiday season!

KC5WCP
73's

2409. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: "Phil, AC6LS" <ac6ls@amsat.org>
Message-ID: <328D81DE.3623@amsat.org>
Source record: 20834
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

KW5Q wrote:
>
> I have uploaded to Simtel.Net:
> sbfft11.zip Sound Blaster spectral display and filtering
> Copyrighted Freeware. Uploaded by the author.
>
> $$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
> Kevin McWilliams
> KW5Q
> Applied Mathematician

thanks for the info, I think I will give it a try....

73 de Phil x^n + y^n = z^n AC6LS
licensed HP48 user

2410. Amplifier for FT-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: faisal@kuwait.net
Message-ID: <848147366.2231@dejanews.com>
Source record: 20835

Thanks for reading my message,

i'm looking for amplifier&preamp to use with FT-736R to work

satellite and dx station.

Any info would be appreciated

73,de FAISAL 9K2CA

This article was posted to Usenet via the Posting Service at Deja News:
http://www.dejanews.com/ [Search, Post, and Read Usenet News]

2411. Test

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: ve1rj@ns.sympatico.ca
Message-ID: <328e0c85.1652620@news1.on.sympatico.ca>
Source record: 20836

Just a test. Please don't responed

McFadden's Computer Care
Phone: (902)497-3070
Internet: ve1rj@ns.sympatico.ca
WWW: http://www3.ns.sympatico.ca/ve1rj

2412. ARLK084 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk084.1996@arrl.org>
Source record: 20837
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK084
ARLK084 Keplerian data

ZCZC SK84
QST de W1AW
Keplerian Bulletin 84 ARLK084
From ARRL Headquarters
Newington, CT November 16, 1996
To all radio amateurs

SB KEP ARL ARLK084
ARLK084 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96320.26125203 .00000002 00000-0 -14509-4 0 2849
2 18129 82.9258 36.8671 0013190 93.0145 267.2515 13.72370880470899
UO-11
1 14781U 84021B 96319.00468424 .00000095 00000-0 23962-4 0 09318
2 14781 97.8120 303.1681 0011689 336.5252 23.5420 14.69496740679652
RS-12/13
1 21089U 91007A 96319.18994023 .00000023 00000-0 81172-5 0 09394
2 21089 82.9204 78.1000 0028534 173.7132 186.4383 13.74074626289630
AO-13
1 19216U 88051B 96320.33780379 .00741161 35115-4 52368-3 0 3340
2 19216 57.0400 77.8031 7261164 56.9410 1.9799 2.38346860 33073
UO-14
1 20437U 90005B 96319.14303773 .00000004 00000-0 18126-4 0 02298
2 20437 98.5358 39.2898 0011345 117.3489 242.8850 14.29937793355480
RS-15
1 23439U 94085A 96318.99096705 -.00000039 00000-0 10000-3 0 01853
2 23439 64.8132 140.8275 0156293 172.3453 187.9908 11.27529189077679
AO-16
1 20439U 90005D 96319.79495163 -.00000013 00000-0 11635-4 0 226
2 20439 98.5506 42.4207 0012000 118.7155 241.5235 14.29989472355597
```

```
DO-17
1 20440U 90005E 96319.73228259 .00000009 00000-0 20023-4 0 238
2 20440 98.5550 43.0837 0011984 116.5727 243.6685 14.30131815355612
WO-18
1 20441U 90005F 96320.28508565 .00000016 00000-0 23062-4 0 270
2 20441 98.5540 43.5493 0012456 115.9582 244.2884 14.30100899355696
LO-19
1 20442U 90005G 96319.14994684 -.00000002 00000-0 16115-4 0 00328
2 20442 98.5565 42.9947 0012573 117.1152 243.1314 14.30211647355553
FO-20
1 20480U 90013C 96319.08032374 -.00000019 00000-0 23866-4 0 09330
2 20480 99.0233 315.4175 0541346 144.7391 219.0805 12.83235163317112
AO-21
1 21087U 91006A 96319.17684822 .00000094 00000-0 82657-4 0 07713
2 21087 82.9409 210.6933 0035305 145.5083 214.8374 13.74573776290615
UO-22
1 21575U 91050B 96319.23803044 .00000009 00000-0 17183-4 0 7291
2 21575 98.3350 21.0298 0007506 171.1611 188.9709 14.37043589279619
KO-23
1 22077U 92052B 96319.85401342 -.00000037 00000-0 10000-3 0 6195
2 22077 66.0775 234.0000 0015223 261.6293 98.2993 12.86298387200187
KO-25
1 22828U 93061F 96319.19374470 .00000012 00000-0 22364-4 0 4926
2 22828 98.5648 32.2068 0010320 131.7527 228.4539 14.28158383131525
IO-26
1 22826U 93061D 96320.22926176 .00000011 00000-0 21923-4 0 5139
2 22826 98.5701 33.1557 0009154 144.5543 215.6244 14.27818003163559
AO-27
1 22825U 93061C 96319.19322277 -.00000028 00000-0 62255-5 0 05283
2 22825 98.5688 31.9411 0008639 146.3168 213.8567 14.27708632163393
FO-29
1 24278U 96046B 96319.85164414 -.00000129 00000-0 -95700-4 0 359
2 24278 98.5731 23.9966 0352450 21.4520 340.0982 13.52625543 12146
Mir
1 16609U 86017A 96320.82280101 .00004420 00000-0 54712-4 0 7997
2 16609 51.6525 79.6856 0013490 35.0554 325.1324 15.62384423613703

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
November 19, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2413. Trackbox updater, where ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: Tomas Orzaez <tom@redestb.es>
Message-ID: <56lh0k$3ls$2@diana.ibernet.es>
Source record: 20838

Could anybody tell me where can i find TBU on internet ?
Thanks ..

2414. Trackbox updater, where ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: Tomas Orzaez <tom@redestb.es>
Message-ID: <56lh1h$3ls$3@diana.ibernet.es>
Source record: 20839

Could anybody tell me where can i find TBU on internet ?
Thanks ..

2415. Re: meteosat

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: Tomas Orzaez <tom@redestb.es>
Message-ID: <56lhbq$3ls$6@diana.ibernet.es>
Source record: 20840

No answer ?

2416. Trackbox ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: Tomas Orzaez <tom@redestb.es>
Message-ID: <56lh7l$3ls$5@diana.ibernet.es>
Source record: 20841

Can anybody tell me where can i find the latest TB software ?
TNX ..

2417. Trackbox ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: Tomas Orzaez <tom@redestb.es>
Message-ID: <56lh6q$3ls$4@diana.ibernet.es>
Source record: 20842

Can anybody tell me where can i find the latest TB software ?
TNX ..

2418. Cybersched your next satellite/DX contact

Newsgroup: rec.radio.amateur.space
Date: 1996-11-16 00:00:00 UTC
From: wb6siv@telis.org
Message-ID: <wb6siv-1611961858390001@host35.cyberg8t.com>
Source record: 20843

By combining the benefits of the World Wide Web and E-mail, you can use the internet to set up schedules to contact hard to find hams all over the world.

How can Cyberscheds help me?

Are you in need of a single state to qualify for the WAS Award? Do you need one more country to qualify for DXCC? Are a county hunter, looking for a few allusive counties? Are you into QRP, and trying to reach a DXCC? Then Cybersched can be a great benefit to your ham radio operations.

DX stations will also find that by establishing prearranged schedules, they can avoid the pile-up mania that makes working the states anything but enjoyable.
Using the same procedure one would use to work the Space Shuttle, you can now (thanks to the World Wide Web) work DX and stateside stations in an orderly and productive way.

Visit http://www.sarrio.com and estabish your own cybersched

*********BELOW IS AN EXAMPLE OF A CYBERSCHED POST FROM MY WEB PAGE**********

Station: EI8ESB

Name: Robbie
QTH: Ireland
Mode: Satellite Comments: I would like any skeds on either RS10/11 or RS15 on SSB up on
2 down on 10Mtrs.I am available most evenings and e-mail me for details.
Regards Robbie...
Post Date: November 10,1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2419. Use for TV Dish?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: Cajun 'Net Crusier <cajuncru@sprynet.com>
Message-ID: <01bbd43a$8907c4c0$abcaaec7@compuserve.com>
Source record: 20844

I have a satlite dish for my TV (the real big kind, not the new Digital ones). Can I use it at all for Ham radio? It would be nice since it is motorized and I have very very little money and sat communications sounds fun.

Please EMAIL responses to me.
73!

2420. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: msimon@rworld.com
Message-ID: <56mg3n$c3d@kirin.wwa.com>
Source record: 20845
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

I would say:

I am sorry I stated your apparent conflict of interest as
fact.

Simon

---

tunedin@arcos.org (.) wrote:

>In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> "James S. Kaplan" <kg7fu@combined.com> wrote:
>>ARRL lawyer to sue member
>>
>>The following is a copy of a message I received today from
>>ARRL General Counsel Christopher D. Imlay N3AKD:
>>
>>
>>To: James S. Kaplan, KG7FU
>>Copies: Mary Lou Brown, NM7N
>> Terry Baun
>> John Poray
>>Date: July 16, 1996
>>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
>>**
>>
>> Jim, I have just finished reading your article in the July,
>>1996 Water Cooled Newsletter, page 6. In it, you argue that two of
>>my clients, the American Radio Relay League, Inc. and the Society
>>of Broadcast Engineers, Inc. should cooperate in certain government
>>relations projects, specifically spectrum protection. You note that
>>I serve as the General Counsel for both organizations. You then
>>jump from that argument to the following, which I quote:
>>
>> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
>> perhaps both ARRL and SBE should be seeking more
>> effective counsel. No offense Chris, but we have work to
>> do. We should not only be sending a message to the FCC
>> and Congress, but to other radio industries.
>>
>> (emphasis in original)
>>
>>It is not useful for me to educate you on the subject of your

>>article to correct the errors in it, and I do not intend to do so.
>>What I do intend, however, is for you to print a retraction, in
>>unambiguous terms, in a form acceptable to me, and to furnish to
>>me, in writing, an assurance that such will be printed in the next
>>Chapter Newsletter for Chapter 124. Failing that, I am going to sue
>>you in the District of Columbia for libel.
>>
>> I have no intention of allowing you to falsely allege that I
>>have a conflict of interest in representing two of my best clients,
>>especially in an SBE publication. You are not entitled to damage my
>>reputation as a lawyer, which you have done in your article, or to
>>infer (without any basis at all) that I have violated the canons of
>>ethics governing attorneys, by which I govern my actions.
>>
>> I will await your response.
>>
>>Chris Imlay, N3AKD
>>
>Great response! People need to express their thoughts and opinions without the threat
>of legal action!

>Dave
>tunedin@arcos.org

In the end people get the government they deserve.

Read "The Weapon Shops of Isher" by A.E. vanVogt

Simon

2421. Wierd Comet-Hale-BOPP Stuff going on...

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: rmra@inconnect.com
Message-ID: <56neta$60c@news.inconnect.com>
Source record: 20846

A chunk or Piece of Comet Hale-Bopp was seen flying off on NOV 14th and photgraphed through several astronomers. Search the WEB for the split piks and the WIERD thing is that if it were an explosion the piece would have kept moving away from the blast point at a regular RATE of SPEED...

The OBJECT is now trailing and MATCHING the speed of HALE-BOPP

See HALE-BOPP pages for more info...

Art Bell pages also have the same piks on it.

Just thought other Spacenet Hams might wanna know..

2422. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: Jsapyta@getnet.com
Message-ID: <328e8f2f.3005971@news.getnet.com>
Source record: 20847

On Tue, 05 Nov 96 12:31:36 GMT, trandall@mhv.net wrote:

>In article <19961103.131559.6871.0.doslover@juno.com>, doslover@juno.COM (Jason K Baack)
wrote:
>>Greetings all..
>>I would love to get this whole freq debate straight.
>>
>>I was under the impression that the NEW frequencies for two meters were
>>the following:
>> packet 145.800
>>
>> voice 145.200 UP
>> 145.800 DN (therefore I would hear
>> MIR HERE..)
>>
>>However, today @ 18:08 (11/3/96) I heard John (KC5PZQ) on the 145.200
>>frequency handling qso's (which should be OUR up freq) after he was on
>>the 145.800 frequency (our correct down) telling EVERYONE to change to
>>145.200 up and 145.800 down.
>>
>>What is going on? And what will the correct frequency pattern (up / down
>>) be..
>>
>>Jason N1RWY
>>Amsat # 31356 "thoroughly confused...."
>
> Well Jason that makes 2 of us! Although Dave (N1PPP) said that 145.200 is
>the downlink a day or 2 ago. I heard John yesterday on 145.200 .....
>The Mir crew said the opposite a few days before the change was made.....
>For now I'll stay with the .200 downlink until this is cleared up .
>
>Tom
>
>
> Tom Randall Amateur Radio - KB2SMS
> trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
> Member: AAVSO Solar Division
>
> Opinions herein are mine and may not be that of MHV.NET!

Its 145.8 UP and 145.2 down. I made a contact with John (KC5TZQ) this
am and it worked. Okay..

John N7XLQ

2423. What's up with NOAA-14?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: cloud78572@aol.com
Message-ID: <19961117214600.QAA13186@ladder01.news.aol.com>
Source record: 20848

I was receiving NOAA-14 today (11-17-96) at 17:58 utc in the New England area,and the signal sounded a little strange. Instead of the usual ring-ring-ring sound, it was more like buzz-buzz-buzz. When I looked at the visible light picture, it was normal except that it had 30 vertical static bars across it.The IR was the same. Looking at these bars, it would appear that the transmitter was turning on and off 250 times per second while it was sending it's pictures. Is the satellite malfunctioning? It's not my radio,or 60 hz hum.The satellite was working fine yesterday.

2424. Re: Mars 96 to hit Australia at 8:00 PM EST - tonight!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: thomsona@netcom.com
Message-ID: <thomsonaE11Gvr.96C@netcom.com>
Source record: 20849
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In article <kcowing-17119618285700001@jobrien-ppp.clark.net> kcowing@reston.com (Keith Cowing) writes:
>Heads up - and get those camcorders running!
>
>CNN broadcast a report at 6:00 PM EST, with some commentary from Pres.
>Clinton in Hawaii, stating that the Mars 96 probe will impact in east
>central Australia at 8:00 PM EST tonight. National Security Agency
>sources were also mentioned.

If NSA is contributing, then the probe has sent and may still be sending signals. Amateur SIGINTers to the task!

And yes, this is a very sad event for exploration of the Solar System.

2425. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-17 00:00:00 UTC
From: Tom <tomc@tiac.net>
Message-ID: <328FF831.50A@tiac.net>
Source record: 20850
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

M Simon wrote:
>
> I would say:
>
> I am sorry I stated your apparent conflict of interest as
> fact.
>
> Simon
>
> ----------
>
> tunedin@arcos.org (.) wrote:
>
> >In article <01bb739f.8e9f00c0$7f8260ce@surf.rio.com>,
> > "James S. Kaplan" <kg7fu@combined.com> wrote:
> >>ARRL lawyer to sue member
> >>
> >>The following is a copy of a message I received today from
> >>ARRL General Counsel Christopher D. Imlay N3AKD:
> >>
> >>
> >>To: James S. Kaplan, KG7FU
> >>Copies: Mary Lou Brown, NM7N
> >> Terry Baun
> >> John Poray
> >>Date: July 16, 1996
> >>Re: Your article, SBE Chapter 124 Newsletter, July, 1996
> >>**********
> >>
> >> Jim, I have just finished reading your article in the July,
> >>1996 Water Cooled Newsletter, page 6. In it, you argue that two of
> >>my clients, the American Radio Relay League, Inc. and the Society
> >>of Broadcast Engineers, Inc. should cooperate in certain government
> >>relations projects, specifically spectrum protection. You note that
> >>I serve as the General Counsel for both organizations. You then
> >>jump from that argument to the following, which I quote:
> >>
> >> If Mr. Imlay can't resolve HIS OWN conflicts of interest,
> >> perhaps both ARRL and SBE should be seeking more
> >> effective counsel. No offense Chris, but we have work to
> >> do. We should not only be sending a message to the FCC
> >> and Congress, but to other radio industries.

> >>
> >> (emphasis in original)
> >>
> >>It is not useful for me to educate you on the subject of your
> >>article to correct the errors in it, and I do not intend to do so.
> >>What I do intend, however, is for you to print a retraction, in
> >>unambiguous terms, in a form acceptable to me, and to furnish to
> >>me, in writing, an assurance that such will be printed in the next
> >>Chapter Newsletter for Chapter 124. Failing that, I am going to sue
> >>you in the District of Columbia for libel.
> >>
> >> I have no intention of allowing you to falsely allege that I
> >>have a conflict of interest in representing two of my best clients,
> >>especially in an SBE publication. You are not entitled to damage my
> >>reputation as a lawyer, which you have done in your article, or to
> >>infer (without any basis at all) that I have violated the canons of
> >>ethics governing attorneys, by which I govern my actions.
> >>
> >> I will await your response.
> >>
> >>Chris Imlay, N3AKD
> >>
> >Great response! People need to express their thoughts and opinions without the threat
> >of legal action!
>
> >Dave
> >tunedin@arcos.org
>
> In the end people get the government they deserve.
>
> Read "The Weapon Shops of Isher" by A.E. vanVogt
>
> SimonI respectfully disagree. Chris was right to defend his professional
reputation, even if the threat to it was from someone who obviously
lacked any understanding about the ethical rules Chris was mentioning.
As for the threat of legal action..."if you don't want to run with the
big dawgs, stay on the porch."

BTW, if you want to "tweak" someone, please do it to someone other than
those trying so hard to defend our favorite radio service from those who
would like to end it.

73 from WA1NVS

2426. Re: Mars 96 to hit Australia at 8:00 PM EST - tonight!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: carol1@apple.com
Message-ID: <carol1-1711961643020001@17.219.103.44>
Source record: 20851
Cross-posted to: sci.space.shuttle,rec.radio.amateur.space

In article <thomsonaE11Gvr.96C@netcom.com>, thomsona@netcom.com (Allen Thomson) wrote:

> In article <kcowing-1711961828570001@jobrien-ppp.clark.net> kcowing@reston.com (Keith Cowing) writes:
> >CNN broadcast a report at 6:00 PM EST, with some commentary from Pres.
> >Clinton in Hawaii, stating that the Mars 96 probe will impact in east
> >central Australia at 8:00 PM EST tonight. National Security Agency
> >sources were also mentioned.
>
> If NSA is contributing, then the probe has sent and may still be
> sending signals. Amateur SIGINTers to the task!

Sheesh. NASA sources were mentioned, _NOT_ NSA. They sound similar, but do have different missions.

Gee we've made this much more complex than it has to be.

(Of course I could be an operative who was told to say that....)

--
Andrew Carol "Could be worse. Could be raining."
carol1@apple.com carol@woz.org

2427. WHO has WISP working with IC820?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <328FDDB8.387F@iglou.com>
Source record: 20852

I have been through quite a few pieces of equipment trying to get QRV on the 9600 baud satellites. I have an Icom 820H and a KC Tracker/tuner. I have an AEA DSP232 but am going to return it to the shop, it is horrible. I HAD a DSP2232, but though it was overkill, so before I got ready for pacsats, I sold it. ANY SUGGESTIONS ON THE TNC to get for this? Im considering the Paccomm NB96, the Kantronics 9612, the AEA PK96.
I want to hear from someone who actually has one running, hi hi.

Charlie KB8BWE
rubenc@iglou.com

2428. SAT Software where??????

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: mdim@intranet.GR
Message-ID: <9611181134.AA14684@lotos>
Source record: 20853

Dear Satellite-Tracking -Fan's

I am looking for Sat. Tracking Shareware sites in WWW since I want
to buy some software.
So far I 've downloaded some sat.trac.software from the "logsat"
site and I would like to compare it with other before I buy it.

Does NASA has any site in WWW for such software???

I am basically using Instant Track but Christmas is around the corner so
I would like to buy a gift(software) to my self....

Thank you in advance
73 SV1CVY Michael
Electrical Engineer
email mdim@intranet.gr

2429. Satellite Tracking for 80186 with CGA?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: davids@mediamachine.com
Message-ID: <davids-ya023180001811960602100001@news.iquest.net>
Source record: 20854

I'm looking for the best satellite tracking program for my HP palmtop. It is an MS-DOS machine with an 80186 and a CGA display. Does anyone have any suggestions?

-David N9PGH

2430. Re: WHO has WISP working with IC820?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bbd559$c7efae80$21ecbdcc@rsmith>
Source record: 20855

Have a 820 and Wisp Charlie but using FODtrack as the radio interface as I have no directional antennas - Sorry can't help you with the KC setup.

As for TNC - I have a DSP2232 right now but have used the AEA unit (bad results) and an MFJ 1270C with the MFJ 9600 bd modem - actually have as good of throughput as the DSP2232 or DSP-93 I have had as well. (Secret: PACCOMM actually makes the G3RUH licensed modems for MFJ - so you are getting the real deal.) AEA does some sort of reverse engineering on the signal - guys on this group swear by them but I find for the same money I would rather get the real deal. PLUS the MFJ has a TAPR disconnect header so you can add other modems in the future - the AEA PK-96 units do not.

PACCOMM has all of the same things as the MFJ, but a bit more expensive.

Good luck.

Charlie Rubenstein <rubenc@iglou.com> wrote in article <328FDDB8.387F@iglou.com>...
I have been through quite a few pieces of equipment trying to get QRV on the 9600 baud
satellites. I have an Icom 820H and a KC Tracker/tuner. I have an AEA DSP232 but am
going to return it to the shop, it is horrible. I HAD a DSP2232, but though it was
overkill, so before I got ready for pacsats, I sold it. ANY SUGGESTIONS ON THE TNC to
get for this? Im considering the Paccomm NB96, the Kantronics 9612, the AEA PK96.
I want to hear from someone who actually has one running, hi hi.

Charlie KB8BWE
rubenc@iglou.com

2431. Re: Wierd Comet-Hale-BOPP Stuff going on...

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <56q6be$735@news.mhv.net>
Source record: 20856

In article <56neta$60c@news.inconnect.com>, rmra@inconnect.com (KB7YJJ) wrote:
>A chunk or Piece of Comet Hale-Bopp was seen flying off on
>NOV 14th and photgraphed through several astronomers. Search
>the WEB for the split piks and the WIERD thing is that if it
>were an explosion the piece would have kept moving away from
>the blast point at a regular RATE of SPEED...
>
>The OBJECT is now trailing and MATCHING the speed of
>HALE-BOPP
>
>See HALE-BOPP pages for more info...
>
>Art Bell pages also have the same piks on it.
>
>Just thought other Spacenet Hams might wanna know..

The object is a STAR. An SAO named star. Comets do break apart from time
to time and the pieces generally stay with the main nucleus by the way.
Nothing wierd about this case....

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2432. Re: SAT Software where??????

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <56q6e9$735@news.mhv.net>
Source record: 20857

In article <9611181134.AA14684@lotos>, mdim@intranet.GR (Mixalis Dimitrakakis) wrote:
>
>
> Dear Satellite-Tracking -Fan's
>
>
>I am looking for Sat. Tracking Shareware sites in WWW since I want
>to buy some software.
>So far I 've downloaded some sat.trac.software from the "logsat"
>site and I would like to compare it with other before I buy it.
>
>Does NASA has any site in WWW for such software???
>
>I am basically using Instant Track but Christmas is around the corner so
>I would like to buy a gift(software) to my self....
>
>Thank you in advance
>73 SV1CVY Michael
>Electrical Engineer
>email mdim@intranet.gr

DO a search for STSORBIT PLUS. Nasa's spacelink site has it.....Excellent
program!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2433. ham page

Newsgroup: rec.radio.amateur.space
Date: 1996-11-18 00:00:00 UTC
From: John Fleenor <johnf@cyberramp.net>
Message-ID: <32913AB6.4FA8@cyberramp.net>
Source record: 20858

http://www.cyberramp.net/~johnf

2434. Re: SAT Software where??????

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: "Timothy S. Zibrat" <timmy_z@nauticom.net>
Message-ID: <01bbd5bc$4c391d40$2f7fabcc@tower>
Source record: 20859

Mixalis Dimitrakakis <mdim@intranet.GR> wrote in article
<9611181134.AA14684@lotos>...
>
>
> Dear Satellite-Tracking -Fan's
>
>
> I am looking for Sat. Tracking Shareware sites in WWW since I want
> to buy some software.
> So far I 've downloaded some sat.trac.software from the "logsat"
> site and I would like to compare it with other before I buy it.
>
> Does NASA has any site in WWW for such software???
>
> I am basically using Instant Track but Christmas is around the corner so
> I would like to buy a gift(software) to my self....
>
> Thank you in advance
> 73 SV1CVY Michael
> Electrical Engineer
> email mdim@intranet.gr
>
>

I found a site that seems to cover all of the ones I've heard of. Try
this:

http://www.grove.net/~tkelso/software/satellite/sat-trak.htm

I personally like LogSat v5.1, but it has a few bugs that disturb me. I
REALLY like Nova 1.1, but it crashed too many times on me. Seems to be bug
ridden IMHO. I have InstanTrack v1.0 and really like it, but it's time to
upgrade to a windows program. Check out the site and make up your own
mind!!

Good luck,
tz

--
****
* timmy_z@nauticom.net * * ...no way to delay *
* K3TZ * that trouble coming *
* TRA# 3348 * everyday... -FZ *
* NAR# 64753 level 1 * * *
* AMSAT# 22105 * *
****

2435. unsubscribe !!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: edborges@manaus.pegasus.COM.BR
Message-ID: <199611190044.QAA23425@UCSD.EDU>
Source record: 20860

```
Please unsubscribe Ham news !!
```

2436. Re: WHO has WISP working with IC820?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: "Bruce J. Howes KG2IC" <kg2ic@amsat.org>
Message-ID: <32918DAD.327@amsat.org>
Source record: 20861

Charlie Rubenstein wrote:
>
> I have been through quite a few pieces of equipment trying to get QRV on the 9600 baud
> satellites. I have an Icom 820H and a KC Tracker/tuner. I have an AEA DSP232 but am
> going to return it to the shop, it is horrible. I HAD a DSP2232, but though it was
> overkill, so before I got ready for pacsats, I sold it. ANY SUGGESTIONS ON THE TNC to
> get for this? Im considering the Paccomm NB96, the Kantronics 9612, the AEA PK96.
> I want to hear from someone who actually has one running, hi hi.
>
> Charlie KB8BWE
> rubenc@iglou.com

Charlie,

I have WISP running on two stations at the moment. One of these stations is using the Icom 820H. The 820 does work fine with WISP, new drivers were released in the last few months specifically for this radio. The radio is controlled off the KCT using TTL inputs, not Icom's CT-17 unit. Works just fine. You do need to mod the 820 to bring out the subband audio, but it is very simple. (I can send you a copy of the mod if needed.)

As for TNC I have used the AEA DSP2232, I currently use 2 of these units, and the AEA DSP232. The 232 I never did get running correctly, the 232 will not receive in the KISS mode at 9600, and is a very flakey unit-pass on it. I have spoken to AEA so many times about this with no luck, at this point I just use the unit for Terrestial packet.

The Kantronics 9612 does work well with WISP, I did use it for a while. My one comment on the 9612 is the RESET procedure is a real pain, you need to remove the cover and short a terminal. If I kept using the unit and external RESET switch would have been installed. I think I needed to adjust the deviation pot on the unit to obtain acceptable deviation with the 820.

In my opinion, the AEA DSP2232 seems to be the best unit to work with. At one point I had WISP fully automated the switching between the 1200 and 9600 baud birds using the AEA DSP2232. Since 2232 is a true dual port unit, I ran the 1200 baud birds on Port 1, and the 9600 baud on Port 2. Worked like a charm!

Feel free to email if you need more info! Good luck and see you on the birds!
--

73,
Bruce KG2IC
==========
Bruce J. Howes KG2IC "The governmentï¿½s view of the economy
Grid FN03pa could be summed up in a few short phrases:
East Amherst, NY If it moves, tax it. If it keeps moving,
AMSAT#30466 ARRL regulate it. And if it stops moving,
ARMY-MARS AAR2AJ subsidize it." -Ronald Reagan
==========

2437. NORAD Two-Line Orbital Element Sets (TLE901)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <56qtk0$rqf@blackbird.afit.af.mil>
Source record: 20862

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #901 -
Alouette 1
1 00424U 62049A 96322.09375139 .00000056 00000-0 55198-4 0 2435
2 00424 80.4628 132.8768 0023620 2.1965 357.9268 13.67880661703243
ATS 1
1 02608U 66110A 96318.40066812 -.00000178 00000-0 10000-3 0 9872
2 02608 14.5841 351.2226 0008383 102.9534 257.1507 1.00295013 26363
ATS 3
1 03029U 67111A 96318.31175699 -.00000111 00000-0 10000-3 0 5723
2 03029 14.9157 358.1800 0010001 258.9566 162.5636 1.00273163106268
Starlette
1 07646U 75010A 96322.17627866 -.00000181 00000-0 -28713-4 0 124
2 07646 49.8298 264.9909 0205602 15.7836 344.9342 13.82191304100124
LAGEOS
1 08820U 76039A 96322.84658293 .00000005 00000-0 00000+0 0 2391
2 08820 109.8545 78.6552 0043383 95.5492 265.0037 6.38664629223640
ETS-2
1 09852U 77014A 96317.27233612 .00000017 00000-0 10000-3 0 842
2 09852 13.4144 31.2225 0006734 134.5985 225.4205 0.99998674 19127
GOES 2
1 10061U 77048A 96317.28839685 .00000055 00000-0 10000-3 0 7597
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2 11080 98.9248 175.3325 0008482 283.4621 76.5593 13.83689797912116
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LandSat 4
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AO-13
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Glonass 48
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AO-21
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UARS
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NOAA 13
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Meteor 2-21
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Measat 2
1 24653U 96063B 96320.06099085 -.00009281 00000-0 -34083-2 0 73
2 24653 3.9720 210.1445 7278910 178.7198 185.8820 2.27662922 27
1996063C
1 24654U 96063C 96319.63910151 -.00000121 00000-0 10000-4 0 35
2 24654 3.9986 210.7558 7280484 178.1988 188.8367 2.22931426 47
1996063D
1 24655U 96063D 96320.49899261 .00000090 00000-0 10000-3 0 44
2 24655 3.9807 209.9281 7278953 179.1522 183.2485 2.27376347 35
Mars-96
1 24656U 96064A 96323.01130778 .13328068 12842-4 45328-4 0 133
2 24656 51.4998 11.2010 0005797 231.1092 129.2833 16.58057739 180
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

2438. looking for FG5?I Help!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: baack@maine.maine.edu
Message-ID: <56smc4$24pi@sol.caps.maine.edu>
Source record: 20863

Looking for callsign of ham in Guadeloupe (FG5((something)) I) FG5 ? I.
I have heard him several times on RS-10, but have yet to work him.
Can anyone who has worked him send me his address?

Like to get information so I coan contact him for a possible RS-10 Sked.

Any info on how I should go about this?

TNX, Jason N1RWY

2439. Re: SAT Software where??????

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: Al Williams <otheral@mailhost.epix.net>
Message-ID: <32922D4E.5841@mailhost.epix.net>
Source record: 20864

Try http://www.grove.net/~tkelso this a new location for this page but
most of the software should be there by now, also about the best place
to get the lastest 2 line elements.

73's n3tyd Al

Mixalis Dimitrakakis wrote:
>
> Dear Satellite-Tracking -Fan's
>
> I am looking for Sat. Tracking Shareware sites in WWW since I want
> to buy some software.
> So far I 've downloaded some sat.trac.software from the "logsat"
> site and I would like to compare it with other before I buy it.
>
> Does NASA has any site in WWW for such software???
>
> I am basically using Instant Track but Christmas is around the corner so
> I would like to buy a gift(software) to my self....
>
> Thank you in advance
> 73 SV1CVY Michael
> Electrical Engineer
> email mdim@intranet.gr

2440. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-19 00:00:00 UTC
From: Tim Connolly <kb8eht@access.mountain.net>
Message-ID: <32926A98.5214@access.mountain.net>
Source record: 20865
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

KW5Q wrote:
>
> I have uploaded to Simtel.Net:
>
> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
>
> sbfft11.zip Sound Blaster spectral display and filtering
>
> Features:
> * Sound Blaster 16 (or 100% compatible) input and output.
> * Band widths of 2K, 4K, 8K or 16K Hz.
> * Spectral resolutions of 1 Hz to 16 Hz per pixel.
> * Display of power spectral density with any of 4 color maps in either
> linear or logarithmic scale.
> * Define and use as many as to six filters simultaneously -- band pass,
> band stop, low pass, and high pass.
> * Filters are defined graphically by mouse movement based upon
> the displayed spectrum. Once you see a signal, you can
> quickly define a pass or stop filter around the signal by clicking
> and dragging the mouse.
> * Net filter passband is displayed at all times.
> * Filters can be selectively enabled and disabled by a single
> keystroke.
>
> Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
> VESA modes 101, 105, mouse.
>
> Copyrighted Freeware. Uploaded by the author.
>
> Kevin - KW5Q
>
> kevinm@eden.com
>
> $$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
> Kevin McWilliams
> KW5Q
> Applied Mathematician

Could you explain what this software is used for, thanks!
Sounds like something I have been interested in.

-- Tim Connolly
-- Vienna Computer Services & World Wide Web Advertising
-- http://www.midohiovalley.com/vcs
-- mailto:kb8eht@access.mountain.net

2441. STS-80 ???

Newsgroup: rec.radio.amateur.space
Date: 1996-11-20 00:00:00 UTC
From: Bowes@ceu.cz
Message-ID: <56uvbf$6n3@tomb.env.cz>
Source record: 20866

Dear all,

Just wondering if anyone knew of the Goddard ARC rebroadcasts will be on air this time around. I know that it isn't a SAREX mission but that shouldn't affect it should it ??? I monitored the launch live across the internet yesterday but GARC's homepage indicates they have been off air since the last sts-79 mission. When I checked their page the shuttle had been in orbit already the whole evening. Any ideas folks ????

Thanks alot

JB

2442. REQ: This Mission Shuttle Freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-20 00:00:00 UTC
From: ke4htm@bluenet.net
Message-ID: <3294ad11.73343736@snews.zippo.com>
Source record: 20867

Please e-mail me ASAP the FREQs that the shuttle will be using on this mission. I need them bad. Double thanks in advance.

Jamie - KE4HTM
ke4htm@bluenet.net

2443. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-20 00:00:00 UTC
From: "Charles W. Baetsen" <charlesb@abelcomputers.com>
Message-ID: <01bbd70c$86d86a90$4b75e1cc@charlesb>
Source record: 20868

> Its 145.8 UP and 145.2 down. I made a contact with John (KC5TZQ) this
> am and it worked. Okay..
>
> John N7XLQ

Now I am confused - when you say 145.800 up and 145.200 down, does that mean that we set OUR rigs for 145.800- or do we set it for 145.200+.

Another question: Is it possible to QSO with MIR with 5W on a handheld with a small 2 beam yagi (with ~ 4 dBd gain), or do you need more power? For that matter, is it possible to hear anything from MIR on a handheld connected to a cheap 1/4 wave vertical car antenna, as MIR passes overhead?

73 de Charles...

--

Charles W. Baetsen, M.Eng VA3NGC
Software Engineer
ABEL Computers Inc. www.abelcomputers.com

2444. AEA Quitting Business--confirmed

Newsgroup: rec.radio.amateur.space
Date: 1996-11-20 00:00:00 UTC
From: chainsaw@tfs.net
Message-ID: <329366e5.1679386@news.tfs.net>
Source record: 20869
Cross-posted to: rec.radio.amateur.misc,rec.radio.scanner,rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.policy,rec.radio.amateur.space

Howdy all;

Just spoke with AEA on the phone (Bill) and he told me they are selling off the last of the product lines now and going out of business. The company is up for sale, but no takers out there.

Translated: support for the $1,000 DSP-2232 remains unchanged.

Bob

2445. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-20 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <329353A6.7811@ix.netcom.com>
Source record: 20870

Charles W. Baetsen wrote:
>
> Now I am confused - when you say 145.800 up and 145.200 down, does that
> mean that we set OUR rigs for 145.800- or do we set it for 145.200+.
>
> Another question: Is it possible to QSO with MIR with 5W on a handheld
> with a small 2 beam yagi (with ~ 4 dBd gain), or do you need more power?
> For that matter, is it possible to hear anything from MIR on a handheld
> connected to a cheap 1/4 wave vertical car antenna, as MIR passes overhead?
>
> 73 de Charles...

Charles,

Set your rig for 145.200+. You listen on the downlink frequency, that is, the signal travelling down from space. You transmit on the uplink frequency, that is, your signal travelling up into space.

I have heard of people working Mir on a HT running 5w into a rubber duck. A lot depends on the competition that you have. If you are in an isolated area with few other hams trying to make a contact, your chances are probably pretty good. If you are in a metropolitan area with hundreds of other hams all trying to make a contact, your liklihood diminishes rapidly. Remember that the satellite "footprint", that is, the earth surface area in direct line of sight to the satellite, covers nearly 3200 km in all directions from the earth point where the satellite is directly overhead. However, signals are strongest at the points where it is closest to the earth station. The FM capture effect comes into play a lot here.

So far, I have made 2 packet contacts with Mir using a very modest station - a Radio Shack HTX-202 into a Radio Shack brick 2m amplifier, running about 35w. My antenna is one of those homemade el-cheapo 1/4 wave ground-planes made from an SO-239 connector and 3 pieces of household electrical wire. It's mounted up at about 8 meters above the ground. And I _do_ live in a metropolitan area, about 100 km from NYC!

Good luck chasing Mir!

--
73 de Jim, KD1YV
http://pw1.netcom.com/~jimkd1yv/hamily.html

2446. Re: STS-80 ???

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <570b9u$e6o@news.mhv.net>
Source record: 20871

In article <56uvbf$6n3@tomb.env.cz>, Bowes@ceu.cz (Jonathan Bowes) wrote:
>Dear all,
>
>Just wondering if anyone knew of the Goddard ARC rebroadcasts will be
>on air this time around. I know that it isn't a SAREX mission but that
>shouldn't affect it should it ??? I monitored the launch live across
>the internet yesterday but GARC's homepage indicates they have been
>off air since the last sts-79 mission. When I checked their page the
>shuttle had been in orbit already the whole evening. Any ideas folks
>????
>Thanks alot
>
>JB

They air regardless of it's a Sarex mission or not. I haven't tuned in yet
to this mission though. Of coarse they have to have the volunteers available
as well.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL
Member: AAVSO Solar Division
"Hoof hearted, Ice melted!"

Opinions herein are mine and may not be that of MHV.NET!

2447. KO-23, and KO-25 RX but no TX

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <571u0t$bcf@faatcrl.faa.gov>
Source record: 20872

I'm trying to work ko23 and ko25 sats on 9600 fsk packet. So far all I get is some, but not many messages from ko-23. Repeated tries at connecting have failed. My station setup for this consists of a 5100 Yaesu 50 watts(is this enough?), AES DSP-232, and a Cushcraft 270B. I have a pair of homebrew Lindenblads and a preamp for 70cm I'm going to try tonite for rx only. If this works I'm going to purchase an antenna duplexer and run seperate antennas for rx and tx. Does anyone reading this have any luck with these sats. If so I would like to hear from you. Thanks for reading this.

73 Jeff (nites, and weekends kb2wqm@juno.com)

2448. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: Jim Johnson <jjohnson@hpl.hp.com>
Message-ID: <3294845E.14C4@hpl.hp.com>
Source record: 20873
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

Tim Connolly wrote:
>
> KW5Q wrote:
> >
> > I have uploaded to Simtel.Net:
> >
> > http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> > ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
> >
> > sbfft11.zip Sound Blaster spectral display and filtering
> >

This sounds very similar to the product that Brian Beasley (sp) sells
for about $100 ... is that the case or am I missing the boat?

Tnx,

Jim W6SC
jjoker@dxhound.com

2449. New Amateur Radio web page

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: webteck@usa.net
Message-ID: <32949271.713E@usa.net>
Source record: 20874

This is my new Amateur Radio web page...

http://linc2.lincup.com/~tstatham

Please check it out and let me know what you think.
I know it is slow, but is it worth the load time? I
would appreciate any ideas for improvement. I am new to
web page design and this is a learning experience for
me. Thanks in advance.

Tommy
N5HTQ

--
To see what the Godfather of Marketing Technology is
doing today visit http://www.enlow.com

2450. ?Help?? RS-10 and dipole orientation!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: baack@maine.edu
Message-ID: <5723qt$bo2@sol.caps.maine.edu>
Source record: 20875

Greetings all.
Just a quick question.
Living on the Coast of Maine I have several "good" passes of RS-10 a
day. The passes are either N to S (morning) or S to N (evenings)
I was wondering if it would be best to have my dipole pointing
E - W ?? (My thinking is that the broad side of the antenna would be facing
north and south. Therefore giving me the best reception)

```
^ (RS-10 heading North)
|
|
********** *********** (dipole)
|
| (path of the satellite)
|
```

Am I correct of do I have it all wrong?

Thanks in advance,
Jason N1RWY FN54kd

2451. Re: mir uhf heard also

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: baack@maine.edu
Message-ID: <5723ts$bo2@sol.caps.maine.edu>
Source record: 20876

{snip}

>> Would someone be kind enough to post the UHF frequencies for packet &
>> voice ??
>>
>> TIA, Rod, VE3INE
>
>rod,uplink 435.750 downlink 437.950 pl 141.3 voice
>
>i have worked do33 and dn40 from cm88 on uhf mir,good luck
>73 steve

Steve, what was needed on your end to work the UHF freqs?

Power? Antenna?
Preamp?
Thanks, Jason N1RWY

2452. Re: KO-23, and KO-25 RX but no TX

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: Bob Smith <rsmith@internetmci.com>
Message-ID: <01bbd7e0$e9f4c7c0$e2edbdcc@rsmith>
Source record: 20877

Your TXcvr Jeff probably doesn't have the frequency refinement to resolve Doppler shift that usually swings 20 kHz or so. That is why you are probably missing most of the pass.

Check out http://www.amsat.org for numerous articles explaining all of this. There are some very good 'getting started' articles.

Jeff Griffin <griffinj@admin.tc.faa.gov> wrote in article <571u0t$bcf@faatcrl.faa.gov>...
I'm trying to work ko23 and ko25 sats on 9600 fsk packet. So far all I get is some, but not many messages from ko-23. Repeated tries at connecting have failed. My station setup for this consists of a 5100 Yaesu 50 watts(is this enough?), AES DSP-232, and a Cushcraft 270B. I have a pair of homebrew Lindenblads and a preamp for 70cm I'm going to try tonite for rx only. If this works I'm going to purchase an antenna duplexer and run seperate antennas for rx and tx. Does anyone reading this have any luck with these sats. If so I would like to hear from you. Thanks for reading this.

73 Jeff (nites, and weekends kb2wqm@juno.com)

2453. NORAD Two-Line Orbital Element Set: Space Shuttle (96326.21586775)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <572ph8$ca3@blackbird.afit.af.mil>
Source record: 20878

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96326.21586775 .00000869 00000-0 35321-5 0 141
2 24660 28.4664 178.5099 0007823 282.1037 88.3192 15.72025106 215
ORFEUS-SPAS II
1 24661U 96065B 96325.95833333 .00000877 00000-0 35774-5 0 70
2 24661 28.4680 180.3885 0008231 273.8800 75.4412 15.72097046 176
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2454. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-21 00:00:00 UTC
From: Bob Sull <wa8imo@kellnet.com>
Message-ID: <329509F9.46AC@kellnet.com>
Source record: 20879
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

Tim Connolly wrote:
>
> KW5Q wrote:
> >
> > I have uploaded to Simtel.Net:
> >
> > http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> > ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
> >
> > sbfft11.zip Sound Blaster spectral display and filtering
> >
> > Features:
> > * Sound Blaster 16 (or 100% compatible) input and output.
> > * Band widths of 2K, 4K, 8K or 16K Hz.
> > * Spectral resolutions of 1 Hz to 16 Hz per pixel.
> > * Display of power spectral density with any of 4 color maps in either
> > linear or logarithmic scale.
> > * Define and use as many as to six filters simultaneously -- band pass,
> > band stop, low pass, and high pass.
> > * Filters are defined graphically by mouse movement based upon
> > the displayed spectrum. Once you see a signal, you can
> > quickly define a pass or stop filter around the signal by clicking
> > and dragging the mouse.
> > * Net filter passband is displayed at all times.
> > * Filters can be selectively enabled and disabled by a single
> > keystroke.
> >
> > Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
> > VESA modes 101, 105, mouse.
> >
> > Copyrighted Freeware. Uploaded by the author.
> >
> > Kevin - KW5Q
> >
> > kevinm@eden.com
> >
> > $$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
> > Kevin McWilliams
> > KW5Q
> > Applied Mathematician

>
> Could you explain what this software is used for, thanks!
> Sounds like something I have been interested in.
>
> -- Tim Connolly
> -- Vienna Computer Services & World Wide Web Advertising
> -- http://www.midohiovalley.com/vcs
> -- mailto:kb8eht@access.mountain.net

Better yet, explain what this has to do with DX?

Later,
Bob
--
<> Bob Sull WA8IMO <>
"73, CUL, es keep the FUN in Ham radio."
>Life Member-ARRL QCWA< >Member-NODXA NCDXF<
>DXCC WAS RCC < >8P9BC<
>QSL Mgr for 8P6JG<
>WA8IMO@NO8M.#NEOH.OH.USA<
>WA8IMO@KELLNET.COM<

2455. Mir on U H F ???

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: "Jean Philippe P." <jpp@pacwan.mm-soft.fr>
Message-ID: <32952567.70D1@pacwan.mm-soft.fr>
Source record: 20880

Hello

Is it possible to make QSO or packet with Mir on UHF (430-438) ???
Please could you give me the scheddule frequencies.
Thank you for you help, my best regards, 73's de Jean-Philippe, F1USC

2456. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: "Galen M. Barnaby" <ny1t@worldnet.att.net>
Message-ID: <329544A2.73CA@worldnet.att.net>
Source record: 20881

Charles W. Baetsen wrote:
>
> > Its 145.8 UP and 145.2 down. I made a contact with John (KC5TZQ) this
> > am and it worked. Okay..
> >
> > John N7XLQ
>
> Now I am confused - when you say 145.800 up and 145.200 down, does that
> mean that we set OUR rigs for 145.800- or do we set it for 145.200+.
>
> Another question: Is it possible to QSO with MIR with 5W on a handheld
> with a small 2 beam yagi (with ~ 4 dBd gain), or do you need more power?
> For that matter, is it possible to hear anything from MIR on a handheld
> connected to a cheap 1/4 wave vertical car antenna, as MIR passes overhead?
>
> 73 de Charles...
>
> --
> --
> Charles W. Baetsen, M.Eng VA3NGC
> Software Engineer
> ABEL Computers Inc. www.abelcomputers.com
> --
I worked them with a icom 2at on a larson mobile antenna

2457. Need 1200bpsk-modem/PCB

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: ecstka@memo.ericsson.se
Message-ID: <573mba$d46@newstoo.ericsson.se>
Source record: 20882

Hey!

I need a 1200bpsk modem. Does anybody have a unit rready built or know
how I could find a PCB?

Thanks in advance!

/ SM7PAF

2458. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: randyk@emf.net
Message-ID: <573rk9$pt6@emf.emf.net>
Source record: 20883

: Another question: Is it possible to QSO with MIR with 5W on a handheld
: with a small 2 beam yagi (with ~ 4 dBd gain), or do you need more power?

Should not be a problem. All depends on the pass and doppler and
phase shifts etc. Go for it as it's been done with a hand held and a 1/2
wave from Moscow.

: For that matter, is it possible to hear anything from MIR on a handheld
: connected to a cheap 1/4 wave vertical car antenna, as MIR passes overhead?

Yes. I would walk around at night i.e. 12 midnight and copy passes
on the rubber duck at 4 bars out of 6 on the meter. They have the altitude
and the power and ERP plus a low orbit. Look for them as they come overhead
as well. It's a big ship.

Always wanted to talk to them on my rubber duck but that's pushing
the rainbow to the max ;-P Use the 1/2 wave.....sk

_Randy N6WDV

2459. FS: SASI Sat Tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: "Bruce J. Howes KG2IC" <kg2ic@amsat.org>
Message-ID: <3295D688.2E11@amsat.org>
Source record: 20884

I have a 10 month old SASI SAT Tracker unit for sale. Like new, works just great! Does not use COM port but Parallel port so you do not need a free Comport, and works great with Laptop for Field Day or portable operation. Have all manuals, books, software etc. Interfaces directly with the Yaesu GB5400 Rotator. I am asking $249 shipped to your door. Thank you.
--

73,
Bruce KG2IC
==========
Bruce J. Howes KG2IC "The governmentï¿½s view of the economy
Grid FN03pa could be summed up in a few short phrases:
East Amherst, NY If it moves, tax it. If it keeps moving,
AMSAT#30466 ARRL regulate it. And if it stops moving,
ARMY-MARS AAR2AJ subsidize it." -Ronald Reagan
==========

2460. Re: ?Help?? RS-10 and dipole orientation!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: Bruce Beford <bbeford@cyberportal.net>
Message-ID: <3295df58.770631@news.monad.net>
Source record: 20885

On Thu, 21 Nov 96 17:34:20 GMT, baack@maine.edu (Jason Baack) wrote:

>Greetings all.
>Just a quick question.
>Living on the Coast of Maine I have several "good" passes of RS-10 a
>day. The passes are either N to S (morning) or S to N (evenings)
>I was wondering if it would be best to have my dipole pointing
>E - W ?? (My thinking is that the broad side of the antenna would be facing
>north and south. Therefore giving me the best reception)
>
> ^ (RS-10 heading North)
> |
> |
> ********** ********** (dipole)
> |
> | (path of the satellite)
> |
>
>
>Am I correct of do I have it all wrong?
>
>Thanks in advance,
>Jason N1RWY FN54kd
>
Hi, Jason. You have it right. Theoretically, you will get the best
performance when the antenna is broadside to the signal source. In
practice, however, you find that the "nulls" off the ends of the
dipole are usually very narrow...so if your antenna is anything like
NE-SW or NW-SE, you probably won't notice much of a difference.
Probably not worth moving it at all, if this is the case. I have found
that a 10meter receive preamp helps quite a bit, but you should do OK
with the dipole. 73 es good luck.

-Bruce, KA1ORB Newport,NH

2461. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: rickets@earthlink.com
Message-ID: <32960272.83289306@news.earthlink.net>
Source record: 20886
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

Bob Sull <wa8imo@kellnet.com> wrote:

>> > $$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$

>> Could you explain what this software is used for, thanks!
>> Sounds like something I have been interested in.
>>

>
>Better yet, explain what this has to do with DX?
>
You could use it to make difficult signals easier to copy, remove
heterodynes, etc. Like the Watkins-Johnson dsp only cheaper.
dr

2462. Project Mercury docs. needed.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.961122162106.1969B-100000@spacelink>
Source record: 20887

If any participants in this group have documents and/or plans related to the Mercury spacecraft of 1960-63, would you please e-mail me. I am in need of copies of specific diagrams and configurations.

Thanks,
Dick, N1MDZ

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

2463. Re: looking for FG5?I Help!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: Harry Kamer <kamer@ibm.net>
Message-ID: <5758k8$12ci$2@news-s01.ny.us.ibm.net>
Source record: 20888

baack@maine.maine.edu (Jason) writes: > Looking for callsign of ham in Guadeloupe (FG5((something)) I) FG5 ? I.
> I have heard him several times on RS-10, but have yet to work him.
> Can anyone who has worked him send me his address?
>
> Like to get information so I coan contact him for a possible RS-10 Sked.
>
> Any info on how I should go about this?
>
> TNX, Jason N1RWY
The station is FG5GI, Alan. He is on regularly on RS-10,12,
and 15.

2464. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: n1btq@tiac.net
Message-ID: <575asp$14b@news-central.tiac.net>
Source record: 20889
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

In article <32960272.83289306@news.earthlink.net>,
rickets@earthlink.com (Dave Rickmers) wrote:

>You could use it to make difficult signals easier to copy, remove
>heterodynes, etc. Like the Watkins-Johnson dsp only cheaper.
>dr
>

Can you tell me what the s/w is called and where I could d/l it?

Thanks,

Tim N1BTQ

2465. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: rickets@earthlink.com
Message-ID: <3296322a.95507354@news.earthlink.net>
Source record: 20890
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

n1btq@tiac.net (Tim Smith) wrote:

>Can you tell me what the s/w is called and where I could d/l it?
>
>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
>>
>> sbfft11.zip Sound Blaster spectral display and filtering
dr

2466. Space and weather site

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: "Charles M. Clark" <charlie@smarty.smart.net>
Message-ID: <32961746.42F9@smarty.smart.net>
Source record: 20891

If as an amateur you have an interest in space, weather, global warming
and amateur radio, you may want to look into the home page of G7PQL
which is located at:

http://www.airtime.co.uk/users/homebase/homebase.htm

2467. OSCAR 13 near re-entry

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <32967277.4E40@ix.netcom.com>
Source record: 20892

Today I received an ARRL e-Newsletter stating that OSCAR 13 is within 2 weeks of re-entry. I remember reading several months ago that this event should be highly visible in the night sky, as it burns up due to atmospheric drag.

Does anybody have any more info on this? I presume that I just use a current set of Keps for AO-13 to calculate passes, and go outside at those times.

--
73 de Jim, KD1YV
http://pw1.netcom.com/~jimkd1yv/hamily.html

2468. Re: Want Kenwood IF-10D Computer Interface.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-22 00:00:00 UTC
From: Randy Jones <rjones@plix.com>
Message-ID: <3296A818.159D@plix.com>
Source record: 20893
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.amateur.dx

William Vynck wrote:
>
> MICHAEL J DRUM wrote:
> >
> > Greetings,
> >
> > I want to buy a Kenwood IF-10D Computer interface for my TS-60. If you
> > have one for sale please contact me at my Email address and let me know
> > the details. I will answer all reply's sent.
> >
> > Thank You.
> >
> > Mike>
>
> DONT BUY !!
>
> To expencive, i could send you the chematics to build one.
>
> 73
> William

Build, ha! Many of us "appliance operators" are either too busy to build
or don't know one end of a soldering iron from the other.

Besides, OEM equipment always looks so much nicer.

Radio Randy.

2469. NORAD Two-Line Orbital Element Set: Space Shuttle (96327.30963841)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <575g0n$h9m@blackbird.afit.af.mil>
Source record: 20894

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96327.30963841 .00000846 00000-0 32987-5 0 178
2 24660 28.4685 170.5533 0009683 289.7461 163.8148 15.72295362 384
ORFEUS-SPAS II
1 24661U 96065B 96326.91666667 .00000873 00000-0 35419-5 0 95
2 24661 28.4683 173.4177 0008245 286.9966 97.5142 15.72112685 328
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2470. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: chainsaw@tfs.net
Message-ID: <3296bd68.23361085@news.tfs.net>
Source record: 20895
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

I am amused!

Well, OK, I'm really not amused...

Given that AEA is in the process of selling off their residual production to go out of business, I am just amazed at this impressive good deal R&L Electronics is offering... NOT!!

It sure looks to me that they're all too willing to screw a few customers to solve their stock problems...

Wouldn't it have been a little more fair of you to caveat your ad here with the note that they who buy AEA products now do so with little to no possibility of product support, since AEA is about to go belly up? Oh well, bidness is bidness!!!

As always: caveat emptor. I'll remember this ad next time I'm shopping for gear...

Bob

Roger Smallwood <roger@randl.com> wrote:

>New Special AEA DSP-232 all mode DSP tnc only $379.00
>
>for more info call (800)221-7735 or
>email sales@randl.com
>
>--
>Thanks!!
>Roger N8EKG
>R&L Electronics
>roger@randl.com

2471. WTB: AEA DSP-2232

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <329717EE.2F6@iglou.com>
Source record: 20896
Cross-posted to: rec.radio.amateur.space,rec.,radio.amateur.equipment

I am looking for an AEA DSP-2232 TNC. If you know of one for sale
or have one to sell, please email me at
rubenc@iglou.com

Charlie KB8BWE

2472. search orbital elements of the MOON for tracking to traffic EME

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: sony28@planete.net
Message-ID: <sony28-2311962134570001@rou1-01.planete.net>
Source record: 20897

I search keplerian element (if possible in 2 lines Norad/Nasa format)
to enter it in my Satellite traking software to see some possibility
to do EME traffic! Thank you

2473. Re: mir uhf heard also

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <3297996A.1FE3@vogon.rain.com>
Source record: 20898

Jason Baack wrote:
>
> {snip}
>
> >> Would someone be kind enough to post the UHF frequencies for packet &
> >> voice ??
> >>
> >> TIA, Rod, VE3INE
> >
> >rod,uplink 435.750 downlink 437.950 pl 141.3 voice
> >
> >i have worked do33 and dn40 from cm88 on uhf mir,good luck
> >73 steve
>
> Steve, what was needed on your end to work the UHF freqs?
>
> Power? Antenna?
> Preamp?

Yes, you need power and an antenna.

(Sorry, I couldn't resist that :-)

I can tell you what *just* works for me:

25W into a GP-9, no pre-amp.

For it to be really usable, it needs either more power and a pre-amp,
or, directional (tracking) antenna(s).

Philip - KC7FWB

2474. ARLK086 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-11-23 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk086.1996@arrl.org>
Source record: 20899
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK086
ARLK086 Keplerian data

ZCZC SK86
QST de W1AW
Keplerian Bulletin 86 ARLK086
From ARRL Headquarters
Newington, CT November 23, 1996
To all radio amateurs

SB KEP ARL ARLK086
ARLK086 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-80
1 24660U 96065A 96327.76094907 .00000842 00000-0 32871-5 0 185
2 24660 28.4668 167.2690 0008741 295.9986 197.5384 15.72239004 452
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96327.18746561 .00000078 00000-0 69040-4 0 02924
2 18129 82.9262 31.7498 0013326 75.5494 284.7122 13.72372013471842
UO-11
1 14781U 84021B 96326.97139103 .00000189 00000-0 39781-4 0 09300
2 14781 97.8122 310.7917 0011043 309.9419 50.0819 14.69500309680828
RS-12/13
1 21089U 91007A 96326.83577384 .00000066 00000-0 54020-4 0 09399
2 21089 82.9205 72.4290 0029215 151.9034 208.3719 13.74075029290687
AO-13
1 19216U 88051B 96327.39782732 .00241138 -28079-4 10000-3 0 3425
2 19216 57.0004 75.8923 7016611 57.7830 354.8362 2.71415348 33252
UO-14
1 20437U 90005B 96327.18994320 .00000053 00000-0 37326-4 0 02270
2 20437 98.5362 47.1807 0011788 95.4533 264.7996 14.29939325356635
RS-15
1 23439U 94085A 96326.97338996 -.00000039 00000-0 10000-3 0 01794
2 23439 64.8123 127.9180 0156225 170.9127 189.4681 11.27529236078575
```

```
AO-16
1 20439U 90005D 96326.79200810 .00000004 00000-0 18210-4 0 00390
2 20439 98.5509 49.2938 0012093 98.2634 261.9925 14.29990373356597
DO-17
1 20440U 90005E 96327.14842303 .00000051 00000-0 36507-4 0 00404
2 20440 98.5550 50.3737 0012151 95.6656 264.5912 14.30133230356672
WO-18
1 20441U 90005F 96326.79184321 .00000019 00000-0 23958-4 0 00325
2 20441 98.5541 49.9443 0012762 97.9977 262.2663 14.30101489356624
LO-19
1 20442U 90005G 96327.19531104 .00000073 00000-0 44930-4 0 00318
2 20442 98.5562 50.9055 0012953 95.1605 265.1057 14.30213267356705
FO-20
1 20480U 90013C 96327.03318517 -.00000026 00000-0 56173-5 0 09279
2 20480 99.0232 321.8555 0541057 126.7120 238.4948 12.83235191318130
AO-21
1 21087U 91006A 96327.18386843 .00000094 00000-0 82657-4 0 07816
2 21087 82.9419 204.7710 0036130 122.9036 237.5605 13.74574093291711
UO-22
1 21575U 91050B 96327.17557774 .00000032 00000-0 24861-4 0 07476
2 21575 98.3337 28.7137 0008024 148.0999 212.0677 14.37045251280756
KO-23
1 22077U 92052B 96327.16253859 -.00000037 00000-0 10000-3 0 06422
2 22077 66.0779 218.6992 0015270 260.7360 99.1930 12.86298549201122
KO-25
1 22828U 93061F 96327.18060703 .00000041 00000-0 33813-4 0 05143
2 22828 98.5643 40.0400 0010579 108.1617 252.0724 14.28159814132666
IO-26
1 22826U 93061D 96327.16687497 .00000034 00000-0 31140-4 0 05204
2 22826 98.5695 39.9591 0009331 123.7560 236.4510 14.27819128164544
AO-27
1 22825U 93061C 96327.18259956 .00000029 00000-0 29308-4 0 05230
2 22825 98.5687 39.7762 0008769 122.3713 237.8321 14.27709887164535
FO-29
1 24278U 96046B 96327.17437114 -.00000028 00000-0 86573-5 0 00607
2 24278 98.5698 30.3414 0351549 2.5954 357.6922 13.52626126013133

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
November 26, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2475. MO-30

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: hamdan@ix.netcom.com
Message-ID: <578d1t$ega@dfw-ixnews9.ix.netcom.com>
Source record: 20900

Hello all. I read in the December QST (p.86) that MO-30 is up and running (the article had the uplink and downlink frequencies). However, I looked for it this afternoon (Nov. 23, at about 23:15 UTC) from my QTH in the Denver, Colorado area, and heard absolutely nothing. Does anyone know if it is operational? And also, what name do I give the satellite in my pb.cfg file (I use PB, not WISP)?

Thanks and 73's de Bernie, KF0QS

2476. New beta version of LogSat Professional is available

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: Roberto Franceschetti <roberto@netwide.net>
Message-ID: <01bbd9f7$6a9acce0$068067ce@miseno.netwide.net>
Source record: 20901

LogSat Software Corporation is currently testing the pre-release of the
next version of LogSat Professional for Windows. This new version will
feature new, highly improved world maps. If you want to participate in our
beta test program, all that is required is that you download the latest
beta version from our page at http://www.logsat.com, and report any errors
you encounter during your regular use of the software to
support@logsat.com. Please be sure to inlcude a description of the problem,
along with any information useful to reproduce the error.
We also welcome any comments/suggestions on possible improvements to the
program. Examples: Do you prefer to superimpose latitude/longitude lines on
the textured maps? Do you suggest using different colors? Etc.
--

Roberto Franceschetti ik8sqi
LogSat Software Corp.

http://www.logsat.com
roberto@logsat.com

2477. Re: Need 1200bpsk-modem/PCB

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <19961124120001.HAA16720@ladder01.news.aol.com>
Source record: 20902

Im Artikel <329810a5.1556409@news.smartt.com>, bbennett@smartt.com (Brian Bennett) schreibt:

>
>Are you looking for a TNC (packet modem)?
>If you are looking to build one, there is a Baycom 1200 baud unit
>that's fairly easy to build. (uses baycom SW, of course!)
>Do a file search for tcm3105.zip (schematic & parts list)
>and a directory seach for baycom software at.....
>http://ftpsearch.ntnu.no/ftpsearch
>...a great file search engine!!!!
>
>Best of luck!!
>
>Brian VE7IJQ

All of the stuff Brian describes has nothing to do with a 1200 baud PSK modem. That's 1200 baud AFSK !!!!!

Unfortunately PSK modems are very rare to find here in Europe. The G3RUH FUJI modems are no longer available (as far as I know) but I think there was also a modem design by TAPR.

There are ready made modems available at PACCOM in Tampa, FL. They are called PSK-1. There is also a complete TNC with PSK modem inside called PSK-1T.

KB2BD, John (Space News editor) did also design a PSK modem design. I guess you can send him a mail to "kb2bd@amsat.org" for further informations.

73 from Oscar, DJ0MY

A PSK PACSATs user !!!!!

2478. AO-13 lost a wing....

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <19961124120000.HAA16721@ladder01.news.aol.com>
Source record: 20903

This message was received by DJ0MY via amateur packet radio:

From: DB2OS @ DB0FD.#NDS.DEU.EU (Peter)
To : AMSAT @ WW

Hi,

AO-13 is still alive as of Nov23 13:35 UTC Orbit #6479..

BUT: The Telemetry sensor for Panel 3 is dead and shows ZERO mA
current since Orbit #6478 which appeared here this morning at
3:06 utc..

Thus it looks like that AO-13 lost one of it's six solar panels.

Also the SERI temperature sensor now jumped to over +80 deg Celsius,
which is a substential increase.

This might be AO-13's last weekend.. ;(

73s Peter DB2OS
P3 Command
AMSAT-DL

2479. AO-13 is dead.....

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: dj0my@aol.com
Message-ID: <19961124120000.HAA16722@ladder01.news.aol.com>
Source record: 20904

Information received today via packet radio:

As Peter Guelzow, DB2OS, reported today (he is one of the AO13 command stations) AO-13 has died today (AMSAT day 6902, 24. November 1996) arround 05:38:16 UTC (MA 31/32, Orbit #6481).

The last telemetry signals were received in Australia.

AO-13 survived the perigee #6481 at 04:32 UTC in an altitude of about 107 km. But he was only living from one solar panel (panel #5). One day before the solar panel #3 failed (see previous message).

Let's hope that phase 3D will liftoff safe and will deliver such an excelent service to the amateur community as AO13 did in the past.

73 de Oscar, DJ0MY

2480. Wefax

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: kb4qzh@pipeline.com
Message-ID: <579o3l$pr9@camel0.mindspring.com>
Source record: 20905

Hello All,
I need a little advice. I am looking for a program to use to download
weather fax pictures off satellites. I am using the DSP-2232 tnc.
Whitch program is the best ? I have a demo verison of AEA wefax but,
since AEA is out of business dont think I can get it. Any info would
be helpfull.
Thanks and 73 Fred KB4QZH
kb4qzh@pipeline.com

73 Fred KB4QZH
kb4qzh@pipeline.com

2481. Wx sat freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: jedent@phoenix.net
Message-ID: <jedent.55.00199FD0@phoenix.net>
Source record: 20906

Need list of NOAA & Meteor sat freqs. Just geting started in Wx sat.
Tnks joe K5ZCX -- Seabrook, Tx.

2482. Re: Wefax

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: Bob Smith <bsmith@msn.com>
Message-ID: <01bbda30$e1650500$01a447cc@desktop>
Source record: 20907

Sure would like to see the demo of that software Fred. Is it the MS Windows version. Know where I can get it? Been searching for that for a while. AEA makes the only windows version available for the 2232 as far as I know.

>>>Fred Moeves <kb4qzh@pipeline.com> wrote in article <579o3l$pr9@camel0.mindspring.com>...
Hello All, I need a little advice. I am looking for a program to use to download weather fax pictures off satellites. I am using the DSP-2232 tnc. Whitch program is the best ? I have a demo verison of AEA wefax but, since AEA is out of business dont think I can get it. Any info would be helpfull. Thanks and 73 Fred KB4QZH

2483. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: dbarillo@texas.net
Message-ID: <57a3vj$n9m@news3.texas.net>
Source record: 20908
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

tyler@cyberia.com (tyler) wrote:

>This is really getting off topic, but I couldn't resist:
>What's the difference between a dead dog on the road and a dead lawer on the
>road?

>There are skid marks in front of the dog!
>Tyler

and to get further out of hand-

there are three differences between lawyers and lab rats:

1) lawyers reproduce faster than rats
2)lawyers will do things that rats refuse to do
3) unlike rats, if you experiment on lawyers, the staff doesnt get
attached to them

2484. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: rwhart@ix.netcom.com
Message-ID: <NEWTNews.848869800.24173.rwhart@pc.wa3mez.netcom.com>
Source record: 20909
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

In Article<3296bd68.23361085@news.tfs.net>, <chainsaw@tfs.net> writes:
> Path: ix.netcom.com!ix.netcom.com!enews.sgi.com!news.sgi.com!howland.erols.net!newsfeed.internetmci.com!news.tfs.net!news
> From: chainsaw@tfs.net (Bob)
> Newsgroups: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy
> Subject: Re: *** AEA DSP-232 only $ 379.00 ***
> Date: Sat, 23 Nov 1996 09:22:53 GMT
> Organization: TFSnet Online Services
> Lines: 34
> Message-ID: <3296bd68.23361085@news.tfs.net>
> References: <329267C3.1FAA@randl.com>
> Reply-To: chainsaw.at.tfs.net
> NNTP-Posting-Host: dialup12.lvw.tfs.net
> Mime-Version: 1.0
> Content-Type: text/plain; charset=us-ascii
> Content-Transfer-Encoding: 7bit
> X-Newsreader: Forte Agent .99f/16.299
> Xref: ix.netcom.com rec.radio.amateur.digital.misc:20504 rec.radio.swap:86283 rec.radio.amateur.misc:119919 rec.radio.amateur.space:8909 rec.radio.scanner:71167 rec.radio.amateur.policy:31697
>
> I am amused!
>
> Well, OK, I'm really not amused...
>
> Given that AEA is in the process of selling off their residual
> production to go out of business, I am just amazed at this impressive
> good deal R&L Electronics is offering... NOT!!
>
> It sure looks to me that they're all too willing to screw a few
> customers to solve their stock problems...
>
> Wouldn't it have been a little more fair of you to caveat your ad here
> with the note that they who buy AEA products now do so with little to
> no possibility of product support, since AEA is about to go belly up?
> Oh well, bidness is bidness!!!
>
> As always: caveat emptor. I'll remember this ad next time I'm
> shopping for gear...
>
> Bob

>
> Roger Smallwood <roger@randl.com> wrote:
>
> >New Special AEA DSP-232 all mode DSP tnc only $379.00
> >
> >for more info call (800)221-7735 or
> >email sales@randl.com
> >
> >--
> >Thanks!!
> >Roger N8EKG
> >R&L Electronics
> >roger@randl.com
>
Beware! There are several software problems
in the DSP-232. The software to fix them was
in beta and scheduled for shipment around
Thanksgiving. I know, I bought one about a
month ago and was looking forward to receiving
the fix. Damn! They'll be giving these things
away before the end of the year.

2485. balancing tubes: how?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.961124140256.8063D-100000@oso.slonet.org>
Source record: 20910
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.ssb

What is the better way of balancing tubes such as 3-500Z units? Is is better to balance the standing current for a given bias (zero bias in the 3-500 units of course) or should the plate current be measured at a give RF drive for each tube? One measures the mu of the tube while the second approach measures the transconductance. Which is more practical for hams?
Cliff Buttschardt K7RR ex W6HDO Morro Bay, CA cbuttsch@slonet.org

2486. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: kd1nr@anomaly.ideamation.com
Message-ID: <57ac8a$1hd@anomaly.ideamation.com>
Source record: 20911
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <57a3vj$n9m@news3.texas.net>, Dave <dbarillo@texas.net> wrote:

>1) lawyers reproduce faster than rats
>2)lawyers will do things that rats refuse to do
>3) unlike rats, if you experiment on lawyers, the staff doesnt get
>attached to them
>
For some absolutely hysterical lawyer jokes surf on over to
http://cartalk.com and look for the picture of a shark with a tie on. Click
on it and be launched into a sampling of NOLO Press' favorite lawyer jokes.

Tony

2487. Need an Article for a Newsletter?????

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: gerryc@airmail.net
Message-ID: <gerryc-2411961934310001@dal31-15.ppp.iadfw.net>
Source record: 20912
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space,

Hi,
Name here is Gerry (WD4BIS) and I have been writing a column for our club newsletter called "New Ham Partner". With the influx of No Code Technicians on the repeater, asking the same kinds of questions I asked 20 years ago, I have been trying to answer them.
Some of the articles are technical, some of them are general information, but they all address subjects that our new friends are struggling with.

I have set up a web page for these articles. On this page, I will place the columns I have already published in past issues of our newsletter. Doing this on a web page has advantages, the big one being that the articles wont expire in a newsgroup, I can edit old ones or add new columns as write them, and I wont have to send re-posts.

The Cost... I will ask that you do not edit the articles, and use my by-line. If you use them, send me an E-mail and let me know when and where. If you have a spare stamp mail me a copy of your newsletter to the address on the page.

Where... http://web2.airmail.net/gerryc/newham.html

Please bear in mind this site is still under construction and not all of them are there yet, but they soon will be. (I have Thanksgiving week off)

73's

Gerry Crenshaw

2488. fs: tapr trakbox

Newsgroup: rec.radio.amateur.space
Date: 1996-11-24 00:00:00 UTC
From: "Mitch, W4OA" <w4oa@vibroplex.com>
Message-ID: <3298F79F.605F5B99@vibroplex.com>
Source record: 20913
Cross-posted to: rec.radio.amateur.space,rec.radio.swap

i no longer am using my trakbox, so i want to let someone
have it who will use it...

it is in a *very* nice case, the graphics for which you
can grab from tapr, compuserve, or i can email you
a copy of the layout files... the filename is trakbox.zip
if you want to see what the box looks like...

this unit is in mint condx, and really looks professional...

asking price is $350.00

mitch
--
Felton "Mitch" Mitchell, W4OA w4oa@vibroplex.com
The Vibroplex Co., Inc., 11 Midtown Park, E., Mobile, AL 36606-4141
800-840-8873 orders, 334-478-8873 info, 334-476-0465 FAX
Visit our web site at - http://www.vibroplex.com

2489. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: rwhart@ix.netcom.com
Message-ID: <NEWTNews.848974218.2668.rwhart@pc.wa3mez.netcom.com>
Source record: 20771
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

In Article<57b1db$f8s@news.goodnet.com>, <gjohnson@indirect.com> writes:
> Path: ix.netcom.com!ix.netcom.com!ix.netcom.com!news-peer.gsl.net!news.gsl.net!howland.erols.net!feed1.news.erols.com!news.dra.com!news.good.net!news.good.net!news.goodnet.com!news
> From: gjohnson@indirect.com (Gary L. Johnson)
> Newsgroups: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc
> Subject: Re: *** AEA DSP-232 only $ 379.00 ***
> Date: 25 Nov 1996 02:48:11 GMT
> Organization: XP Software Products
> Lines: 88
> Message-ID: <57b1db$f8s@news.goodnet.com>
> References: <329267C3.1FAA@randl.com> <3296bd68.23361085@news.tfs.net> <NEWTNews.848869800.24173.rwhart@pc.wa3mez.netcom.com>
> NNTP-Posting-Host: phx-ts7-19.goodnet.com
> Mime-Version: 1.0
> Content-Type: Text/Plain; charset=US-ASCII
> X-Newsreader: WinVN 0.99.8 (beta 2)
> Xref: ix.netcom.com rec.radio.swap:86601 rec.radio.scanner:71339 rec.radio.amateur.space:8930 rec.radio.amateur.policy:31750 rec.radio.amateur.misc:120063 rec.radio.amateur.digital.misc:20549
>
> In article <NEWTNews.848869800.24173.rwhart@pc.wa3mez.netcom.com>, rwhart@ix.netcom.com says...
> >
> >
> >In Article<3296bd68.23361085@news.tfs.net>, <chainsaw@tfs.net> writes:
> >> Path:
> ix.netcom.com!ix.netcom.com!enews.sgi.com!news.sgi.com!howland.erols.net!newsfeed.internetmci.com
> !news.tfs.net!news
> >> From: chainsaw@tfs.net (Bob)
> >> Newsgroups:
> rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.
> radio.scanner,rec.radio.amate
> >> Subject: Re: *** AEA DSP-232 only $ 379.00 ***
> >> Date: Sat, 23 Nov 1996 09:22:53 GMT
> >> Organization: TFSnet Online Services
> >> Lines: 34
> >> Message-ID: <3296bd68.23361085@news.tfs.net>
> >> References: <329267C3.1FAA@randl.com>

> >> Reply-To: chainsaw.at.tfs.net
> >> NNTP-Posting-Host: dialup12.lvw.tfs.net
> >> Mime-Version: 1.0
> >> Content-Type: text/plain; charset=us-ascii
> >> Content-Transfer-Encoding: 7bit
> >> X-Newsreader: Forte Agent .99f/16.299
> >> Xref: ix.netcom.com rec.radio.amateur.digital.misc:20504 rec.radio.swap:86283
> rec.radio.amateur.misc:119919 rec.radio.amateur.space:8909 r
> >>
> >> I am amused!
> >>
> >> Well, OK, I'm really not amused...
> >>
> >> Given that AEA is in the process of selling off their residual
> >> production to go out of business, I am just amazed at this impressive
> >> good deal R&L Electronics is offering... NOT!!
> >>
> >> It sure looks to me that they're all too willing to screw a few
> >> customers to solve their stock problems...
> >>
> >> Wouldn't it have been a little more fair of you to caveat your ad here
> >> with the note that they who buy AEA products now do so with little to
> >> no possibility of product support, since AEA is about to go belly up?
> >> Oh well, bidness is bidness!!!
> >>
> >> As always: caveat emptor. I'll remember this ad next time I'm
> >> shopping for gear...
> >>
> >> Bob
> >>
> >> Roger Smallwood <roger@randl.com> wrote:
> >>
> >> >New Special AEA DSP-232 all mode DSP tnc only $379.00
> >> >
> >> >for more info call (800)221-7735 or
> >> >email sales@randl.com
> >> >
> >> >--
> >> >Thanks!!
> >> >Roger N8EKG
> >> >R&L Electronics
> >> >roger@randl.com
> >>
> >Beware! There are several software problems
> >in the DSP-232. The software to fix them was
> >in beta and scheduled for shipment around
> >Thanksgiving. I know, I bought one about a
> >month ago and was looking forward to receiving
> >the fix. Damn! They'll be giving these things
> >away before the end of the year.

> >
>
>
> Well I received the update EEPROMS on November 23rd. Hope
> that all other received these as well. Have not tried
> the updates yets. But the beta versions had solved
> many of the problems.
>
> 73 Gary
>
>
> --
> **
> * Gary Johnson * (602) 833-6997 Voice *
> * gjohnson@indirect.com * (602) 898-1058 BBS *
> * CIS : 74041,2317 * *
> * FTP : ftp.indirect.com directory : pub/www/gjohnson *
> * WEB : http://www.indirect.com/user/gjohnson *
> * XPCOM - XPDUAL - XPKAM - XPPCI - XPPTC - XPWIN *
> **
>
Well I guess I should apologize. I received my new firmware
today. The package was postmarked 12/21 and the software had
a date of 12/6. I installed it and noticed the signal analysis
still seem to have a problem. I'll take what I have (many new
modems) and put up with the minor things. Whew, I thought I
was screwed. Thanks AEA!!!!!! Hopefully they will not go the
way of Lafayette, Heathkit, and the real Radio Shack.

Rod Hart WA3MEZ/AAR3DQ

2490. F)-29 JA transponder ?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <3299FA6B.7C4C@vogon.rain.com>
Source record: 20772

For the last two passes, I have received strong signals from
the FO-29 beacon/telemetry/JD downlink on 435.910, but the
JA transponder appears to be turned off.

Does anyone have any info about this ??

Philip - KC7FWB

2491. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: gjohnson@indirect.com
Message-ID: <57b1db$f8s@news.goodnet.com>
Source record: 20914
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

In article <NEWTNews.848869800.24173.rwhart@pc.wa3mez.netcom.com>, rwhart@ix.netcom.com says...
>
>
>In Article<3296bd68.23361085@news.tfs.net>, <chainsaw@tfs.net> writes:
>> Path:
ix.netcom.com!ix.netcom.com!enews.sgi.com!news.sgi.com!howland.erols.net!newsfeed.internetmci.com
!news.tfs.net!news
>> From: chainsaw@tfs.net (Bob)
>> Newsgroups:
rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.
radio.scanner,rec.radio.amate
>> Subject: Re: *** AEA DSP-232 only $ 379.00 ***
>> Date: Sat, 23 Nov 1996 09:22:53 GMT
>> Organization: TFSnet Online Services
>> Lines: 34
>> Message-ID: <3296bd68.23361085@news.tfs.net>
>> References: <329267C3.1FAA@randl.com>
>> Reply-To: chainsaw.at.tfs.net
>> NNTP-Posting-Host: dialup12.lvw.tfs.net
>> Mime-Version: 1.0
>> Content-Type: text/plain; charset=us-ascii
>> Content-Transfer-Encoding: 7bit
>> X-Newsreader: Forte Agent .99f/16.299
>> Xref: ix.netcom.com rec.radio.amateur.digital.misc:20504 rec.radio.swap:86283
rec.radio.amateur.misc:119919 rec.radio.amateur.space:8909 r
>>
>> I am amused!
>>
>> Well, OK, I'm really not amused...
>>
>> Given that AEA is in the process of selling off their residual
>> production to go out of business, I am just amazed at this impressive
>> good deal R&L Electronics is offering... NOT!!
>>
>> It sure looks to me that they're all too willing to screw a few
>> customers to solve their stock problems...
>>
>> Wouldn't it have been a little more fair of you to caveat your ad here
>> with the note that they who buy AEA products now do so with little to

>> no possibility of product support, since AEA is about to go belly up?
>> Oh well, bidness is bidness!!!
>>
>> As always: caveat emptor. I'll remember this ad next time I'm
>> shopping for gear...
>>
>> Bob
>>
>> Roger Smallwood <roger@randl.com> wrote:
>>
>> >New Special AEA DSP-232 all mode DSP tnc only $379.00
>> >
>> >for more info call (800)221-7735 or
>> >email sales@randl.com
>> >
>> >--
>> >Thanks!!
>> >Roger N8EKG
>> >R&L Electronics
>> >roger@randl.com
>>
>Beware! There are several software problems
>in the DSP-232. The software to fix them was
>in beta and scheduled for shipment around
>Thanksgiving. I know, I bought one about a
>month ago and was looking forward to receiving
>the fix. Damn! They'll be giving these things
>away before the end of the year.
>

Well I received the update EEPROMS on November 23rd. Hope
that all other received these as well. Have not tried
the updates yets. But the beta versions had solved
many of the problems.

73 Gary

--
****
* Gary Johnson * (602) 833-6997 Voice *
* gjohnson@indirect.com * (602) 898-1058 BBS *
* CIS : 74041,2317 * *
* FTP : ftp.indirect.com directory : pub/www/gjohnson *
* WEB : http://www.indirect.com/user/gjohnson *
* XPCOM - XPDUAL - XPKAM - XPPCI - XPPTC - XPWIN *
****

2492. (none)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: AA7PD@sisna.COM
Message-ID: <199611250451.UAA02309@UCSD.EDU>
Source record: 20915

```
add ham-space
```

2493. FS FT736R

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: Dick DiVittorio <dickd@magicnet.net>
Message-ID: <32992A0F.3940@magicnet.net>
Source record: 20916

I have an Yaesu FT736R For Sale in MINT condition.
W/
Tone En/Decoder
Keyer
Voice board
6M module
1.2G module
Box & manuels

2,200.00 plus UPS
I am in the Central Florida area

2494. FT-101-ZD

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: Brave Night <Brave@Night>
Message-ID: <01bbdaf7$62115160$LocalHost@default>
Source record: 20917

Hello,

Is there anybody able to tell me where I could find the I.C. which drives
the LEDs of the frequency indicator?

Thanks for a kind reply and best regards.

My e-mail: textrade@mc.village.it

2495. Re: new Mir feq's CONFUSION

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: "Charles W. Baetsen" <charlesb@abelcomputers.com>
Message-ID: <01bbdaf2$cb34b330$4b75e1cc@charlesb>
Source record: 20918

Thanks for the responses. I did manage to hear R0MIR calling CQ at about 3:09AM Sunday morning. I had to turn down the squelch to hear them though since they were kind of faint. I believe that they reach a maximum of only about 24 degrees above the horizon at our location in Hamilton, ON, so they were quite far away. Didn't manage to make contact however.

73, Charles...

--

Charles W. Baetsen, M.Eng VA3NGC
Software Engineer
ABEL Computers Inc. www.abelcomputers.com

2496. Re: Wx sat freqs

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: boyer@rd.bbc.co.uk
Message-ID: <57cg6s$qu4@bbcnews.rd.bbc.co.uk>
Source record: 20919

Joel E. Davis (jedent@phoenix.net) wrote:
: Need list of NOAA & Meteor sat freqs. Just geting started in Wx sat.
: Tnks joe K5ZCX -- Seabrook, Tx.

Try subscribing to the wx-sat mail list.

Mail addressed to wxsat-mail-daemon@ssg will be discarded.
Replies: wxsat-l@ssg.com - subscription changes: wxsat-request@ssg.com

J.

2497. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-25 00:00:00 UTC
From: David Kelly <dkelly@hiwaay.net>
Message-ID: <329A38FC.794BDF32@hiwaay.net>
Source record: 20920
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Gary L. Johnson wrote:
>
> In article <NEWTNews.848869800.24173.rwhart@pc.wa3mez.netcom.com>, rwhart@ix.netcom.com says...

> >Beware! There are several software problems
> >in the DSP-232. The software to fix them was
> >in beta and scheduled for shipment around
> >Thanksgiving. I know, I bought one about a
> >month ago and was looking forward to receiving
> >the fix. Damn! They'll be giving these things
> >away before the end of the year.
> >
>
> Well I received the update EEPROMS on November 23rd. Hope
> that all other received these as well. Have not tried
> the updates yets. But the beta versions had solved
> many of the problems.

And I too just now received an update in the mail. EPROM, not EEPROM. Parts are labeled "AEA V1.0 L31". Level 31? Instructions dated 10/24/96 say "This upgrade enhances your DSP-232;s ability to function in Amtor, Pactor, 9600 bps Packet and 9600 pbs KISS mode."

Just thinking, if AEA can't find a buyer for their intellectual property, it sure would be nice if they'd post the source code to the DSP-232. One of the reasons I purchased a DSP-232 was that it has a very powerfull CPU (MC68340) that can be programmed with free tools (gcc and gdb), and AEA's advertising copy showed a picture of their PCB including the jack for connecting Motorola's Background Debugging Mode. Alas, haven't had time to play with these toys.

--
David Kelly N4HHE, dkelly@hiwaay.net
==========
The human mind ordinarily operates at only ten percent of its capacity -- the rest is overhead for the operating system.

2498. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: dnorris@k7no.com
Message-ID: <329a34d2.1706618@news.syspac.com>
Source record: 20773
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

kd1nr@anomaly.ideamation.com (Anthony S. Pelliccio) wrote:

>For some absolutely hysterical lawyer jokes surf on over to
>http://cartalk.com and look for the picture of a shark with a tie on. Click
>on it and be launched into a sampling of NOLO Press' favorite lawyer jokes.
>
>Tony

Why is it that when you tell a 'joke' about an Irishman it is called
tasteless; when you tell a joke about a black it is called racist, and
when you tell a joke about a lawyer it is called funny?

hmmmm

cdn

2499. NORAD Two-Line Orbital Element Set: Space Shuttle (96330.16557757)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57dc3d$84@blackbird.afit.af.mil>
Source record: 20774

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96330.16557757 .00001005 00000-0 45026-5 0 245
2 24660 28.4662 149.7767 0009060 327.0492 124.5160 15.72086080 838
ORFEUS-SPAS II
1 24661U 96065B 96329.37500000 .00000945 00000-0 40550-5 0 144
2 24661 28.4701 155.5319 0008828 315.3557 331.7459 15.72148910 715
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2500. NORAD Two-Line Orbital Element Sets (TLE905)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57dcha$8h@blackbird.afit.af.mil>
Source record: 20775

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #905 -
Alouette 1
1 00424U 62049A 96326.55552568 .00000026 00000-0 19692-4 0 2440
2 00424 80.4627 128.4733 0023314 351.0864 8.9864 13.67880616703851
ATS 1
1 02608U 66110A 96329.36786233 -.00000183 00000-0 10000-3 0 9882
2 02608 14.5768 351.1101 0008129 104.0873 255.9770 1.00293588 26474
ATS 3
1 03029U 67111A 96327.27298233 -.00000126 00000-0 10000-3 0 5779
2 03029 14.9153 358.0837 0012395 265.9772 150.4837 1.00273046106357
Starlette
1 07646U 75010A 96326.22523199 -.00000164 00000-0 -15133-4 0 132
2 07646 49.8297 249.0154 0205691 29.1969 332.0242 13.82191226100684
LAGEOS
1 08820U 76039A 96326.91795354 -.00000014 00000-0 00000+0 0 2406
2 08820 109.8540 80.0504 0043405 94.5699 265.9800 6.38664628223907
ETS-2
1 09852U 77014A 96317.27233612 .00000017 00000-0 10000-3 0 842
2 09852 13.4144 31.2225 0006734 134.5985 225.4205 0.99998674 19127
GOES 2
1 10061U 77048A 96328.61523171 .00000039 00000-0 10000-3 0 7644
2 10061 12.5782 35.2696 0012405 131.4948 300.3253 1.00269811 16043
IUE
1 10637U 78012A 96330.24530227 -.00000131 00000-0 10000-3 0 3120
2 10637 35.7216 80.9816 1340200 62.1834 268.0555 1.00056354 21546
GOES 3
1 10953U 78062A 96325.38881465 -.00000123 00000-0 10000-3 0 7426
2 10953 11.5741 38.2441 0004040 216.0695 202.0576 1.00265473 20628

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SeaSat 1
1 10967U 78064A 96329.55770428 .00000036 00000-0 56457-4 0 5328
2 10967 107.9993 146.5801 0001967 250.2225 109.8704 14.38135495964505
Nimbus 7
1 11080U 78098A 96329.66082487 -.00000077 00000-0 -32208-4 0 6297
2 11080 98.9196 183.9102 0008377 256.6746 103.3475 13.83689594913360
GOES 5
1 12472U 81049A 96325.36290174 .00000091 00000-0 10000-3 0 9663
2 12472 8.4416 48.6104 0007282 84.9884 274.9911 1.00279171 14662
Cosmos 1383
1 13301U 82066A 96326.56899278 .00000045 00000-0 35182-4 0 5448
2 13301 82.9336 18.4078 0027445 163.4038 196.8020 13.68078848718898
LandSat 4
1 13367U 82072A 96330.18889347 .00000057 00000-0 22354-4 0 238
2 13367 98.0534 16.0418 0007690 7.2164 352.9137 14.57193016763983
DMSP B5D2-1
1 13736U 82118A 96329.15717328 .00000041 00000-0 35784-4 0 1238
2 13736 98.6232 154.9682 0008105 285.4746 74.5537 14.25813084723860
IRAS
1 13777U 83004A 96329.53363773 .00000046 00000-0 61470-4 0 4993
2 13777 98.9672 151.6455 0013853 15.7428 344.4164 13.99269275375792
Cosmos 1447
1 13916U 83021A 96330.18668956 .00000049 00000-0 35201-4 0 6371
2 13916 82.9430 71.9598 0039441 63.5182 297.0033 13.74348867685850
TDRS 1
1 13969U 83026B 96330.13731284 -.00000300 00000-0 00000+0 0 6650
2 13969 9.2118 42.1123 0003846 189.7700 193.0454 1.00265006 23008
GOES 6
1 14050U 83041A 96327.29524821 -.00000131 00000-0 10000-3 0 5745
2 14050 7.2860 52.1360 0005921 87.7250 287.9632 1.00218240107786
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96328.74512051 -.00000221 00000-0 -38782-4 0 5678
2 14780 98.3119 26.4000 0002447 134.0003 226.1387 14.57061242677194
UO-11
1 14781U 84021B 96326.90329964 .00000188 00000-0 39600-4 0 9296
2 14781 97.8122 310.7264 0011057 310.2392 49.7849 14.69500275680812
Cosmos 1574
1 15055U 84062A 96326.87838219 .00000027 00000-0 12867-4 0 8365
2 15055 82.9545 129.6519 0026291 263.8385 95.9778 13.73641633622630
Cosmos 1602
1 15331U 84105A 96329.57832564 .00000287 00000-0 30824-4 0 5196
2 15331 82.5326 322.7548 0021176 132.7462 227.5541 14.84809576656773
ERBS
1 15354U 84108B 96326.67154695 -.00000158 00000-0 73090-5 0 2350
2 15354 56.9930 108.8825 0008995 123.1386 237.0599 14.94994326660399
NOAA 9
1 15427U 84123A 96329.78739114 .00000081 00000-0 66603-4 0 9305
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2 15427 98.9316 34.6612 0014106 216.6314 143.3893 14.13819449616327
Mir
1 16609U 86017A 96330.22492270 .00004182 00000-0 51883-4 0 8299
2 16609 51.6554 32.2392 0013837 69.6830 290.5684 15.62489326615175
SPOT 1
1 16613U 86019A 96327.54691858 -.00000045 00000-0 00000+0 0 62
2 16613 98.8218 35.1646 0001976 135.5194 224.6142 14.19992445242783
Cosmos 1766
1 16881U 86055A 96328.54696869 .00000343 00000-0 38440-4 0 4335
2 16881 82.5200 21.3912 0019134 165.0700 195.1085 14.83779878557477
EGP
1 16908U 86061A 96329.87996656 -.00000083 00000-0 10000-3 0 1336
2 16908 50.0104 222.9647 0011610 62.1549 298.0460 12.44415513136418
NOAA 10
1 16969U 86073A 96329.85280427 .00000043 00000-0 36780-4 0 8613
2 16969 98.5315 322.3847 0012001 245.9003 114.0920 14.25011158529483
MOS-1
1 17527U 87018A 96327.19346808 -.00000043 00000-0 00000+0 0 4859
2 17527 98.9272 25.6040 0017121 245.4720 114.4658 14.00456491497108
GOES 7
1 17561U 87022A 96327.30104050 -.00000163 00000-0 10000-3 0 1547
2 17561 3.3727 68.2739 0004154 283.4503 82.9888 1.00281399 18890
Kvant-1
1 17845U 87030A 96329.90511309 .00008062 00000-0 94369-4 0 8259
2 17845 51.6531 33.8595 0013675 69.8463 290.2906 15.62490984549238
DMSP B5D2-3
1 18123U 87053A 96329.48665605 .00000013 00000-0 29041-4 0 6909
2 18123 98.7643 157.1368 0014245 153.4008 206.7904 14.15459036487175
RS-10/11
1 18129U 87054A 96330.24958124 .00000060 00000-0 49231-4 0 2869
2 18129 82.9263 29.4872 0013292 68.0038 292.2526 13.72371862472266
Meteor 2-16
1 18312U 87068A 96328.21528238 .00000116 00000-0 90520-4 0 5234
2 18312 82.5567 225.9373 0013081 128.2714 231.9768 13.84088402468179
Meteor 2-17
1 18820U 88005A 96329.88167109 .00000070 00000-0 48984-4 0 1052
2 18820 82.5392 279.2579 0015496 191.0520 169.0298 13.84765221445764
DMSP B5D2-4
1 18822U 88006A 96329.54948918 .00000013 00000-0 23783-4 0 3962
2 18822 98.3804 153.9571 0005386 258.5596 101.4979 14.23207632457386
Glonass 34
1 19163U 88043A 96324.38232902 -.00000005 00000-0 10000-3 0 1314
2 19163 65.3216 80.6112 0006830 143.0611 216.9779 2.13102392 65540
Glonass 36
1 19165U 88043C 96329.13198400 -.00000043 00000-0 10000-3 0 5415
2 19165 65.3033 80.4047 0003183 15.4883 344.5036 2.13102298 66264
METEOSAT 3
1 19215U 88051A 96325.31229873 -.00000060 00000-0 10000-3 0 2905
2 19215 3.5774 66.9068 0006014 127.9677 231.8401 0.96946945 18696
AO-13
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1 19216U 88051B 96329.53160745 .04347561 -43218-5 15344-2 0 3459
2 19216 57.0688 75.2966 6878658 58.4351 356.7489 2.90560471 33309
OKEAN 1
1 19274U 88056A 96325.97806192 .00000202 00000-0 22143-4 0 1337
2 19274 82.5136 124.8363 0019540 333.3261 26.6947 14.82541163452603
Meteor 3-2
1 19336U 88064A 96328.24753396 .00000051 00000-0 10000-3 0 5283
2 19336 82.5392 53.8718 0016425 194.3477 165.7161 13.16979921400412
Glonass 39
1 19503U 88085C 96329.16269387 -.00000048 00000-0 10000-3 0 4259
2 19503 65.5297 319.3243 0007195 133.7402 226.3221 2.13101591 63753
NOAA 11
1 19531U 88089A 96329.74879969 .00000038 00000-0 45212-4 0 7492
2 19531 99.1760 351.9702 0012037 146.2196 213.9746 14.13111900421125
TDRS 3
1 19548U 88091B 96328.75032455 -.00000194 00000-0 10000-3 0 2523
2 19548 2.8116 71.0587 0006323 159.8692 187.2729 1.00265455 17124
Glonass 40
1 19749U 89001A 96329.66919529 -.00000041 00000-0 10000-3 0 6384
2 19749 65.2745 79.9439 0006848 250.3273 109.5835 2.13101474 61270
Glonass 41
1 19750U 89001B 96326.43919802 -.00000032 00000-0 10000-3 0 5404
2 19750 65.2883 80.1272 0007571 242.4447 117.4670 2.13101789 61222
GPS BII-01
1 19802U 89013A 96329.68898501 -.00000019 00000-0 00000+0 0 3180
2 19802 55.4112 104.2474 0032498 123.5346 236.7697 2.00556629 56930
Akebono
1 19822U 89016A 96330.21797867 .00011272 00000-0 55101-3 0 8159
2 19822 75.0935 30.2155 3736461 344.5130 6.6359 7.94569206179463
Meteor 2-18
1 19851U 89018A 96327.63086633 .00000040 00000-0 22852-4 0 5221
2 19851 82.5197 154.7516 0013026 253.1825 106.7906 13.84421026390759
MOP-1
1 19876U 89020B 96328.06341098 -.00000150 00000-0 10000-3 0 2274
2 19876 2.3137 71.1071 0016290 280.2311 79.1070 0.97110801 8167
TDRS 4
1 19883U 89021B 96327.02443287 -.00000273 00000-0 00000+0 0 2755
2 19883 0.1964 88.7112 0006128 153.9726 146.4411 1.00270600200692
GPS BII-02
1 20061U 89044A 96328.03387176 -.00000075 00000-0 10000-3 0 3134
2 20061 54.0890 279.8458 0160298 222.5191 136.2097 2.00562933 54645
Nadezhda 1
1 20103U 89050A 96329.79743778 .00000026 00000-0 11793-4 0 9802
2 20103 82.9558 350.2282 0037353 328.6602 31.2335 13.73871257370736
GPS BII-03
1 20185U 89064A 96327.27341267 .00000002 00000-0 10000-3 0 3510
2 20185 55.1100 104.6602 0125685 317.2781 41.8285 2.00805078 53203
GMS 4
1 20217U 89070A 96329.13818287 -.00000372 00000-0 10000-3 0 4917
2 20217 2.1119 74.2766 0001206 256.8411 262.0360 1.00262418 27020
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INTERCOSMOS 24
1 20261U 89080A 96328.14421497 .00000193 00000-0 51848-4 0 5445
2 20261 82.5960 169.2105 1242361 40.2336 328.4307 12.47365476325725
GPS BII-04
1 20302U 89085A 96327.90369599 .00000007 00000-0 10000-3 0 3427
2 20302 53.1973 219.6022 0025149 138.6154 221.6624 2.00570967 52015
Meteor 3-3
1 20305U 89086A 96330.20257546 .00000044 00000-0 10000-3 0 6969
2 20305 82.5504 13.2658 0005810 281.3755 78.6731 13.04425583339198
COBE
1 20322U 89089A 96326.07741783 -.00000247 00000-0 -12972-3 0 2606
2 20322 98.9392 338.6565 0008638 325.8436 34.2172 14.03460437358932
Kvant-2
1 20335U 89093A 96329.90511309 .00008062 00000-0 94369-4 0 7527
2 20335 51.6531 33.8595 0013675 69.8463 290.2906 15.62490984398249
GPS BII-05
1 20361U 89097A 96325.42757557 -.00000081 00000-0 10000-3 0 1392
2 20361 56.0896 47.1103 0092421 138.0430 222.6876 2.00565313 41442
COSMOS 2054 (Altair-1)
1 20391U 89101A 96326.42474734 -.00000142 00000-0 00000+0 0 4605
2 20391 4.1559 62.4052 0004282 151.4897 343.4537 1.00269122 25572
SPOT 2
1 20436U 90005A 96330.07191380 -.00000044 00000-0 00000+0 0 1517
2 20436 98.7507 41.3847 0000646 106.6923 253.4354 14.20013975354676
UO-14
1 20437U 90005B 96326.77010493 .00000052 00000-0 36867-4 0 2261
2 20437 98.5362 46.7690 0011792 96.7123 263.5402 14.29939234356575
AO-16
1 20439U 90005D 96328.26138883 .00000013 00000-0 21832-4 0 242
2 20439 98.5511 50.7373 0012130 94.1005 266.1564 14.29990613356806
DO-17
1 20440U 90005E 96328.19787724 .00000014 00000-0 22007-4 0 257
2 20440 98.5551 51.4055 0012265 93.3548 266.9041 14.30132938356829
WO-18
1 20441U 90005F 96330.22013232 .00000006 00000-0 19024-4 0 291
2 20441 98.5541 53.3133 0012817 89.3639 270.9022 14.30101697357111
LO-19
1 20442U 90005G 96329.85377738 .00000031 00000-0 28576-4 0 259
2 20442 98.5565 53.5199 0012987 87.3890 272.8775 14.30213329357085
GPS BII-06
1 20452U 90008A 96329.31173074 .00000067 00000-0 10000-3 0 2412
2 20452 54.0417 160.2463 0071702 91.7728 269.1102 2.00551500 50025
MOS-1B
1 20478U 90013A 96329.76712124 -.00000196 00000-0 -11465-3 0 04
2 20478 99.1119 37.1706 0005400 162.4160 197.7190 13.93965191266922
DEBUT
1 20479U 90013B 96326.98352900 -.00000006 00000-0 50765-4 0 240
2 20479 99.0225 322.0450 0540925 126.1991 239.0384 12.83345988318148
FO-20
1 20480U 90013C 96326.56537292 -.00000030 00000-0 -29533-5 0 9219
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2 20480 99.0232 321.4765 0541056 127.7704 237.3689 12.83235168318074
MOS-1B R/B
1 20491U 90013D 96327.54754890 .00000513 00000-0 10386-2 0 2956
2 20491 99.0658 32.4519 0469250 283.7298 71.2010 13.03002983322483
LACE
1 20496U 90015A 96329.53564537 .00001546 00000-0 51113-4 0 7060
2 20496 43.1031 7.7542 0011293 9.9188 350.1891 15.36114759378480
Nadezhda 2
1 20508U 90017A 96329.82586147 .00000049 00000-0 36379-4 0 9795
2 20508 82.9424 124.6795 0043643 280.8075 78.8170 13.73515237337944
OKEAN 2
1 20510U 90018A 96329.89785202 .00000175 00000-0 20630-4 0 5428
2 20510 82.5227 76.4940 0019374 146.9476 213.2952 14.78644748363422
GPS BII-07
1 20533U 90025A 96325.20772130 -.00000060 00000-0 00000+0 0 2838
2 20533 54.4635 280.7463 0048496 77.6251 282.9096 2.00568236 48719
PegSat
1 20546U 90028A 96329.35919683 .00008621 00000-0 14843-3 0 9955
2 20546 94.1245 83.7403 0058376 103.6497 257.1266 15.49165749369781
HST
1 20580U 90037B 96322.39904697 .00000479 00000-0 32079-4 0 8841
2 20580 28.4706 313.6545 0005890 337.3221 22.7103 14.91127758161473
MACSAT 2
1 20608U 90043B 96327.07386557 .00000158 00000-0 24601-4 0 2264
2 20608 89.9274 172.0515 0103507 223.4868 135.8159 14.64956433349404
Glonass 44
1 20619U 90045A 96325.34386064 -.00000017 00000-0 10000-3 0 3408
2 20619 65.1240 318.6185 0024432 210.3145 149.5609 2.13102485 50635
Glonass 45
1 20620U 90045B 96329.21675763 -.00000049 00000-0 10000-3 0 3288
2 20620 65.1062 318.4529 0012266 94.5797 265.5618 2.13102215 50759
Glonass 46
1 20621U 90045C 96324.12230647 -.00000009 00000-0 10000-3 0 9408
2 20621 65.1281 318.6915 0012901 194.7313 165.2525 2.13102527 50644
Kristall
1 20635U 90048A 96329.90511309 .00008062 00000-0 94369-4 0 5441
2 20635 51.6531 33.8595 0013675 69.8463 290.2906 15.62490984369071
ROSAT
1 20638U 90049A 96327.16539575 .00000075 00000-0 23667-4 0 6109
2 20638 52.9916 307.5819 0010880 241.7289 118.2603 15.07498432356149
Meteor 2-19
1 20670U 90057A 96330.17996198 .00000051 00000-0 32698-4 0 1380
2 20670 82.5460 219.9946 0015370 158.0232 202.1592 13.84130008324018
CRRES
1 20712U 90065A 96328.95116479 .00000109 00000-0 16781-3 0 3598
2 20712 17.5887 184.7500 7177812 139.0782 306.3251 2.35807217 46889
GPS BII-08
1 20724U 90068A 96326.54790059 .00000006 00000-0 00000+0 0 1383
2 20724 55.0446 102.3375 0130403 186.4057 173.4025 2.00564309 44609
Feng Yun1-2
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1 20788U 90081A 96329.88278538 .00000108 00000-0 10000-3 0 1738
2 20788 98.8083 329.8406 0016532 54.4079 305.8414 14.01292832318606
Meteor 2-20
1 20826U 90086A 96330.10051867 .00000035 00000-0 18571-4 0 344
2 20826 82.5257 156.2927 0014763 67.5201 292.7518 13.83640703311096
GPS BII-09
1 20830U 90088A 96328.09847769 -.00000084 00000-0 00000+0 0 1181
2 20830 56.0306 44.9169 0066480 95.7927 264.9797 2.00567510 45279
GPS BIIA-10
1 20959U 90103A 96328.49997772 -.00000012 00000-0 10000-3 0 933
2 20959 55.2337 104.3579 0099914 231.0666 127.9907 2.00555370 43871
DMSP B5D2-5
1 20978U 90105A 96329.79913451 .00000103 00000-0 51925-4 0 8527
2 20978 98.5819 39.4922 0080188 56.4999 304.3809 14.32698073312718
Glonass 47
1 21006U 90110A 96327.43046557 -.00000042 00000-0 10000-3 0 8979
2 21006 65.2716 79.3525 0056211 186.3919 173.5204 2.13102818 46380
Glonass 48
1 21007U 90110B 96329.49984630 -.00000042 00000-0 10000-3 0 388
2 21007 65.2733 79.3695 0033465 177.6065 182.3928 2.13101169 46412
Glonass 49
1 21008U 90110C 96326.58068901 -.00000035 00000-0 00000+0 0 3032
2 21008 65.2535 79.4079 0008984 268.7485 91.1403 2.13098726 46347
AO-21
1 21087U 91006A 96327.69340515 .00000094 00000-0 82657-4 0 7616
2 21087 82.9419 204.3938 0036122 121.5027 238.9666 13.74574178291788
RS-12/13
1 21089U 91007A 96330.25819242 .00000034 00000-0 19663-4 0 9357
2 21089 82.9207 69.8909 0029452 142.3422 217.9800 13.74075000291153
MOP-2
1 21140U 91015B 96329.05623727 -.00000014 00000-0 00000+0 0 2993
2 21140 0.8769 78.6562 0002210 62.6058 302.1588 1.00265286 23211
Nadezhda 3
1 21152U 91019A 96329.78618190 .00000069 00000-0 58415-4 0 6663
2 21152 82.9214 26.8347 0040596 256.5101 103.1535 13.73539880285799
Glonass 50
1 21216U 91025A 96328.38728331 -.00000045 00000-0 10000-3 0 5543
2 21216 64.8624 317.9869 0012912 189.7119 170.2703 2.13103193 43918
Glonass 51
1 21217U 91025B 96326.11317679 -.00000024 00000-0 10000-3 0 9600
2 21217 64.8685 318.0820 0008160 208.0273 151.9440 2.13101800 43851
Glonass 52
1 21218U 91025C 96324.34586362 -.00000011 00000-0 10000-3 0 4297
2 21218 64.8566 318.1129 0005329 287.3137 72.6455 2.13102523 43821
GRO
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1 21578U 91050E 96330.25201609 .00000292 00000-0 10792-3 0 9270
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2 21655 82.5547 208.1281 0013634 128.6964 231.5380 13.16849923253601
UARS
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2 21701 56.9854 186.0347 0005519 104.4127 255.7519 14.96553586284413
DMSP B5D2-6
1 21798U 91082A 96329.66114835 .00000084 00000-0 67808-4 0 5249
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Glonass 57
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2 22057 64.7142 317.9976 0009118 308.8040 51.1176 2.13102696 33575
Glonass 58
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FREJA
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GPS BIIA-18
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Glonass 60
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2 22521 31.1021 147.1482 0056107 280.2823 79.1493 15.03176311206035
UFO F1
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GPS BIIA-19
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2 22581 55.1647 341.6605 0066831 37.3464 323.1568 2.00574711 26771
GPS BIIA-20
1 22657U 93032A 96329.12204857 -.00000075 00000-0 00000+0 0 7740
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RADCAL
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UFO F2
1 22787U 93056A 96322.98011958 -.00000073 00000-0 00000+0 0 6900
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SPOT 3
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Meteor 3-6
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TUBSAT-B
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Glonass 63
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Glonass 64
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2 23045 64.5683 318.3150 0010325 25.5945 334.4609 2.13102397 20414
GOES 8
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MSTI 2
1 23101U 94028A 96329.55731430 .00006834 00000-0 10107-3 0 3770
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Glonass 66
1 23204U 94050B 96329.99272447 .00000065 00000-0 00000+0 0 3839
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Glonass 67
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RESURS 1-3
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Glonass 73
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TDRS 7
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Glonass 77
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2 23953 55.0862 101.9279 0018667 333.2946 26.5774 2.00563853 2653
Progress M-32
1 24071U 96043A 96325.42801023 -.00006819 00000-0 -68994-4 0 1067
2 24071 51.6538 56.4505 0013603 52.9082 307.2969 15.62420823 17465
ADEOS
1 24277U 96046A 96328.97306800 -.00000044 00000-0 00000+0 0 1099
2 24277 98.6183 43.6103 0001790 57.8767 302.2622 14.27641528 14083
FO-29
1 24278U 96046B 96328.72767464 .00000002 00000-0 38803-4 0 381
2 24278 98.5695 31.6872 0351594 358.5730 1.4374 13.52626520 13344
Soyuz TM-24
1 24280U 96047A 96329.90511309 .00008062 00000-0 94369-4 0 979
2 24280 51.6531 33.8595 0013675 69.8463 290.2906 15.62490984 15541
FAST
1 24285U 96049A 96330.02357403 .00001031 00000-0 10181-3 0 387
2 24285 82.9848 133.9561 2208378 353.3082 4.2393 10.81605349 10340
Microsat
1 24291U 96050A 96327.42844642 .00055725 64735-5 36447-3 0 733
2 24291 62.7945 95.2202 0620334 119.8027 246.5943 14.65318155 12453
MO-30
1 24305U 96052B 96329.53046084 .00000204 00000-0 20364-3 0 439
2 24305 82.9294 145.8244 0031373 56.6052 303.8093 13.73086317 10971
GPS BIIA-27
1 24320U 96056A 96323.23701739 -.00000037 00000-0 00000+0 0 409
2 24320 54.6760 282.2603 0054889 150.5533 209.8215 2.00566869 1224
Molniya 3-47
1 24640U 96060A 96329.05876812 .00000045 00000-0 -13255-2 0 431
2 24640 62.8587 152.8056 7361176 288.3455 9.4649 2.00616434 612
1996060B
1 24641U 96060B 96330.24475696 .00309386 76792-5 52347-3 0 543
2 24641 62.8196 38.5796 0191028 125.3998 236.5555 15.76867169 4985
1996060C
1 24642U 96060C 96330.30739785 .04135104 84513-5 70710-3 0 883
2 24642 62.7913 36.0242 0077709 116.1441 244.7875 16.23934529 5032
1996060D
1 24643U 96060D 96300.17176725 .00029140 00000-0 54458+0 0 31
2 24643 62.8804 157.0390 7404585 288.2435 86.9773 1.96534388 39
1996059C
1 24644U 96059C 96309.34412794 .30092023 75539-5 40968-2 0 16
2 24644 62.8803 27.5661 0238849 94.8971 267.9365 15.88259486 35
SAC-B/HETE
1 24645U 96061A 96327.82670284 .00000594 00000-0 37183-4 0 239
2 24645 37.9777 15.2955 0047084 84.9575 275.6560 15.14771224 2750
1996062B
1 24649U 96062B 96329.40882732 .00181339 -22450-5 65357-3 0 209
2 24649 25.3337 59.3637 2539930 0.4328 359.6827 10.52760954 1731
1996062D
1 24651U 96062D 96330.16800024 .00181191 -21871-5 64608-3 0 199
2 24651 25.3250 56.8088 2538967 4.8514 357.2469 10.53038558 1908
Arabsat 2B
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1 24652U 96063A 96325.31372041 .00010406 00000-0 31079-2 0 61
2 24652 3.9925 208.1383 7284808 182.9551 165.5729 2.27503266 145
Measat 2
1 24653U 96063B 96329.36167171 -.00000227 00000-0 00000+0 0 100
2 24653 0.0760 224.1451 0001987 89.1768 28.4699 1.00267330 165
1996063C
1 24654U 96063C 96329.46790582 .00000386 00000-0 81196-3 0 92
2 24654 3.8720 206.6912 7277837 186.0721 154.7415 2.22873807 269
1996063D
1 24655U 96063D 96329.69025790 .00011512 00000-0 45545-2 0 89
2 24655 3.9450 206.0318 7278144 186.8212 151.0139 2.27611686 241
Mars-96
1 24656U 96064A 96323.01130778 .13328068 12842-4 45328-4 0 133
2 24656 51.4998 11.2010 0005797 231.1092 129.2833 16.58057739 180
STS 80
1 24660U 96065A 96330.16557757 .00001005 00000-0 45026-5 0 245
2 24660 28.4662 149.7767 0009060 327.0492 124.5160 15.72086080 838
ORFEUS-SPAS II
1 24661U 96065B 96329.37500000 .00000945 00000-0 40550-5 0 144
2 24661 28.4701 155.5319 0008828 315.3557 331.7459 15.72148910 715
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
Progress M-33
1 24663U 96066A 96329.90511309 .00008062 00000-0 94369-4 0 98
2 24663 51.6531 33.8595 0013675 69.8463 290.2906 15.62490984 786
1996066B
1 24664U 96066B 96327.41277526 .58399191 12743-4 19260-3 0 190
2 24664 51.6425 45.7297 0017318 127.1554 233.1175 16.57786928 401
Hot Bird 2
1 24665U 96067A 96327.75000000 .00002618 73664-6 10000-3 0 62
2 24665 23.8873 196.7180 7311335 179.2354 352.6087 2.28438038 23
1996067B
1 24666U 96067B 96328.40108914 .00103242 41517-6 24475-2 0 66
2 24666 23.8810 195.3274 7299850 180.6555 177.1519 2.30262481 31
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2501. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: Mark Bryant <bryant@sohobusiness.com>
Message-ID: <01bbdb3e$8e1f6ca0$a3d879a8@soho>
Source record: 20776
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Have you ever gotten a nasty letter from an Irishman or black? And I and B
don't pretend that they know everything.

M

> Why is it that when you tell a 'joke' about an Irishman it is called
> tasteless; when you tell a joke about a black it is called racist, and
> when you tell a joke about a lawyer it is called funny?
>
> hmmmm
>
> cdn
>
>
>

2502. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: pacrimgolf@kuentos.guam.net
Message-ID: <57e39e$i57@lehi.kuentos.guam.net>
Source record: 20777
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Bob wrote:

>>> Given that AEA is in the process of selling off their residual
>>> production to go out of business, I am just amazed at this impressive
>>> good deal R&L Electronics is offering... NOT!!
>>>
>>> It sure looks to me that they're all too willing to screw a few
>>> customers to solve their stock problems...
>>>
>>> Wouldn't it have been a little more fair of you to caveat your ad here
>>> with the note that they who buy AEA products now do so with little to
>>> no possibility of product support, since AEA is about to go belly up?
>>> Oh well, bidness is bidness!!!
>>>

AEA didn't have any product support when they WERE in business, so
what's the big deal ? The typical ham doesn't look for support anyway,
all they care about is saving ten bucks.

>>> As always: caveat emptor. I'll remember this ad next time I'm
>>> shopping for gear...
>>>
>>> Bob
>>>

If you think R & L did something wrong by putting something on sale to
get rid of it, you are probably pissed off at the produce guy in your local
grocery store most of the time too. R & L always had good prices, in my book.
But you go right ahead and get even with them by paying more for something
somewhere else. That will really piss 'em off.....

73, Jim KH2D

2503. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <57f4e0$849@faatcrl.faa.gov>
Source record: 20778
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

I had a DSP-232 for about a week. One of the main problems was a birdie at 145.085-145.105. This is right in the middle of the local packet bbs area. With a cable connected to the 232 my ht picked up this birdie from 35 feet away (s9). The case by itself tx's up th 5 feet away. I checked the unit for proper grounding, and found no problem areas. I tryed to use the unit for 9600 sat work and was only able to get a weak signal from KO-23. I took my 232 back to HRO for an exchange, thinking that I must have gotten a defective unit, but the one the shelf did the same thing. On the way to HRO I talked to two people both returned their DSP-232's for a refund. Knowing the state of AEA, (I called late last week for tech help. The recorded message said the company was being 'bought' and any tech problems or servive warrenty work needed, call ARRL in about a month). I was very lucky to get my money back. I now plan on buying a TAPR DSP93 kit.

73 Jeff

2504. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: wnewkirk@iu.net
Message-ID: <57f5ou$22h@cc.iu.net>
Source record: 20779
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <329a34d2.1706618@news.syspac.com>, dnorris@k7no.com (CDN) writes:
>when you tell a joke about a lawyer it is called funny?
>hmmmm
>cdn

because a number of high-profile members of the profession diligently slave
to become the ambulance-chaser stereotype that is the root of the gags.

all you gotta do is listen to the radio and tv ads.

one radio station personality locally commented once that for the money the
law firm was paying for the spot, and for the production cost of the spot, the
cost of a professional voice talent would have been peanuts and would
enhance their appearance and remove some of the "used car salesman" image
the founder projects...

Bill Newkirk WB9IVR The Space Coast Amateur Technical Group
Melbourne, FL duty now for the future of amateur radio
Lombardi's 1st Law of Business:
Companies succeed in spite of their best effort. If they succeed at all.

2505. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: Tom <tomc@tiac.net>
Message-ID: <329BE4A7.5B2B@tiac.net>
Source record: 20780
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

FUman wrote:
>
> > In <329a34d2.1706618@news.syspac.com>, dnorris@k7no.com (CDN) writes:
> > >when you tell a joke about a lawyer it is called funny?
> > >hmmmm
>
> Maybe the jokes aren't funny. But neither is what lawyers are helping
> to do to our hobby, our country and our world.
>
> People oftn use humor to release frustration and tension. The cost of
> doing business with and the results of lawyers causes both. No wonder
> there are so many lawyer jokes.
>
> Perhaps if lawyers had a canon of ethics which kept them from taking
> frivolous cases, charging exorbanant rates, raping those who win large
> judgement sums, and taking or making action that hurt groups like
> amateur radio they would have a some respect from the general public.
>
> Of course, some lawyer will try and justify or nullify the above. That's
> what they do.
>
> de kg7fu
>

I won't try to nullify your argument...I'm ready for a return to the wild
west where things got settled with force instead of the law...

2506. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: Burt Fisher <k1oik@ccsnet.com>
Message-ID: <329BAC5C.42D9@ccsnet.com>
Source record: 20781
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Thomas Mosher wrote:

> Since when is AEA going tits up?
> --
> Thomas Mosher
> tmosher@isource.net

Hams do not know what "tits" are.
Explain for them.

#================#===#
Burt Fisher	Teacher of video, broadcasting and electronics
Amateur call	South Dennis, Ma. (Cape Cod)
K1OIK	If you sit on the fence, it is a pain in the butt
#================#===#
|This message was posted from home k1oik@ccsnet.com |
#===#
If you try to milk too much, you won't get a drop
Samantha Fisher

2507. Re: balancing tubes: how?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-26 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <329B1383.4A38@vogon.rain.com>
Source record: 20782
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.ssb

Clifford Buttschardt wrote:
>
> What is the better way of balancing tubes such as 3-500Z units? Is is
> better to balance the standing current for a given bias (zero bias in the
> 3-500 units of course) or should the plate current be measured at a give
> RF drive for each tube? One measures the mu of the tube while the second
> approach measures the transconductance. Which is more practical for hams?

Set the standing current (no drive) in each tube to be the
same (adjust bias). Apply drive, and adjust the drive level(s)
to each tube to get the same plate current.

If you are really pedantic, now try halving the drive. If there
is a large difference in plate current, replace the lower reading
tube.

Philip

2508. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: FUman <kg7fu@rio.com>
Message-ID: <01bbdc0a$ff402c40$9f8260ce@surf.rio.com>
Source record: 20783
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

> In <329a34d2.1706618@news.syspac.com>, dnorris@k7no.com (CDN) writes:
> >when you tell a joke about a lawyer it is called funny?
> >hmmmm

Maybe the jokes aren't funny. But neither is what lawyers are helping to do to our hobby, our country and our world.

People oftn use humor to release frustration and tension. The cost of doing business with and the results of lawyers causes both. No wonder there are so many lawyer jokes.

Perhaps if lawyers had a canon of ethics which kept them from taking frivolous cases, charging exorbanant rates, raping those who win large judgement sums, and taking or making action that hurt groups like amateur radio they would have a some respect from the general public.

Of course, some lawyer will try and justify or nullify the above. That's what they do.

de kg7fu
=20

2509. Re: KO-23, and KO-25 RX but no TX

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Bob Houghton <houghton@cyberg8t.com>
Message-ID: <57g8il$mgt@gate.cyberg8t.com>
Source record: 20784

You don't indicate what software you are using. The microsats cannot be accessed by "connecting" with conventional AX-25 packet protocol. You need a special softwre suite such as PB/PG under DOS or WISP under windows. Check out the AMSAT home page
for more detailed info.

Bob Houghton

2510. MO-30

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Bob Houghton <houghton@cyberg8t.com>
Message-ID: <57g8t8$mpl@gate.cyberg8t.com>
Source record: 20785

Can anyone tell me the callsign for MO-30? I have read two articles about
this bird and understand that it uses the same protocols as PacSat
but I have not seen the XXXXXXX-11 and XXXXXXX-12 callsigns for PB/PG.
Nothing on the MO-30 homepage either!

Anybody?

Bob Houghton

2511. NORAD Two-Line Orbital Element Set: Space Shuttle (96331.41666667)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57g8a3$5r0@blackbird.afit.af.mil>
Source record: 20786

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96331.41666667 .00001008 00000-0 45040-5 0 288
2 24660 28.4681 140.6766 0008407 335.2813 11.8264 15.72216320 1038
ORFEUS-SPAS II
1 24661U 96065B 96331.41666667 .00001007 00000-0 45015-5 0 156
2 24661 28.4676 140.6767 0008793 340.0083 6.8390 15.72177022 1034
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2512. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Thomas Mosher <tmosher@isource.net>
Message-ID: <329BF3BB.507F@isource.net>
Source record: 20787
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Jim Kehler wrote:
>
> Bob wrote:
>
> >>> Given that AEA is in the process of selling off their residual
> >>> production to go out of business, I am just amazed at this impressive
> >>> good deal R&L Electronics is offering... NOT!!
> >>>
> >>> It sure looks to me that they're all too willing to screw a few
> >>> customers to solve their stock problems...
> >>>
> >>> Wouldn't it have been a little more fair of you to caveat your ad here
> >>> with the note that they who buy AEA products now do so with little to
> >>> no possibility of product support, since AEA is about to go belly up?
> >>> Oh well, bidness is bidness!!!
> >>>
>
> AEA didn't have any product support when they WERE in business, so
> what's the big deal ? The typical ham doesn't look for support anyway,
> all they care about is saving ten bucks.
>
> >>> As always: caveat emptor. I'll remember this ad next time I'm
> >>> shopping for gear...
> >>>
> >>> Bob
> >>>
>
> If you think R & L did something wrong by putting something on sale to
> get rid of it, you are probably pissed off at the produce guy in your local
> grocery store most of the time too. R & L always had good prices, in my book.
> But you go right ahead and get even with them by paying more for something
> somewhere else. That will really piss 'em off.....
>
> 73, Jim KH2D
Since when is AEA going tits up?
--
Thomas Mosher
tmosher@isource.net

2513. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Nov27.142054.14987@ke4zv.atl.ga.us>
Source record: 20788
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

In article <57f4e0$849@faatcrl.faa.gov> Jeff Griffin <griffinj@admin.tc.faa.gov> writes:
>I had a DSP-232 for about a week. One of the main problems was
>a birdie at 145.085-145.105. This is right in the middle of the
>local packet bbs area. With a cable connected to the 232 my ht
>picked up this birdie from 35 feet away (s9). The case by
>itself tx's up th 5 feet away. I checked the unit for proper
>grounding, and found no problem areas. I tryed to use the unit
>for 9600 sat work and was only able to get a weak signal from
>KO-23. I took my 232 back to HRO for an exchange, thinking that
>I must have gotten a defective unit, but the one the shelf did
>the same thing. On the way to HRO I talked to two people both
>returned their DSP-232's for a refund. Knowing the state of
>AEA, (I called late last week for tech help. The recorded
>message said the company was being 'bought' and any tech
>problems or servive warrenty work needed, call ARRL in about a
>month). I was very lucky to get my money back. I now plan on
>buying a TAPR DSP93 kit.

Heh, this is a common problem, and not just with the DSP-232.
The PK-232 has it too. The problem is a lack of RF bond between
the case halves. If you sand the paint off the mating surfaces,
and use a screw every 5 cm (as is standard VHF shielding practice),
those harmonics of the reference oscillator stay inside where
they belong, and don't radiate all over the shack.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

2514. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: kd6clo@radio.org
Message-ID: <NEWTNews.849120461.19442.kd6clo@kd6clo.radio.org>
Source record: 20789
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.digital.misc,rec.radio.amateur.antenna

In Article<01bbdc0a$ff402c40$9f8260ce@surf.rio.com>, <kg7fu@rio.com> writes:
> Path: news.radio.org!metro.atlanta.com!news.he.net!www.nntp.primenet.com!nntp.primenet.com!howland.erols.net!newsfeed.internetmci.com!news.rio.com!news
> From: "FUman" <kg7fu@rio.com>
> Newsgroups: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space
> Subject: Re: ARRL lawyer to sue member
> Date: 27 Nov 1996 02:28:05 GMT
> Organization: kg7fu
> Lines: 25
> Message-ID: <01bbdc0a$ff402c40$9f8260ce@surf.rio.com>
> References: <01bb739f.8e9f00c0$7f8260ce@surf.rio.com> <32883836.4DD2@rcru.rl.ac.uk> <56clho$8cp$4@news3.microserve.net> <57a3vj$n9m@news3.texas.net> <57ac8a$1hd@anomaly.ideamation.com> <329a34d2.1706618@news.syspac.com> <57f5ou$22h@cc.iu.net>
> NNTP-Posting-Host: p59.t0.rio.com
> Mime-Version: 1.0
> Content-Type: text/plain; charset=ISO-8859-1
> Content-Transfer-Encoding: quoted-printable
> X-Newsreader: Microsoft Internet News 4.70.1155
> Xref: news.radio.org rec.radio.amateur.antenna:16645 rec.radio.amateur.digital.misc:9027 rec.radio.amateur.dx:1192 rec.radio.amateur.equipment:24086 rec.radio.amateur.homebrew:11023 rec.radio.amateur.misc:29505 rec.radio.amateur.policy:12573 rec.radio.amateur.space:3862
>
> > In <329a34d2.1706618@news.syspac.com>, dnorris@k7no.com (CDN) writes:
> > >when you tell a joke about a lawyer it is called funny?
> > >hmmmm
>
> Maybe the jokes aren't funny. But neither is what lawyers are helping
> to do to our hobby, our country and our world.
>
> People oftn use humor to release frustration and tension. The cost of
> doing business with and the results of lawyers causes both. No wonder
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>
> Perhaps if lawyers had a canon of ethics which kept them from taking
> frivolous cases, charging exorbanant rates, raping those who win large
> judgement sums, and taking or making action that hurt groups like
> amateur radio they would have a some respect from the general public.
>

> Of course, some lawyer will try and justify or nullify the above. That's
> what they do.
>
>
> de kg7fu
> =20
>
>
>
YEA! YOU TELL'EM JAMES!!!!!!!!!!!!!!!!!!!!!!!!!

de kd6clo :)

2515. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: jaykq4ms@ipass.net
Message-ID: <329c84ef.7445476@news.ipass.net>
Source record: 20790
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

rickets@earthlink.com (Dave Rickmers) wrote:

>n1btq@tiac.net (Tim Smith) wrote:
>
>
>>Can you tell me what the s/w is called and where I could d/l it?
>>
>>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
>>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
>>>
>>> sbfft11.zip Sound Blaster spectral display and filtering
>dr
Is the software anywhere else on the net?? I can't connect to
simtel.net for some reason. Netscape keeps giving me "no DNS entry"

Thanks
Jay
jaykq4ms@ipass.net

2516. whats the best tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Reed Christiansen <radiohead@telis.org>
Message-ID: <329CBD9C.2ADB@telis.org>
Source record: 20791

I hate to post such a general question to the net.
But, I'm geting back into radio after being out of the country for 2 years. Allot has changed computer wise since I've been gone. Especially with windows 95. I'm looking for a tracking software thats not to expensive and if posible runs under windows 95. that might be to much to ask, but any inpute about dos based trackers or windows would be great. I ran instatrack before I left and that worked great but unfortunatly I lost all my disks so I have to buy new software.

thanks for your imput.

At the same time If anyone has a 2meter allmode amp that they want to sell I'm looking for one at the right price

thanks,
Reed

Radiohead.telis@mail.telis.org

2517. Re: Weather satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Maurice Sketchley <maurice.sketchley@dial.pipex.com>
Message-ID: <329BE204.836@dial.pipex.com>
Source record: 20792

cloud78572@aol.com wrote:
>
> Does anyone know of any active weather satellites operating in the 137
> Mhz area (other than NOAA12+14,Meteor3-5) that are able to be monitored in
> New England? Also, has anyone had any luck with the German program
> WXSAT.EXE in decoding infrared pictures? I get visible light pictures
> great, but IR looks like hell. Thanks!

I can't get any sort of pictures out of WXSAT.EXE. Anybody know where I
can find an English language version of the .TXT file that comes with it?
thanks
maurice

2518. RS-12 skeds anyone?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <329C207B.3F03@mwt.net>
Source record: 20793

Anybody want to schedule some attempts on RS-12? I'm still working on
WAS Satellite (all on RS-12). Alaska and Hawaii attempts really
appreciated...might be pretty tough from here (Wisconsin), but hafta try
it! 73, Scott, N0EDV (EN43).
2nd Place in the ARRL June VHF contest from Michigan in the Limited
Multi-op category (op from EN67...probably the rarest USA inland grid!)

--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

2519. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: Burt Fisher <k1oik@ccsnet.com>
Message-ID: <329D1066.43A7@ccsnet.com>
Source record: 20794
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Brian Carling wrote:

> |>Hams do not know what "tits" are.
> |>Explain for them.
> |>
> |>#===============#===#
> |>| Burt Fisher | Teacher of lunacy |
>
> Here's the explanation:
> They are those three things on Burt Fisher's CHEST!

Typical ham response.

#===============#===#
Burt Fisher	Teacher of video, broadcasting and electronics
Amateur call	South Dennis, Ma. (Cape Cod)
K1OIK	If you sit on the fence, it is a pain in the butt
#===============#===#
|This message was posted from home k1oik@ccsnet.com |
#===#
If you try to milk too much, you won't get a drop
Samantha Fisher

2520. ARLS016 Ham radio on space station

Newsgroup: rec.radio.amateur.space
Date: 1996-11-27 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls016.1996@arrl.org>
Source record: 20795
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS016
ARLS016 Ham radio on space station

ZCZC AS24
QST de W1AW
Space Bulletin 016 ARLS016
From ARRL Headquarters
Newington, CT November 27, 1996
To all radio amateurs

SB SPACE ARL ARLS016
ARLS016 Ham radio on space station

A foundation has been laid to give Amateur Radio a permanent presence in space. Earlier this month, Amateur Radio delegates from eight countries--Russia, Japan, Germany, Great Britain, Italy, Canada, France and the US--met at the NASA Johnson Space Center in Houston, Texas, to map plans to include a permanent ham radio station aboard the International Space Station, to be tended by station crew members.

From the United States, members of the SAREX Working Group, officials from NASA, US representatives of the Russian Mir Amateur Radio experiment and members from the Johnson Space Center Amateur Radio Club attended the meetings November 4 and 5, chaired by Roy Neal, K6DUE. ARRL Vice President Joel Harrison, W5ZN (ex-WB5IGF), represented the League at the gathering. SAREX Working Group member Rosalie White, WA1STO, of the ARRL Headquarters staff, was among those on hand. The delegates jointly developed a draft memorandum of understanding to promote the development of Amateur Radio on the International Space Station--to be known as ARISS.

The ARISS group will provide for the planning, coordination and performance of Amateur Radio projects on the space station, similar to the way the SAREX Working Group currently coordinates Amateur Radio activities on many space shuttle missions. AMSAT and IARU organizations in each of the eight countries are to review and consider approving the memorandum of understanding. In the US, this includes AMSAT-NA and the ARRL.

The AMSAT-NA Board unanimously approved the memorandum of understanding at its November 11 Board of Directors meeting in Tucson, Arizona. Once the memorandum is finalized, AMSAT-NA President Bill Tynan, W3XO, has been given authority by the board to sign it. AMSAT-NA Vice President for Manned Space Frank Bauer,

KA3HDO, congratulated the international ARISS team for a job well done. ''We look forward to a truly cooperative international venture on the International Space Station,'' he said.
NNNN
/EX

2521. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Erik Skovgaard <Erik.Skovgaard@bc.sympatico.ca>
Message-ID: <01bbdcdf$8a603840$3fc56cce@default>
Source record: 20796
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt

Jay,

It must be a local problem. It works for me. Try it a couple of times.
Sometimes the DNS cache needs to be refreshed and a second or third attempt
does the job. Netscape is a little impatient with DNS.

73 de VE7MDL ....Erik.

Jay <jaykq4ms@ipass.net> wrote in article
<329c84ef.7445476@news.ipass.net>...
> rickets@earthlink.com (Dave Rickmers) wrote:
>
> >n1btq@tiac.net (Tim Smith) wrote:
> >
> >
> >>Can you tell me what the s/w is called and where I could d/l it?
> >>
> >>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> >>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
1032518 bytes
> >>>
> >>> sbfft11.zip Sound Blaster spectral display and filtering
> >dr
> Is the software anywhere else on the net?? I can't connect to
> simtel.net for some reason. Netscape keeps giving me "no DNS entry"
>
> Thanks
> Jay
> jaykq4ms@ipass.net
>

2522. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Chuck Harrington <paketpet@gate.net>
Message-ID: <329D4021.6BE7@gate.net>
Source record: 20797
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Thomas Mosher wrote:
>
> Since when is AEA going tits up?
> --
> Thomas Mosher
> tmosher@isource.net

Since November 15th, there abouts...
RIP

--
Visual PacketPeT - Terminal Software For All hardware TNCs!
Visit WEB SIGHT - http://www.gate.net/~paketpet
DOWNLOAD - ftp://ftp.gate.net/pub/users/paketpet/vpaket32.zip
EMAIL - paketpet@gate.net

2523. Any feedback on TS-50 or 60 computer control?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: mikedrum@ix.netcom.com
Message-ID: <57jt0c$81b@dfw-ixnews4.ix.netcom.com>
Source record: 20798
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Greetings,

I am planning on building and buying the hardware to interface my Kenwood TS-60s to my computer. I am sure their are others who have already done this and have some opinion on the software available to control the radio once the interfacing has been done. I would like to hear from people who use their radios in this manner and get their feedback on what software they use and what they like or do not like about it. Any recomendations would be appreciated.

Thanks for your time and all reply's will be answered.

Mike, N2QAC.

2524. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: bry@mnsinc.com
Message-ID: <57k3kl$4k2@news1.mnsinc.com>
Source record: 20799
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Burt Fisher <k1oik@ccsnet.com> whistled a happy tune like:

|>Thomas Mosher wrote:

|>> Since when is AEA going tits up?
|>> --
|>> Thomas Mosher
|>> tmosher@isource.net

|>Hams do not know what "tits" are.
|>Explain for them.
|>
|>#===============#===#
|>| Burt Fisher | Teacher of lunacy |

Here's the explanation:
They are those three things on Burt Fisher's CHEST!

73 from Amateur Radio AF4K / G3XLQ
http://www.mnsinc.com/bry
E-mail: bry@mnsinc.com
Home of MEGALIST ham radio files, pirate links etc. etc.

2525. Sat. freqs.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: w8cnl@csra.net
Message-ID: <329dd9c3.4262564@news.csra.net>
Source record: 20800

I would like the Mir uplink and downlink freq.'s . Have heard they are
working split on 2mtr FM .
tnx de Derek..
reply here or via email..

2526. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: tomrice@netcom.com
Message-ID: <tomriceE1LF3E.A9x@netcom.com>
Source record: 20801
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Why is it that you never see lawyers at the beach?

Because the cats keep covering them up with sand.

73 de WB6BYH
--
"Start off every day with a smile and get it over with." --W.C.Fields
Tom R. Rice
tomrice@netcom.com
CIS: 71160,1122

2527. WTB: Kenwood IF-10D or plans to build.

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: mikedrum@ix.netcom.com
Message-ID: <57jsg7$kas@sjx-ixn10.ix.netcom.com>
Source record: 20802
Cross-posted to: rec.radio.swap,rec.radio.scanner,rec.radio.amateur.space,rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc

Greetings,

I am still looking to buy or build a Kenwood IF-10D interface for my TS-60s all-mode transceiver. This interface mounts inside the radio and serves as a buffer between the radios digital board and a level converter such as Kenwood's IF-232C interface. I am building my own level converter from readily available plans, but I have not been able to find any plans or specifications on the IF-10D.

If you have information on this interface, or have an IF-10D you would like to part with, please leave me a private Email message and I will get back to you.

All reply's will be answered.

Thanks for your time.

Mike, N2QAC.

2528. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.961128151525.10435B-100000@oso.slonet.org>
Source record: 20803
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

I've had the very same difficulty for weeks! Cliff K7RR

On Wed, 27 Nov 1996, Jay wrote:

> rickets@earthlink.com (Dave Rickmers) wrote:
>
> >n1btq@tiac.net (Tim Smith) wrote:
> > >
> > >
> > >>Can you tell me what the s/w is called and where I could d/l it?
> > >>
> > >>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> > >>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
> > >>>
> > >>> sbfft11.zip Sound Blaster spectral display and filtering
> > >dr
> > Is the software anywhere else on the net?? I can't connect to
> > simtel.net for some reason. Netscape keeps giving me "no DNS entry"
> >
> > Thanks
> > Jay
> > jaykq4ms@ipass.net
> >
> >

2529. VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Intrepid <chrisb@connect.ab.ca>
Message-ID: <01bbdd81$59290200$c94d22cf@jaclen.connect.ab.ca>
Source record: 20804
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

This is not a joke. Serious business, guys. Please read and take
some action.

>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
>>>>"rec.music.white-power", so that they can get their message of hate out
>>>>to young people using the Internet. Newsgroups are public discussions
on
>>>>the Internet and their formation requires enough support from the
Internet
>>>>community.
>>>>
>>>>EACH AND EVERY ONE OF US HAS ONE VOTE when it comes to creating a new
>>>>Usenet group. I hope you will vote NO and thereby tell these NAZIS we
>>>>don't want their stuff on the net. Below is the procedure, please
repost
>>>>this plea and get the NO vote out. If you want to see the official
call
>>>>for votes, you can try on "news.group".
>>>>
>>>> DO NOT VOTE TWICE - that would constitute voting fraud.
>>>>
>>>> HOW TO VOTE:
>>>>
>>>> Send e-mail (posts to newsgroups are invalid) to:
>>>>
>>>> music-vote@sub-rosa.com
>>>>
>>>> This is an impartial, third party vote taker.
>>>> Please check the address before you mail your vote. Your mail
>>>> message, to be accepted by the counting computer, must
>>>> contain only the following statement with no signature:
>>>>
>>>> I vote NO on rec.music.white-power
>>>>
>>>> Vote counting is automated. Failure to follow these directions
>>>>may mean that your vote does not get counted. If you do not receive
>>>>an acknowledgment of your vote within three days contact the votetaker
>>>>about the problem. It's your responsibility to make sure your vote is
>>>>registered correctly.
>>>>
>>>> Here's what Canada's George Burdi, of the neo-Nazi Heritage
>>>>Front, had to say about this vote, on February 21, on his RESISTANCE
>>>>mailing list:

>>>>
>>>> "There is a call for votes coming on rec.music.white-power
>>>> in the next week or so, and you will be notified in a special
>>>> issue of RREN exactly what to do. FOLLOW THE INSTRUCTIONS
>>>> TO THE LETTER. Let me be perfectly blunt and state that we have
>>>> more than enough net-nazis to win this thing handsdown. But every
>>>> one of you must vote YES! And just voting yes means nothing unless
>>>> you do it properly. So you have been forewarned. The instructions
>>>> are coming to your email box soon, and they are not complicated.
>>>> Just follow them as told, and we will have a WP music newsgroup
>>>> finally!"
>>>>
>>>>If Mr. Burdi's confidence disturbs you, please give this letter the
>>>>widest possible distribution, and help us deliver the largest NO vote
>>>>in the history of the UseNet.

--
Second Star to the right, and straight on till morining.

2530. EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Intrepid <chrisb@connect.ab.ca>
Message-ID: <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>
Source record: 20805
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

This is not a joke. Serious business, guys. Please read and take
some action.

>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
>>>>"rec.music.white-power", so that they can get their message of hate out
>>>>to young people using the Internet. Newsgroups are public discussions
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>>>>the Internet and their formation requires enough support from the
Internet
>>>>community.
>>>>
>>>>EACH AND EVERY ONE OF US HAS ONE VOTE when it comes to creating a new
>>>>Usenet group. I hope you will vote NO and thereby tell these NAZIS we
>>>>don't want their stuff on the net. Below is the procedure, please
repost
>>>>this plea and get the NO vote out. If you want to see the official
call
>>>>for votes, you can try on "news.group".
>>>>
>>>> DO NOT VOTE TWICE - that would constitute voting fraud.
>>>>
>>>> HOW TO VOTE:
>>>>
>>>> Send e-mail (posts to newsgroups are invalid) to:
>>>>
>>>> music-vote@sub-rosa.com
>>>>
>>>> This is an impartial, third party vote taker.
>>>> Please check the address before you mail your vote. Your mail
>>>> message, to be accepted by the counting computer, must
>>>> contain only the following statement with no signature:
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>>>> I vote NO on rec.music.white-power
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>>>> Vote counting is automated. Failure to follow these directions
>>>>may mean that your vote does not get counted. If you do not receive
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>>>> Here's what Canada's George Burdi, of the neo-Nazi Heritage
>>>>Front, had to say about this vote, on February 21, on his RESISTANCE
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>>>>
>>>> "There is a call for votes coming on rec.music.white-power
>>>> in the next week or so, and you will be notified in a special
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>>>> TO THE LETTER. Let me be perfectly blunt and state that we have
>>>> more than enough net-nazis to win this thing handsdown. But every
>>>> one of you must vote YES! And just voting yes means nothing unless
>>>> you do it properly. So you have been forewarned. The instructions
>>>> are coming to your email box soon, and they are not complicated.
>>>> Just follow them as told, and we will have a WP music newsgroup
>>>> finally!"
>>>>
>>>>If Mr. Burdi's confidence disturbs you, please give this letter the
>>>>widest possible distribution, and help us deliver the largest NO vote
>>>>in the history of the UseNet.

--
Second Star to the right, and straight on till morining.

2531. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Jim Lewis <lewy@pacbell.net>
Message-ID: <329E7657.5A9F@pacbell.net>
Source record: 20806
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Intrepid wrote:
>
> This is not a joke. Serious business, guys. Please read and take
> some action.I consider it a stupid prank. Whats it got to do with rec.aviation. Let'em have their
damn group. We don't listen to their music.
--
Just an opinion mindya
Starduster SA-100 4/sale
lewy@pacbell.net
__________|__________
\ _0_/ /
_____(_+_)___/__
|/ \|
|.........................|

2532. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: Lee Eschen <leeschen@cdsnet.net>
Message-ID: <329E6E28.205A@cdsnet.net>
Source record: 20807
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

Clifford Buttschardt wrote:
>
> I've had the very same difficulty for weeks! Cliff K7RR
>
> On Wed, 27 Nov 1996, Jay wrote:
>
> > rickets@earthlink.com (Dave Rickmers) wrote:
> >
> > >n1btq@tiac.net (Tim Smith) wrote:
> > >
> > >
> > >>Can you tell me what the s/w is called and where I could d/l it?
> > >>
> > >>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
> > >>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
> > >>>
> > >>> sbfft11.zip Sound Blaster spectral display and filtering
> > >dr
> > Is the software anywhere else on the net?? I can't connect to
> > simtel.net for some reason. Netscape keeps giving me "no DNS entry"
> >
> > Thanks
> > Jay
> > jaykq4ms@ipass.net
> >
> >

I just got it using Netware 3.01 with no problems whatever. Try again!

-- N6AXB in Cave Junction, Orygon.

Lee, of the Independent Republic of Jefferson: (leeschen@cdsnet.net)
We laugh at honor and are shocked to find traitors in our midst.
-C. S. Lewis

2533. Is ther a FAQ for Weather Sat stuff?

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: len@isdi.com
Message-ID: <len.205.0001662E@isdi.com>
Source record: 20808

Hi:

I am looking for info on Wweather Satellite gear. Is ther a FAQ around?

len - KA7FTP

2534. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-28 00:00:00 UTC
From: jayfar@netaxs.com
Message-ID: <jayfar-ya023480002811961944100001@netnews>
Source record: 20809
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd81$59290200$c94d22cf@jaclen.connect.ab.ca>, "Intrepid"
<chrisb@connect.ab.ca> wrote:

| This is not a joke. Serious business, guys. Please read and take
| some action.
|
| >>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
| >>>>"rec.music.white-power", so that they can get their message of hate out
| >>>>to young people using the Internet. Newsgroups are public discussions

It may as well be a joke. The vote *was* held _many months ago_ and the
proposed newsgroup was defeated.

Cheers,
Jayfar

//
////// The Mops Page <URL:http://www.netaxs.com/~jayfar/mops.html> //////
//
Jay Farrell
jayfar@netaxs.com <URL:http://www.netaxs.com/~jayfar/>
Philadelphia, Pennsylvania, USA Jayfar's Virtual Mac FTP Site

2535. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: jherman@Hawaii.Edu
Message-ID: <57nfph$3hp@news.Hawaii.Edu>
Source record: 20721
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

In article <3296bd68.23361085@news.tfs.net>, Bob <chainsaw.at.tfs.net> wrote:
>Wouldn't it have been a little more fair of you to caveat your ad here
>with the note that they who buy AEA products now do so with little to
>no possibility of product support, since AEA is about to go belly up?
>Oh well, bidness is bidness!!!

Ah, "product support" - the cry of the appliance operator. Maybe you
should invest in a soldering gun and test equipment, Bob.

KH2PZ

2536. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: Jeff Power <power@nf.sympatico.ca>
Message-ID: <329EA72B.15EE@nf.sympatico.ca>
Source record: 20810
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Intrepid wrote:
>
> This is not a joke. Serious business, guys. Please read and take
> some action.
>
> >>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called<SNIP, SNIP>
> >>>>in the history of the UseNet.

I may be incorrect, but I don't believe so.

Should you be posting this stuff in the newsgroups you have?
And why have you posted it twice? I understand you wish to get
your point across, but thats a waste of bandwidth.
Perhaps a better choice would be alt.activism, maybe.
I don't agree with white-supremacists, nor would I appreciate
them voicing their racist opinions in un-appropriate areas.
But, they _do_ have the right of free speech, at least in Canada
and the US, among other places, and if they wish to have their own
private area for their thoughts, I must agree with them on that.
As long as no laws are being broken, I don't believe we should
deny them their rights, even if they seek to remove the rights
of others. Free speech is universal. (Or should be.)

But.... thats just my opinion. And you have yours.
(Thanks to free speech, we can both express them.)

Ciao.

Jeff Power

power@nf.sympatico.ca
also:
lunatic@mad.scientist.com

2537. Re: Weather satellites

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: cloud78572@aol.com
Message-ID: <19961129064600.BAA03003@ladder01.news.aol.com>
Source record: 20811

Hi Maurice-
I couldn't get any pictures at first either, but now I can. I replaced the second IF filter in my scanner with a .01mf capacitor to widen the bandwidth.I record the wav file while in DOS. To get the right recording level, I made some short test recordings of pager signals with the scanner volume set differently for each recording. Play back the recordings, and compare the loudness of each with a standard wav file like "windows\chimes.wav". When you find the volume setting on your scanner that will play back at the same loudness as the standard wav,make a note of it.Thats the volume setting your scanner should be at when you record the satellite pass.When the satellite begins to make it's pass,don't begin to record until the signal is noise-free.Stop when you can't hear the signal anymore.Start the program and go to wav-datie input.Select the wav file.Then go to parameter.If it's a NOAA-12/14 daylight pass hit the "vis" button,make V1=1.25,O1= -.12, make the N-S button read S-N if it's a south to north pass, hit the "lock"button,and then select "ok". Select from Datie "bild start",and sit back and let the computer do the rest. Be prepared for a LONG wait for the picture to start to appear.On my '386 a 10 minute pass takes up to 8 HOURS to totally process. Just let it run overnight if your computer is as slow as mine. If you record a meteor 3-5 pass, the settings I have the best luck with are:Hit the "meteor" button, V1=1.00,O1= -.01,zeilenl.=1196.15,Grd.-Verst.=1.15,don't select "lock". It's a slow program, but it really works. The pictures come out great. Don't forget to save the picture-goto "bitmap""speichen" to save. Good luck!

2538. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: Erik Skovgaard <Erik.Skovgaard@bc.sympatico.ca>
Message-ID: <01bbddb9$7c436360$8bc56cce@default>
Source record: 20812

Try and keep that sort of stuff away from this list, S.V.P.

....Erik.

Intrepid <chrisb@connect.ab.ca> wrote in article
<01bbdd81$59290200$c94d22cf@jaclen.connect.ab.ca>...
>
> This is not a joke. Serious business, guys. Please read and take
> some action.
>
(JUNK deleted)

> Second Star to the right, and straight on till morining.
>

2539. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: Jeff Power <lunatic@mad.scientist.com>
Message-ID: <329ED244.45F5@mad.scientist.com>
Source record: 20813
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

```
Jim Lewis wrote:
>
> Intrepid wrote:
> >
> > This is not a joke. Serious business, guys. Please read and take
> > some action.
> I consider it a stupid prank.
> Whats it got to do with rec.aviation. Let'em have their
> damn group. We don't listen to their music.
> --

Here, here.
Stick it to 'em.

Ciao.

Jeff Power

power@nf.sympatico.ca
also:
lunatic@mad.scientist.com
```

2540. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: "Michael D. Painter" <mpainter@maxinet.com>
Message-ID: <01bbddc6$47e9fa40$13ce77cc@michaelp>
Source record: 20814
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Free speech is free speech. I'm at the end of the spectrum that says it's
all right to yell fire in a theater if it's not to crowded.
Keeping things from "young people" has never been to successful.

Intrepid <chrisb@connect.ab.ca> wrote in article
<01bbdd81$59290200$c94d22cf@jaclen.connect.ab.ca>...
>
> This is not a joke. Serious business, guys. Please read and take
> some action.
>
> >>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
> >>>>"rec.music.white-power", so that they can get their message of hate
out
> >>>>to young people using the Internet. Newsgroups are public
discussions
> on
> >>>>the Internet and their formation requires enough support from the
> Internet
> >>>>community.
> >>>>
> >>>>EACH AND EVERY ONE OF US HAS ONE VOTE when it comes to creating a new
> >>>>Usenet group. I hope you will vote NO and thereby tell these NAZIS
we
> >>>>don't want their stuff on the net. Below is the procedure, please
> repost
> >>>>this plea and get the NO vote out. If you want to see the official
> call
> >>>>for votes, you can try on "news.group".
> >>>>
> >>>> DO NOT VOTE TWICE - that would constitute voting fraud.
> >>>>
> >>>> HOW TO VOTE:
> >>>>
> >>>> Send e-mail (posts to newsgroups are invalid) to:
> >>>>
> >>>> music-vote@sub-rosa.com
> >>>>
> >>>> This is an impartial, third party vote taker.
> >>>> Please check the address before you mail your vote. Your mail
> >>>> message, to be accepted by the counting computer, must
> >>>> contain only the following statement with no signature:
> >>>>
> >>>> I vote NO on rec.music.white-power

> >>>>
> >>>> Vote counting is automated. Failure to follow these directions
> >>>>may mean that your vote does not get counted. If you do not receive
> >>>>an acknowledgment of your vote within three days contact the
votetaker
> >>>>about the problem. It's your responsibility to make sure your vote
is
> >>>>registered correctly.
> >>>>
> >>>> Here's what Canada's George Burdi, of the neo-Nazi Heritage
> >>>>Front, had to say about this vote, on February 21, on his RESISTANCE
> >>>>mailing list:
> >>>>
> >>>> "There is a call for votes coming on rec.music.white-power
> >>>> in the next week or so, and you will be notified in a special
> >>>> issue of RREN exactly what to do. FOLLOW THE INSTRUCTIONS
> >>>> TO THE LETTER. Let me be perfectly blunt and state that we have
> >>>> more than enough net-nazis to win this thing handsdown. But every
> >>>> one of you must vote YES! And just voting yes means nothing
unless
> >>>> you do it properly. So you have been forewarned. The
instructions
> >>>> are coming to your email box soon, and they are not complicated.
> >>>> Just follow them as told, and we will have a WP music newsgroup
> >>>> finally!"
> >>>>
> >>>>If Mr. Burdi's confidence disturbs you, please give this letter the
> >>>>widest possible distribution, and help us deliver the largest NO vote
> >>>>in the history of the UseNet.
>
>
>
> --
> Second Star to the right, and straight on till morining.
>

2541. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: plucky@mindspring.com
Message-ID: <plucky-2911961341170001@user-168-121-115-224.dialup.mindspring.com>
Source record: 20815
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>, "Intrepid" <chrisb@connect.ab.ca> wrote:

> This is not a joke. Serious business, guys. Please read and take
> some action.
>

This sounds suspiciously like the "if this e-mail were AIDS you'd now be infected" chain-letter or the "Good Times!" virus alert, a long-since irrelvant e-mail chain that just will not die. I thought the sturm-und-drang about the nazi music newsgroup came and went months ago.

A check of news.groups shows no action on a "rec.music.white-power" listed in "Current Status of Usenet Newsgroup Proposals" by David C Lawrence <newgroups-request@uunet.uu.net> as of Tuesday, Nov 26 1996.

Furthermore, in a thread called REC.MUSIC.WHITE-POWER on news.groups, I did find the following.

> ["Gary Romalis" chain letter deleted]
>
> That chain letter has been circulating since March 15th. The issue has
> been moot since March 18th, 1996. Please tell the person who sent you this
> message (only; please don't start ANOTHER chain letter to address the last
> one) how wrong it is. This "Stopping a Tidal Wave" message may provide a
> model.

I suggest we drop this thread *NOW*, and remind ourselves to be suspicious of anything with four or more levels of ">" quoting in the future.

(apologies for massive cross-post, but it seems appropriate in an effort to squelch this cross-posted, chain-mailed monster)

--Chris

--------- Chris Adamson ------ plucky@mindspring.com -------
======= http://www.mindspring.com/~plucky/homer.html =======
Forget computers in schools;
they should be installing cash registers and deep fryers

2542. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: xelph@acm.org
Message-ID: <xelph-2911961032220001@smx-ca2-24.ix.netcom.com>
Source record: 20816
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>, "Intrepid" <chrisb@connect.ab.ca> wrote:

> >>>>EACH AND EVERY ONE OF US HAS ONE VOTE when it comes to creating a new
> >>>>Usenet group. I hope you will vote NO and thereby tell these NAZIS we
> >>>>don't want their stuff on the net.

I see no reason to vote NO as long as they don't crosspost unrelated stuff to my favourite newsgroups, just like YOU do.

Whatever happened to freedom of speech? You can't bar people from having (even lame) opinions. Your mission, should you accept it, is to convince them that they're wrong :). Well good luck, in my case I'd rather ignore them.

X

"merere caelum atque in tartaro evenire" --xelph

2543. Re: ARRL lawyer to sue member (another twist...)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: A Redshirt <occupant@psyber.com>
Message-ID: <01bbde38$321b37c0$56c087cf@occupant.psyber.com>
Source record: 20817
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Lifted from the local paper without permission, and forwarded
without comment...

"The parents of 4-year-old Sarah Engstrand filed a US $1.2
million
lawsuit in New York City against the girls' grandparents because
the elder couple's Akita dog, Becky Bear, bit and deeply scarred

Sarah's nose and cheek during the girl's birthday party in 1994.
The grandparents are heartsick at being sued by their own son,
who not surprisingly is a lawyer, as is his wife."

A Redshirt in Rocklin

"HILLARY SHOT VINCE!!" - A Local Bumper Sticker
--

2544. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: doering@xrayspex.nlm.nih.gov
Message-ID: <57nk91$a3i@lhc.nlm.nih.gov>
Source record: 20818
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <plucky-2911961341170001@user-168-121-115-224.dialup.mindspring.com>,
Chris Adamson <plucky@mindspring.com> wrote:
:In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>, "Intrepid"
:<chrisb@connect.ab.ca> wrote:
:
:> This is not a joke. Serious business, guys. Please read and take
:> some action.
:
: This sounds suspiciously like the "if this e-mail were AIDS you'd now
:be infected" chain-letter or the "Good Times!" virus alert, a long-since
:irrelvant e-mail chain that just will not die. I thought the
:sturm-und-drang about the nazi music newsgroup came and went months ago.
:
: A check of news.groups shows no action on a "rec.music.white-power"
:listed in "Current Status of Usenet Newsgroup Proposals" by David C
:Lawrence <newgroups-request@uunet.uu.net> as of Tuesday, Nov 26 1996.
:
: Furthermore, in a thread called REC.MUSIC.WHITE-POWER on news.groups, I
:did find the following.
:
:> ["Gary Romalis" chain letter deleted]
:>
:> That chain letter has been circulating since March 15th. The issue has
:> been moot since March 18th, 1996. Please tell the person who sent you this
:> message (only; please don't start ANOTHER chain letter to address the last
:> one) how wrong it is. This "Stopping a Tidal Wave" message may provide a
:> model.

Yup - there was a Call For Votes to create rec.music.white-power last March,
and when the voting period ended the proposal was defeated (by a very large
margin, IIRC). The group was not created. Nobody is currently attempting
to create this newsgroup, so voting against it is pointless.

There's been at least one other iteration of this e-mail chain - I got
several messages urging me to vote against the creation of the newsgroup
last July and August (again, well after the proposal was defeated in March.)

It looks like this may be joining "Good Times", Craig Shergold, and the
FCC's modem tax as perennial e-mail pests.

ljd

2545. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: rwa@cs.athabascau.ca
Message-ID: <57nsrh$c50@aurora.cs.athabascau.ca>
Source record: 20819

Jeff Power <power@nf.sympatico.ca> writes:

>But, they _do_ have the right of free speech, at least in Canada
>and the US, among other places, and if they wish to have their own
>private area for their thoughts, I must agree with them on that.

A) Hate speech is not protected in Canada; it's specifically proscribed.
B) A usenet group is not private.

regards,
Ross ve6pdq
--
Ross Alexander, ve6pdq -- (403) 675 6311 -- rwa@cs.athabascau.ca

2546. FS-1.2G Module

Newsgroup: rec.radio.amateur.space
Date: 1996-11-29 00:00:00 UTC
From: Dick DiVittorio <dickd@magicnet.net>
Message-ID: <329F3CED.6327@magicnet.net>
Source record: 20820

I have a 1.2G module for the FT736R for sale for $450 and I pay the UPS.
I sold the radio and the new owner didn't want 1.2.

Dick KB4QKP

2547. Re: ARRL lawyer to sue member (another twist...)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: stevec@rain.org
Message-ID: <57os2q$7sm@news3.snfc21.pacbell.net>
Source record: 20722
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <01bbde38$321b37c0$56c087cf@occupant.psyber.com>, "A Redshirt"
<occupant@psyber.com> wrote:
>
>Lifted from the local paper without permission, and forwarded
>without comment...
>
>"The parents of 4-year-old Sarah Engstrand filed a US $1.2
>million
>lawsuit in New York City against the girls' grandparents because
>the elder couple's Akita dog, Becky Bear, bit and deeply scarred
>
>Sarah's nose and cheek during the girl's birthday party in 1994.
>The grandparents are heartsick at being sued by their own son,
>who not surprisingly is a lawyer, as is his wife."

I wonder if the family isn't in cahoots on this - Grandparents file
bankruptcy, Homeowner's insurance pays, Everyone profits.
Get a few crapola TV show appearances & a book.
Grandparents now live high on the hog in retirement.
Children inherit estate.

So they say, well, let's at least get something positive out of
the bad situation, eh?

Probably how a lawyer's mind works.

stevech@pacbell.net

Stevech@pacbell.net If Computers Are The Answer...
WB6CSZ What Was The Question?

2548. Re: ARRL lawyer to sue member (another twist...)

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: rogerjb@ibm.net
Message-ID: <57otcs$tm0$4@news-s01.ca.us.ibm.net>
Source record: 20723
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In <01bbde38$321b37c0$56c087cf@occupant.psyber.com>, "A Redshirt" <occupant@psyber.com> writes:
>
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>"The parents of 4-year-old Sarah Engstrand filed a US $1.2
>million
>lawsuit in New York City against the girls' grandparents because
>the elder couple's Akita dog, Becky Bear, bit and deeply scarred
>
>Sarah's nose and cheek during the girl's birthday party in 1994.
>The grandparents are heartsick at being sued by their own son,
>who not surprisingly is a lawyer, as is his wife."
>
If I had to guess, based on no other information, I would guess that this is a scheme to get around the inheritance tax, which will tax a bequest from the grandparents to the kids or grandkids, at a confiscatory rate of 45% if they have a sizeable estate.

On the other hand, tort damages for physical injury are generally excluded from taxes. Therefore, the unfortunate injury to the daughter may be a vehicle for all concerned to avoid the inheritance tax. (Or it may not be; I'm only guessing).

Sounds like a clever scheme, by a clever lawyer. The kind of lawyer people pay good money for.

Roger J. Buffington
W6VZV
rogerjb@ibm.net

USC Law School, Class of '97

"I want to die peacefully, in my sleep, like my Grandfather."
"Not screaming, and in terror, like his passengers."

2549. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: Jeff Power <lunatic@mad.scientist.com>
Message-ID: <32A0B6B3.2B34@mad.scientist.com>
Source record: 20724
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Jean-Michel P. Decombe wrote:
>
> I see no reason to vote NO as long as they don't crosspost unrelated stuff
> to my favourite newsgroups, just like YOU do.
>
> Whatever happened to freedom of speech? You can't bar people from having
> (even lame) opinions. Your mission, should you accept it, is to convince
> them that they're wrong :). Well good luck, in my case I'd rather ignore
> them.

Here, here. Someone with a brain. (Just my opinion.)

Jeff Power
power@nf.sympatico.ca
also:
lunatic@mad.scientist.com

2550. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: clint.bradford@atdbbs.com
Message-ID: <961130105815963@atdbbs.com>
Source record: 20725

>But, they _do_ have the right of free speech, at least in Canada
>and the US, among other places, and if they wish to have their own
>private area for their thoughts, I must agree with them on that.

>>A) Hate speech is not protected in Canada; it's specifically
>>proscribed. B) A usenet group is not private.

And the most basic point: there are no such Constitutional protections
on a non-US government-run telecommunications service.

2551. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: bs02@engr.uark.edu
Message-ID: <32a1b458.7226315@news.uark.edu>
Source record: 20726
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

There are only 3 laywer jokes...

all the rest are true stories!

On Tue, 26 Nov 1996 00:09:28 GMT, dnorris@k7no.com (CDN) wrote:

>kd1nr@anomaly.ideamation.com (Anthony S. Pelliccio) wrote:
>
>
>>For some absolutely hysterical lawyer jokes surf on over to
>>http://cartalk.com and look for the picture of a shark with a tie on. Click
>>on it and be launched into a sampling of NOLO Press' favorite lawyer jokes.
>>
>>Tony
>
>
>Why is it that when you tell a 'joke' about an Irishman it is called
>tasteless; when you tell a joke about a black it is called racist, and
>when you tell a joke about a lawyer it is called funny?
>
>hmmmm
>
>cdn
>
>

2552. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: Bill@halcyon.com
Message-ID: <NEWTNews.849404703.26069.bill@bill.halcyon.com>
Source record: 20727
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.space,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.digital.misc,alt.radio.digital,alt.ham-radio.vhf-uhf,alt.ham-radio.uwave,alt.ham-radio.ssb,alt.ham-radio.spread,alt.ham-radio.slowscan,alt.ham-radio.rtty,alt.ham-radio.packet,alt.ham-radio.nocode,alt.ham-radio.morse,alt.ham-radio.hf,alt.ham-radio.fm,alt.ham-radio.fax,alt.ham-radio.exotic-modes,alt.ham-radio.eme,alt.ham-radio.dxing,alt.ham-radio.digital-voice,alt.ham-radio.binaries,alt.ham-radio.amtor,alt.ham-radio.am

> Clifford Buttschardt wrote:
> >
> > I've had the very same difficulty for weeks! Cliff K7RR
> >
> > On Wed, 27 Nov 1996, Jay wrote:

snip

>
> I just got it using Netware 3.01 with no problems whatever. Try again!
>
> -- N6AXB in Cave Junction, Orygon.
> ---
> Lee, of the Independent Republic of Jefferson: (leeschen@cdsnet.net)
> We laugh at honor and are shocked to find traitors in our midst.
> -C. S. Lewis
> ---

Hey Guys,

Why is this thread propigated to 29 different news groups? That is a horrible waste of spectrum.

Please Please dump all of the news groups from your replies except one. alt.ham-radio.digital-voice seems like the right place to me.

Please let this message be the last one to all 29 news groups.

Bill

2553. AMSAT mail forwarding

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: Bill@halcyon.com
Message-ID: <NEWTNews.849409093.7637.bill@bill.halcyon.com>
Source record: 20728

Several years ago I signed up somewhere to have AMSAT forward mail addressed to k7rie@amsat.org to my real mailbox. I can no longer remember where I signed up for this service.

Does anyone know how to do this?

I have changed my call (vanity program) and what to have mail sent to the new call forwarded.

Thanks,

Bill
W7OO

reply to bill@halcyon.com

2554. Re: AMSAT mail forwarding

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: "ROSS J. LANE" <Hanover@cris.com>
Message-ID: <32A11F3E.61F0@cris.com>
Source record: 20729

Bill@halcyon.com wrote:
>
> Several years ago I signed up somewhere to have AMSAT forward mail addressed
> to k7rie@amsat.org to my real mailbox. I can no longer remember where I
> signed up for this service.
>
> Does anyone know how to do this?
>
> I have changed my call (vanity program) and what to have mail sent to the new
> call forwarded.
>
> Thanks,
>
> Bill
> W7OO
>
> reply to bill@halcyon.com

listserv@amsat.org

2555. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-11-30 00:00:00 UTC
From: kd1nr@anomaly.ideamation.com
Message-ID: <57qr02$qm@anomaly.ideamation.com>
Source record: 20730
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <32a1b458.7226315@news.uark.edu>, <bs02@engr.uark.edu> wrote:
>There are only 3 laywer jokes...
>
>all the rest are true stories!

I can pretty much believe that. After reading those it makes me wish
I had a daughter so I could forbid her to marry a lawyer. :)

>>Why is it that when you tell a 'joke' about an Irishman it is called
>>tasteless; when you tell a joke about a black it is called racist, and
>>when you tell a joke about a lawyer it is called funny?

Even though you didn't post this, I missed the original response so here
goes:

The reason it's funny is because by and large most lawyers are lower
than slime.

Tony

2556. International Space Station Mailing List

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: mathew@ramlink.net
Message-ID: <57qpb6$8ev@ram2.ramlink.net>
Source record: 20731

Anounncing a new mailing list for people interested in the International Space Station Alpha.
For compleate information email me at mathew@ramlink.net

73's,

Matthew Thompson KC8FHZ

2557. Dish Positioning Formula

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: Michael Wallace <mewalla@worldnet.att.net>
Message-ID: <32A145B0.12BF@worldnet.att.net>
Source record: 20732

I'm trying to find the formula used in calculating the
azimuth and elevation for an antenna given a geostationary
satellite's longitude.

Typically, you must input your own antenna lat/long and
possibly elevation as well.

If you know it, I'd sure like to see it please.

Thankx!

Michael Wallace
N3LFH

mewalla@worldnet.att.net

2558. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: Iain F Buckley <iain.buckley@ukonline.co.uk>
Message-ID: <32A18514.515E@ukonline.co.uk>
Source record: 20733
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

I am not politically minded at all. I hold no views on any party - whatever they call themselves.

I am worried that in this climate of free opinion, that people are trying to censor the right to express them. I don't think it matters if we agree or not - but are we not turning into those we dislike/disagree with by dictating to them our views and not allowing them their right to express theirs?

Just a thought.

2559. Re: AMSAT mail forwarding

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: Vicy <adpe1khp@pi.net>
Message-ID: <32A24456.479F@pi.net>
Source record: 20734

Bill@halcyon.com wrote:
>
> Several years ago I signed up somewhere to have AMSAT forward mail addressed
> to k7rie@amsat.org to my real mailbox. I can no longer remember where I
> signed up for this service.
>
> Does anyone know how to do this?
>
> I have changed my call (vanity program) and what to have mail sent to the new
> call forwarded.
>
> Thanks,
>
> Bill
> W7OO
>
> reply to bill@halcyon.comSee this...
--
Cuagn, Adriaan
////
(o o)
--ooOO--(_)--OOoo--
VHF DX AmateurRadio Station PE1KHP JO22XE
Home site http://home.pi.net/~adpe1khp/home.htm
Pakect Radio pe1khp@pi8apd

Use 70cm, don't give it to the CB-boys

Member of the dutch radioclub Veron (IARU), member of VHF
commitee and chair-man of the local-club Apeldoorn

**Please notify listserv@amsat.org if you would like to subscribe,
un-subscribe or change your Internet address for any of the AMSAT
lists.
You may request to be added or deleted from the following
lists: AMSAT-BB, ANS, SAREX, or KEPS.
Please *do not* send such requests to the lists themselves.**

2560. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: Jim Hutchings <jim.hutchings@sk.sympatico.ca>
Message-ID: <32A25874.1582@sk.sympatico.ca>
Source record: 20735
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Anthony S. Pelliccio wrote:
>
> In article <32a1b458.7226315@news.uark.edu>, <bs02@engr.uark.edu> wrote:
> >There are only 3 laywer jokes...
> >
> >all the rest are true stories!
>
> I can pretty much believe that. After reading those it makes me wish
> I had a daughter so I could forbid her to marry a lawyer. :)
>
> >>Why is it that when you tell a 'joke' about an Irishman it is called
> >>tasteless; when you tell a joke about a black it is called racist, and
> >>when you tell a joke about a lawyer it is called funny?
>
> Even though you didn't post this, I missed the original response so here
> goes:
>
> The reason it's funny is because by and large most lawyers are lower
> than slime.
>
> Tony

first of all, I doubt that this is a reasonable place to be posting this
stuff.
second, I have been in the unfortunate position where a qualified capable
lawyer was required. To my great relief, we won our case and I vowed to
never again tell another lawyer joke...I no longer get the humor
Jim Hutchings VE5HM

2561. YAESU FT-101EE

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: erbie@alpha.wcoil.com
Message-ID: <erbie.4.0016326D@alpha.wcoil.com>
Source record: 20736

I have a YAESU FT-101EE with antenna match box for sale $400
anyone interested e-mail erbie@alpha.wcoil.com

2562. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: andrewv@io.org
Message-ID: <57tl38$g1g@news1.io.org>
Source record: 20737
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>,
"Intrepid" <chrisb@connect.ab.ca> wrote:

> This is not a joke. Serious business, guys. Please read and take
>some action.

>>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
>>>>>"rec.music.white-power", so that they can get their message of hate out
>>>>>to young people using the Internet. Newsgroups are public discussions

Sigh

This thing is becoming another 'Good Times' or 'Craig Shergold'. I
should check on the BI for this... if it is not cancellable spam yet it
should be real soon now.

OK Folks... Listen up now:

The vote was closed about six months ago. The group failed. The 'no'
vote was around 33,000.

e-Mail whoever you got this from and let them know so that they can
stop spreading it around.

See the attached for more information.

--
AndrewV -- Disce aut discede.
....
| andrewv@io.org | Net.Cop.L5 (There is no Cabal) | LART-3D-MAGLIGHT |
| See the Internet Spam Boycott, at <URL:http://www.vix.com/spam/>. |

<.........................CUT HERE.............................>

Subject: Re: rec.music.white-power
From: rcgraves@ix.netcom.com (Rich Graves)
Date: 1996/11/07
Message-Id: <55tiss$ag8@Networking.Stanford.EDU>
Sender: llurch@Networking.Stanford.EDU
References: <3281A71D.3413@research.haifa.ac.il>
Organization: Fans of Nizkor, http://www.nizkor.org/objectives.html
Newsgroups: news.groups

"J. Michael Jaffe" <jmjaffe@research.haifa.ac.il> writes:
>I've been receiving several messages about a vote on approving or

>denying a new newsgroup called "rec.music.white-power." Has this vote
>been completed yet? If not, when is the deadline? If so, has the
>newsgroup been approved or rejected?

Three words:

Don't go there.

Yes, it's over. Way, way over.

If you're serious, please see:

http://pathfinder.com/Netly/daily/960607.html
http://www-leland.stanford.edu/~llurch/neo.htm
http://www.nizkor.org/ftp.cgi?people/k/kleim.milton

talk.politics.natl-socialism was dropped, too, but for rather different
reasons. soc.politics.anti-fascism is going to lose for many of the same
reasons that rec.music.white-power did, but the misc.activism.anti-fa.*
hierarchy, which will be proposed Real Soon Now, is expected to pass
without much controversy.

Posted & emailed.
--
Perhaps this final act was meant Rich Graves
<rcgraves@ix.netcom.com>
To clinch a lifetime's argument California Institute of International
Studies
That nothing comes from violence Remember
John Hron
And nothing ever could
http://www.nizkor.org/hweb/people/h/hron-john

2563. Re: Dish Positioning Formula

Newsgroup: rec.radio.amateur.space
Date: 1996-12-01 00:00:00 UTC
From: scott <acepilot@mwt.net>
Message-ID: <32A22E28.624C@mwt.net>
Source record: 20738

Michael Wallace wrote:
>
> I'm trying to find the formula used in calculating the
> azimuth and elevation for an antenna given a geostationary
> satellite's longitude.
>
> Typically, you must input your own antenna lat/long and
> possibly elevation as well.
>
> If you know it, I'd sure like to see it please.
>
> Thankx!
>
> Michael Wallace
> N3LFH
>
> mewalla@worldnet.att.net

The ARRL book "The Satellite Experimenter's Handbook" has a graph on page 6-13 that shows how to compute AZ/EL for geosynchronous sats. The book I refer to is 2nd edition, 2nd printing, copyright 1990.
--
Gotta FLY or gonna Die !
Ask me about my
Aeronca Super Chief !

2564. Re: Radial Wire Type and Source?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: wf3h@enter.net
Message-ID: <57t5to$h2m@news.enter.net>
Source record: 20739
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

dnorris@k7no.com (CDN) wrote:

>Why is it that when you tell a 'joke' about an Irishman it is called
>tasteless; when you tell a joke about a black it is called racist, and
>when you tell a joke about a lawyer it is called funny?

>

how about the real life situation in california where lawyers tried to
gut silicon valley by making it possible to sue a company every time
its stock dropped in price....thats the kind of thing that gets
lawyers a bad name...

whats the difference between a lawyer and a catfish?

one's a bottom feeding scum sucker and the other's a fish.

2565. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: FUman <kg7fu@rio.com>
Message-ID: <01bbe021$c538d7c0$988260ce@surf.rio.com>
Source record: 20740
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Jim Hutchings <jim.hutchings@sk.sympatico.ca> wrote in article =
<32A25874.1582@sk.sympatico.ca>...

> second, I have been in the unfortunate position where a qualified =
capable=20
> lawyer was required. To my great relief, we won our case and I vowed =
to=20
> never again tell another lawyer joke...I no longer get the humor
> Jim Hutchings VE5HM

Gee, good for you Jim! How much did he charge you?

Don't you ever wonder about the screwball laws being written everyday
to restrict and regulate our laws? Do you think they're written by
Joe Concerned Citizen?

How about the financial impact lawyers have on our everyday lives?
Every time they win some humongous settlement in some pea brained
case it ends up costing the taxpayers and consumers.

Ever look up justice in the dictionary? How about all those crooks and
murders that get off every year due to some "technicality"? Ever hear
of the case of the divorce where the mom was suicidal and mentally
unable to cope without anti-psychotic medication and the father was
"normal"...mom got custody.

The responses you see here are direct reflections of our own experiences
and disdain for lawyers. When one threatedned to sue me, I posted it
so the world could see what they are really like.

Sorry you don't agree that the world would be a safer and cheaper place
without them.

de kg7fu

2566. Re: AMSAT mail forwarding

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: chainsaw@tfs.net
Message-ID: <32a3980f.58331558@news.tfs.net>
Source record: 20741

Bill@halcyon.com wrote:
Bill;

Send a note to: kb5mu@amsat.org (Paul Williamson)

The particulars are also on the AMSAT home page at:

http://www.amsat.org

73 de Bob

>Several years ago I signed up somewhere to have AMSAT forward mail addressed
>to k7rie@amsat.org to my real mailbox. I can no longer remember where I
>signed up for this service.

[snip]

2567. unsub kc8dzh@aol.com ham-space

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: KC8DZH@aol.COM
Message-ID: <961202052854_1554020509@emout16.mail.aol.com>
Source record: 20742

```
unsub kc8dzh@aol.com ham-space
```

2568. IAMBIC keying using the PC keyboard....

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: herksen@ibm.net
Message-ID: <57uibi$9a6$4@news-s01.ny.us.ibm.net>
Source record: 20743

Hi there,

I had always an idea to make a software program that can generate morse keying
using two keys on the keyboard of a PC, like a bug.

Wonder if there are peoople with a similar idea, or maybe people that have
seen a program that is able to do just that.

A kind of keyer emulator using only two keys (one for DASH and one for DOT)
and iambic operation.

Thanks !!!

Regards

Please respond to this message by email to: <herksen@ibm.net>
as I'm not visiting this newsgroup so often!

Robbert J. van Herksen / TA2IX
Istanbul, Turkey
Tel : +90 216 391 6336
Fax : +90 216 391 6336
E-mail: herksen@ibm.net
FIDO : 2:430/205.11
PACKET: ta2ix@ta2em.#ist.tur.eu

IMPORTANT NOTE: Some servers change my reply address.
Please ONLY reply via Email to: herksen@ibm.net
Please do NOT send unaddressed junkmail

2569. EVERYONE READ THIS, VERY IMPORTANT -- NOT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: amos@nsof.co.il
Message-ID: <amos.849531768@hub>
Source record: 20744
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Please don't bother, the voting period had ended March 18, 1996.

(Readers of year-2000, note the use of 4-digit year; I expect this thread
to keep going well into the next millennium... :-))

--
Amos Shapir Net: amos@nsof.co.il
Paper: nSOF Parallel Software, Ltd.
Givat-Hashlosha 48800, Israel
Tel: +972 3 9388551 Fax: +972 3 9388552 GEO: 34 55 15 E / 32 05 52 N

2570. Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: rmander@mbox.4net.it
Message-ID: <57vdie$84@server-b.cs.interbusiness.it>
Source record: 20745

Hello all !
I wonder what is the likelyhood for a satellite to be hit by a metheor
or another celestial body.
That is the fact that mostly worries me when I think of spending money
to prepare a P3D station.... :-)
73 de IK4JQW, Roberto

2571. What is the best cable ?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: rmander@mbox.4net.it
Message-ID: <57vdij$84@server-b.cs.interbusiness.it>
Source record: 20746

Hello all,
I am thinking of buying some coaxial cable for a line 20 mt. long at
430 Mhz.I have the problem that the cable must go inside a tube to
reach the roof.At a certain point the tube makes an angle that so far
hasn't brought me problems with RG213 cable .I have seen that Marlow
50/20 has the same external dimension of RG213 but I also know that
the bending curve may be different.Is 50/20 really suitable for a line
like that and in case, will its bending curve allow me to fit it
properly into the tube that goes to the roof ?
Thanks in advance
73 IK4JQW, Rob

2572. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: patcar@mainemoose.esd.sgi.com
Message-ID: <57ve2m$aat@gazette.engr.sgi.com>
Source record: 20747
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>, "Intrepid"
<chrisb@connect.ab.ca> writes:
|>
|> This is not a joke.

no - it is old, out of date and long since settled.

Don't bother passing around posts like this that are undated - they
are almost without doubt zombies from the past.

pat

2573. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <57vifp$2lq@news.mhv.net>
Source record: 20748

In article <57vdie$84@server-b.cs.interbusiness.it>, rmander@mbox.4net.it wrote:
>Hello all !
>I wonder what is the likelyhood for a satellite to be hit by a metheor
>or another celestial body.
>That is the fact that mostly worries me when I think of spending money
>to prepare a P3D station.... :-)
>73 de IK4JQW, Roberto

I think we have to worry more about all the space junk floating around in orbit alot more than meteors. But then again it depends how high or low of an orbit P3D will be. It's orbit will be pretty high I understand, I'll have to check on it though..

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2574. Re: EVERYONE READ THIS, VERY IMPORTANT -- NOT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: richard@beulah.demon.co.uk
Message-ID: <57vhfk$ieo@beulah.demon.co.uk>
Source record: 20749
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

```
In article <amos.849531768@hub>, Amos Shapir <amos@nsof.co.il> wrote:
>Please don't bother, the voting period had ended March 18, 1996.
>
>(Readers of year-2000, note the use of 4-digit year; I expect this thread
>to keep going well into the next millennium... :-))

Perhaps it would like to go do it somewhere where it's on-topic ?

Please ?

--
Richard Robinson, Leeds, UK.
"The whole plan hinged upon the natural curiosity of potatoes" - S. Lem
Nothing in the above should be read as suggesting that
I may wish to receive bulk mailshots. I do *NOT*.
```

2575. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: Jim <nospam@on.the.net>
Message-ID: <32A37E30.446B@on.the.net>
Source record: 20750

trandall@mhv.net wrote:
>
> In article <57vdie$84@server-b.cs.interbusiness.it>, rmander@mbox.4net.it wrote:
> >Hello all !
> >I wonder what is the likelyhood for a satellite to be hit by a metheor
> >or another celestial body.
> >That is the fact that mostly worries me when I think of spending money
> >to prepare a P3D station.... :-)
> >73 de IK4JQW, Roberto
>
> I think we have to worry more about all the space junk floating around in
> orbit alot more than meteors. But then again it depends how high or low of an
> orbit P3D will be. It's orbit will be pretty high I understand, I'll have to
> check on it though..
>
> Tom
>
>
> Tom Randall Amateur Radio - KB2SMS
> trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
> Member: AAVSO Solar Division
>
> Opinions herein are mine and may not be that of MHV.NET!

For my two cents.

In the U.S. I think we need to worry more about congress-critters simply
mandating the FCC auction off the spectrum used for P3D especially the
2.4 GHz bands. Or even worldwide the ITU reallocating spectrum to
something else, more than worrying about collisions with whatever in
space.

I recently saw what was described (here) as the first verified collison
with damage to a satellite. Pretty low odds it seems to me.

There is a lot of stuff up there, but WAY more empty space.

Jim

--
My from line is not machine readable my real e-mail address is:
jimf@corp.sgi.com Do not hit reply to send back to me.

Sending unsolicited e-mails to my address that are not of a
previously established personal nature nor directly related
to my business will be considered a request of my proof reading

services. My rates are $50 per word and punctuation. Sending
to my address is considered acceptance of these terms.

2576. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: Jim Hutchings <jim.hutchings@sk.sympatico.ca>
Message-ID: <32A3A0FA.50CB@sk.sympatico.ca>
Source record: 20751
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

>
> Sorry you don't agree that the world would be a safer and cheaper place
> without them.
>
> de kg7fu
>
> The anti-gun control groups have a snappy slogan that basically says,
"guns don't cause crime any more than flys cause garbage". Without
debating the validity of that particular statement, I think that it's
unfair to blame lawyers for the state of our society. I'm not suggesting
that I agree with the strange things that go on in the "legal system"
(anyone collecting oxymorons??).
On the positive side of this topic, you might note that the Feds have now
decreed that aircraft manufacturers will only be liable for 18 years
after their product has been sold instead of eternity. Common sense does
prevail eventually.
Another point to consider is that many of these unbelievable judgements
have been rendered by juries!! Has the point been reached where we can
no longer trust the juries??
Our society has serious problems and sleazy lawyers are a symptom, not
the problem itself.
Honest, hardworking lawyers do exist and are a valuable commodity when
someone decides to rain on your parade. And yes, they're not
necessarily cheap, but most will try to keep costs down when they know
you're not well-off.
73 de Jim Hutchings VE5HM

2577. Re: Sound Blaster... and ARRL Lawyer... Threads

Newsgroup: rec.radio.amateur.space
Date: 1996-12-02 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <32A3A339.4564@amsat.org>
Source record: 20752

Ken Durham wrote:
>
> Worst I've ever seen this usegroup trashed.
> Surely everyone has seen the shareware ad by
> now. What the Hell does an ARRL lawyer have
> to do with Ham satellites anyway?
>
> Ken K5MBV mbv@flash.net

Ditto that Ken.... Let's try to stay on track here!

Mark

2578. NORAD Two-Line Orbital Element Sets (TLE907)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57vr41$9g@blackbird.afit.af.mil>
Source record: 20753

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #907 -
Alouette 1
1 00424U 62049A 96330.87101021 .00000056 00000-0 55695-4 0 2451
2 00424 80.4626 124.2146 0023225 340.0991 19.9250 13.67881256704440
ATS 1
1 02608U 66110A 96330.36489924 -.00000181 00000-0 10000-3 0 9890
2 02608 14.5792 351.0997 0007742 104.0277 256.0277 1.00293435 26487
ATS 3
1 03029U 67111A 96333.27050190 -.00000117 00000-0 10000-3 0 5808
2 03029 14.9149 358.0187 0012139 267.0019 154.5403 1.00272949106415
Starlette
1 07646U 75010A 96330.85259054 -.00000131 00000-0 10910-4 0 144
2 07646 49.8298 230.7538 0205858 44.4808 317.2411 13.82191832101323
LAGEOS
1 08820U 76039A 96331.14591985 -.00000003 00000-0 00000+0 0 2410
2 08820 109.8524 81.4992 0043451 93.4966 267.0584 6.38664612224176
ETS-2
1 09852U 77014A 96330.27175720 .00000062 00000-0 10000-3 0 853
2 09852 13.4258 31.0767 0006458 147.0890 212.8991 1.00001745 19252
GOES 2
1 10061U 77048A 96332.21166640 .00000043 00000-0 10000-3 0 7666
2 10061 12.5835 35.2291 0012377 131.3742 158.7183 1.00270890 16071
IUE
1 10637U 78012A 96335.60475520 -.00000081 00000-0 10000-3 0 3213
2 10637 35.7282 80.8956 1338751 62.2154 38.5657 1.00056047 21606
GOES 3
1 10953U 78062A 96334.29211441 -.00000114 00000-0 10000-3 0 7483
2 10953 11.5880 38.1466 0003208 188.4602 203.5047 1.00265055 20718

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SeaSat 1
1 10967U 78064A 96329.55770428 .00000036 00000-0 56457-4 0 5328
2 10967 107.9993 146.5801 0001967 250.2225 109.8704 14.38135495964505
Nimbus 7
1 11080U 78098A 96329.66082487 -.00000077 00000-0 -32208-4 0 6297
2 11080 98.9196 183.9102 0008377 256.6746 103.3475 13.83689594913360
GOES 5
1 12472U 81049A 96325.36290174 .00000091 00000-0 10000-3 0 9663
2 12472 8.4416 48.6104 0007282 84.9884 274.9911 1.00279171 14662
Cosmos 1383
1 13301U 82066A 96330.66463070 -.00000011 00000-0 -30758-4 0 5451
2 13301 82.9332 15.4054 0027775 151.8683 208.3988 13.68078246719455
LandSat 4
1 13367U 82072A 96330.18889347 .00000057 00000-0 22354-4 0 238
2 13367 98.0534 16.0418 0007690 7.2164 352.9137 14.57193016763983
DMSP B5D2-1
1 13736U 82118A 96336.52557468 .00000049 00000-0 39002-4 0 1295
2 13736 98.6232 162.2176 0007911 262.3824 97.6458 14.25814200724911
IRAS
1 13777U 83004A 96337.11317500 -.00000177 00000-0 -91938-4 0 5072
2 13777 98.9681 159.0683 0013747 353.7647 6.3342 13.99266479376850
Cosmos 1447
1 13916U 83021A 96330.18668956 .00000049 00000-0 35201-4 0 6371
2 13916 82.9430 71.9598 0039441 63.5182 297.0033 13.74348867685850
TDRS 1
1 13969U 83026B 96337.20853869 -.00000287 00000-0 00000+0 0 6732
2 13969 9.2226 42.0428 0004209 192.5203 222.7640 1.00262455 23078
GOES 6
1 14050U 83041A 96333.21756965 -.00000117 00000-0 10000-3 0 5788
2 14050 7.2928 52.1250 0000843 133.6712 218.6569 1.00217393107835
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96337.19176692 -.00000007 00000-0 86972-5 0 5726
2 14780 98.3117 34.8261 0002747 109.2188 250.9308 14.57059464678423
UO-11
1 14781U 84021B 96330.92069273 .00000202 00000-0 41892-4 0 9302
2 14781 97.8125 314.5714 0011052 297.1496 62.8581 14.69502305681401
Cosmos 1574
1 15055U 84062A 96330.88459466 .00000051 00000-0 38810-4 0 8378
2 15055 82.9546 126.6967 0026212 252.1847 107.6454 13.73642044623182
Cosmos 1602
1 15331U 84105A 96329.57832564 .00000287 00000-0 30824-4 0 5196
2 15331 82.5326 322.7548 0021176 132.7462 227.5541 14.84809576656773
ERBS
1 15354U 84108B 96330.81735327 -.00000226 00000-0 11416-5 0 2369
2 15354 56.9942 92.3147 0008870 127.3303 232.8537 14.94995514661018
NOAA 9
1 15427U 84123A 96336.72283470 .00000124 00000-0 89134-4 0 9410
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2 15427 98.9305 41.5852 0014463 195.7275 164.3444 14.13821465617302
Mir
1 16609U 86017A 96337.19620760 .00003296 00000-0 42097-4 0 8459
2 16609 51.6527 357.0610 0013608 95.9232 264.3317 15.62542251616260
SPOT 1
1 16613U 86019A 96337.20028466 -.00000045 00000-0 00000+0 0 100
2 16613 98.8196 44.7828 0001737 107.5676 252.5679 14.19991948244150
Cosmos 1766
1 16881U 86055A 96332.66063868 .00000281 00000-0 30874-4 0 4345
2 16881 82.5199 17.5356 0019590 151.6378 208.5908 14.83781562558085
EGP
1 16908U 86061A 96329.87996656 -.00000083 00000-0 10000-3 0 1336
2 16908 50.0104 222.9647 0011610 62.1549 298.0460 12.44415513136418
NOAA 10
1 16969U 86073A 96336.87429208 .00000030 00000-0 30968-4 0 8736
2 16969 98.5320 329.2110 0011946 223.1640 136.8603 14.25012170530487
MOS-1
1 17527U 87018A 96331.19437311 -.00000043 00000-0 00000+0 0 4865
2 17527 98.9245 29.5078 0017385 233.7186 126.2372 14.00455715497663
GOES 7
1 17561U 87022A 96333.19509552 -.00000159 00000-0 10000-3 0 1621
2 17561 3.3839 68.2366 0004144 283.2418 51.0968 1.00280717 18947
Kvant-1
1 17845U 87030A 96337.13224325 .00008360 00000-0 97427-4 0 8329
2 17845 51.6519 357.3859 0013662 95.0348 265.1714 15.62546132550361
DMSP B5D2-3
1 18123U 87053A 96336.55546814 .00000030 00000-0 37640-4 0 7033
2 18123 98.7654 164.0877 0014539 133.4041 226.8346 14.15459943488171
RS-10/11
1 18129U 87054A 96330.24958124 .00000060 00000-0 49231-4 0 2869
2 18129 82.9263 29.4872 0013292 68.0038 292.2526 13.72371862472266
Meteor 2-16
1 18312U 87068A 96332.76958372 .00000047 00000-0 28420-4 0 5249
2 18312 82.5571 222.3260 0013391 116.5955 243.6578 13.84087982468802
Meteor 2-17
1 18820U 88005A 96336.16787917 .00000040 00000-0 22274-4 0 1114
2 18820 82.5395 274.2563 0015914 172.6669 187.4729 13.84765197446631
DMSP B5D2-4
1 18822U 88006A 96337.14231296 .00000012 00000-0 23527-4 0 4046
2 18822 98.3801 161.1860 0005412 233.0620 127.0061 14.23208449458464
Glonass 34
1 19163U 88043A 96336.58312486 -.00000010 00000-0 10000-3 0 1377
2 19163 65.3383 80.1995 0009174 133.3904 226.6950 2.13102507 65806
Glonass 36
1 19165U 88043C 96334.76314041 -.00000009 00000-0 10000-3 0 5457
2 19165 65.2979 80.2132 0003119 356.4284 3.5581 2.13102186 66383
METEOSAT 3
1 19215U 88051A 96330.46923690 -.00000126 00000-0 10000-3 0 2919
2 19215 3.5878 66.8695 0006007 130.1897 229.5049 0.96948389 18740
AO-13
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1 19216U 88051B 96337.31939743 .54004640 13463-4 70327-2 0 3627
2 19216 56.9849 71.1997 4621340 60.3171 340.2112 6.56003097 33324
OKEAN 1
1 19274U 88056A 96330.50010476 .00000269 00000-0 30540-4 0 1348
2 19274 82.5133 120.6025 0019097 318.5489 41.4274 14.82543673453273
Meteor 3-2
1 19336U 88064A 96332.27402825 .00000051 00000-0 10000-3 0 5290
2 19336 82.5390 51.0234 0016376 184.7149 175.3821 13.16979559400942
Glonass 39
1 19503U 88085C 96331.03974284 -.00000052 00000-0 10000-3 0 4263
2 19503 65.5293 319.2613 0007146 135.3917 224.6782 2.13101623 63797
NOAA 11
1 19531U 88089A 96336.90009827 .00000043 00000-0 48100-4 0 7615
2 19531 99.1725 359.2951 0012528 126.2184 234.0148 14.13113063422137
TDRS 3
1 19548U 88091B 96337.24102495 -.00000178 00000-0 10000-3 0 2576
2 19548 2.8276 71.0160 0006501 171.9661 359.9778 1.00263514 17213
Glonass 40
1 19749U 89001A 96329.66919529 -.00000041 00000-0 10000-3 0 6384
2 19749 65.2745 79.9439 0006848 250.3273 109.5835 2.13101474 61270
Glonass 41
1 19750U 89001B 96333.47813981 -.00000014 00000-0 10000-3 0 5429
2 19750 65.2902 79.8886 0007680 240.5043 119.4083 2.13101726 61379
GPS BII-01
1 19802U 89013A 96336.66893088 .00000022 00000-0 00000+0 0 3274
2 19802 55.4262 103.9553 0026253 146.5656 213.6318 2.00557860 57079
Akebono
1 19822U 89016A 96337.14007275 .00011981 00000-0 59355-3 0 8203
2 19822 75.0925 26.1763 3734956 339.2579 8.9255 7.94724293180018
Meteor 2-18
1 19851U 89018A 96331.89497968 .00000026 00000-0 10020-4 0 5230
2 19851 82.5189 151.3499 0012959 240.3961 119.5912 13.84421007391340
MOP-1
1 19876U 89020B 96328.06341098 -.00000150 00000-0 10000-3 0 2274
2 19876 2.3137 71.1071 0016290 280.2311 79.1070 0.97110801 8167
TDRS 4
1 19883U 89021B 96334.64231481 -.00000264 00000-0 00000+0 0 2819
2 19883 0.2091 89.8649 0007156 151.7442 17.4610 1.00269743200766
GPS BII-02
1 20061U 89044A 96337.00835460 -.00000048 00000-0 10000-3 0 3225
2 20061 54.0900 279.4677 0163804 222.5409 136.2530 2.00562613 54821
Nadezhda 1
1 20103U 89050A 96336.78890616 .00000046 00000-0 33385-4 0 9895
2 20103 82.9537 345.0708 0037166 309.4330 50.3540 13.73871728371694
GPS BII-03
1 20185U 89064A 96336.23679974 .00000020 00000-0 10000-3 0 3605
2 20185 55.1113 104.3077 0116838 313.6825 45.3267 2.00804552 53383
GMS 4
1 20217U 89070A 96335.74001370 -.00000362 00000-0 10000-3 0 5008
2 20217 2.1245 74.2380 0001601 250.6592 131.1658 1.00259116 27097
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INTERCOSMOS 24
1 20261U 89080A 96332.55530291 .00000203 00000-0 55809-4 0 5452
2 20261 82.5949 166.3940 1242535 30.1933 336.5152 12.47367439326271
GPS BII-04
1 20302U 89085A 96336.87771605 -.00000001 00000-0 10000-3 0 3478
2 20302 53.2032 219.2077 0040567 194.4989 166.2013 2.00567724 52197
Meteor 3-3
1 20305U 89086A 96337.18238147 .00000044 00000-0 10000-3 0 7038
2 20305 82.5565 8.4458 0005321 266.7112 93.3411 13.04435733340100
COBE
1 20322U 89089A 96330.49750721 -.00000297 00000-0 -16173-3 0 2612
2 20322 98.9386 342.9980 0008594 314.1542 45.8917 14.03457949359552
Kvant-2
1 20335U 89093A 96337.13224325 .00008360 00000-0 97427-4 0 7585
2 20335 51.6519 357.3859 0013662 95.0348 265.1714 15.62546132399371
GPS BII-05
1 20361U 89097A 96336.39632978 -.00000071 00000-0 10000-3 0 1466
2 20361 56.0840 46.6672 0093112 139.3216 221.4365 2.00565228 41669
COSMOS 2054 (Altair-1)
1 20391U 89101A 96330.55946063 -.00000140 00000-0 00000+0 0 4612
2 20391 4.1622 62.3930 0004332 152.8034 34.6627 1.00268485 25616
SPOT 2
1 20436U 90005A 96337.18851919 -.00000044 00000-0 00000+0 0 1562
2 20436 98.7493 48.4200 0000924 119.7930 240.3339 14.20014611355681
UO-14
1 20437U 90005B 96331.24837999 .00000010 00000-0 20767-4 0 2274
2 20437 98.5362 51.1597 0011940 84.5290 275.7229 14.29939350357219
AO-16
1 20439U 90005D 96332.73950035 .00000030 00000-0 28584-4 0 251
2 20439 98.5513 55.1365 0012141 81.3997 278.8563 14.29991197357446
DO-17
1 20440U 90005E 96332.25576265 .00000008 00000-0 19824-4 0 262
2 20440 98.5550 55.3934 0012370 82.7275 277.5314 14.30133194357404
WO-18
1 20441U 90005F 96330.22013232 .00000006 00000-0 19024-4 0 291
2 20441 98.5541 53.3133 0012817 89.3639 270.9022 14.30101697357111
LO-19
1 20442U 90005G 96329.85377738 .00000031 00000-0 28576-4 0 259
2 20442 98.5565 53.5199 0012987 87.3890 272.8775 14.30213329357085
GPS BII-06
1 20452U 90008A 96334.79635375 .00000048 00000-0 10000-3 0 2472
2 20452 54.0439 160.0227 0095702 86.6669 273.9513 2.00551686 50134
MOS-1B
1 20478U 90013A 96337.23188890 .00000076 00000-0 90447-4 0 49
2 20478 99.1128 44.5311 0005608 142.6959 217.4590 13.93969357267969
DEBUT
1 20479U 90013B 96331.03753371 -.00000007 00000-0 48538-4 0 256
2 20479 99.0225 325.3273 0540806 117.0048 248.7318 12.83346248318668
FO-20
1 20480U 90013C 96331.00957348 -.00000019 00000-0 20128-4 0 9229
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2 20480 99.0231 325.0746 0541216 117.7141 247.9936 12.83235340318641
MOS-1B R/B
1 20491U 90013D 96331.23315552 .00000280 00000-0 60017-3 0 2964
2 20491 99.0661 35.5542 0469400 275.1029 79.6668 13.03003993322967
LACE
1 20496U 90015A 96329.53564537 .00001546 00000-0 51113-4 0 7060
2 20496 43.1031 7.7542 0011293 9.9188 350.1891 15.36114759378480
Nadezhda 2
1 20508U 90017A 96336.89201246 .00000010 00000-0 -45767-5 0 9885
2 20508 82.9446 119.4703 0043028 260.9105 98.7183 13.73514855338917
OKEAN 2
1 20510U 90018A 96329.89785202 .00000175 00000-0 20630-4 0 5428
2 20510 82.5227 76.4940 0019374 146.9476 213.2952 14.78644748363422
GPS BII-07
1 20533U 90025A 96336.17614392 -.00000046 00000-0 00000+0 0 2891
2 20533 54.4556 280.2967 0047991 78.1163 282.4314 2.00568698 48936
PegSat
1 20546U 90028A 96335.81856397 .00008058 00000-0 13813-3 0 9999
2 20546 94.1269 87.4451 0058733 79.6409 281.1455 15.49271993370781
HST
1 20580U 90037B 96330.89951535 .00000508 00000-0 34946-4 0 8868
2 20580 28.4701 259.0073 0006156 67.9779 292.1462 14.91133732162748
MACSAT 2
1 20608U 90043B 96331.10400328 .00000206 00000-0 32938-4 0 2273
2 20608 89.9270 172.0151 0103580 209.2172 150.3225 14.64958337349992
Glonass 44
1 20619U 90045A 96335.19830791 -.00000031 00000-0 10000-3 0 3465
2 20619 65.1207 318.2823 0024409 210.0875 149.7716 2.13102466 50847
Glonass 45
1 20620U 90045B 96331.09379865 -.00000053 00000-0 10000-3 0 3297
2 20620 65.1105 318.3935 0008809 58.2230 301.9306 2.13102325 50799
Glonass 46
1 20621U 90045C 96331.16118638 -.00000053 00000-0 10000-3 0 9415
2 20621 65.1267 318.4513 0012711 196.5565 163.4019 2.13102527 50792
Kristall
1 20635U 90048A 96337.13224325 .00008360 00000-0 97427-4 0 5500
2 20635 51.6519 357.3859 0013662 95.0348 265.1714 15.62546132370205
ROSAT
1 20638U 90049A 96336.24819830 .00000255 00000-0 35331-4 0 6148
2 20638 52.9912 266.6709 0010485 272.2461 87.7331 15.07507378357510
Meteor 2-19
1 20670U 90057A 96336.75820208 .00000095 00000-0 71720-4 0 1453
2 20670 82.5466 214.7731 0015945 139.7534 220.4809 13.84130955324923
CRRES
1 20712U 90065A 96336.99587672 .00000117 00000-0 14570-3 0 3669
2 20712 17.6136 181.5226 7177135 145.1166 295.5200 2.35808414 47074
GPS BII-08
1 20724U 90068A 96336.51946331 .00000017 00000-0 00000+0 0 1446
2 20724 55.0489 101.9358 0130905 186.5595 173.2619 2.00564190 44804
Feng Yun1-2
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1 20788U 90081A 96337.02258794 -.00000032 00000-0 69607-5 0 1900
2 20788 98.8079 336.7341 0015885 38.7723 321.4579 14.01371721319609
Meteor 2-20
1 20826U 90086A 96330.10051867 .00000035 00000-0 18571-4 0 344
2 20826 82.5257 156.2927 0014763 67.5201 292.7518 13.83640703311096
GPS BII-09
1 20830U 90088A 96336.07565210 -.00000073 00000-0 00000+0 0 1241
2 20830 56.0321 44.5945 0065442 93.3314 267.4472 2.00567746 45432
GPS BIIA-10
1 20959U 90103A 96336.47754110 .00000021 00000-0 10000-3 0 1038
2 20959 55.2372 104.0381 0110949 235.5776 123.3856 2.00556889 44039
DMSP B5D2-5
1 20978U 90105A 96336.78291988 .00000110 00000-0 54361-4 0 8657
2 20978 98.5811 46.4057 0079949 36.1132 324.5411 14.32700308313713
Glonass 47
1 21006U 90110A 96334.46940732 -.00000011 00000-0 10000-3 0 9021
2 21006 65.2747 79.1122 0055899 186.9878 172.9251 2.13102686 46531
Glonass 48
1 21007U 90110B 96329.49984630 -.00000042 00000-0 10000-3 0 388
2 21007 65.2733 79.3695 0033465 177.6065 182.3928 2.13101169 46412
Glonass 49
1 21008U 90110C 96331.27337359 -.00000031 00000-0 00000+0 0 3047
2 21008 65.2556 79.2493 0008935 269.3554 90.5328 2.13098711 46442
AO-21
1 21087U 91006A 96337.15622613 .00000094 00000-0 82657-4 0 7654
2 21087 82.9425 197.3937 0036889 96.1521 264.3833 13.74574690293084
RS-12/13
1 21089U 91007A 96330.25819242 .00000034 00000-0 19663-4 0 9357
2 21089 82.9207 69.8909 0029452 142.3422 217.9800 13.74075000291153
MOP-2
1 21140U 91015B 96334.51132029 -.00000008 00000-0 00000+0 0 3040
2 21140 0.8882 78.7640 0002062 120.7701 53.0061 1.00267041 23265
Nadezhda 3
1 21152U 91019A 96336.85221382 .00000058 00000-0 46315-4 0 6756
2 21152 82.9216 21.6002 0040612 236.2145 123.5140 13.73540292286769
Glonass 50
1 21216U 91025A 96332.14131765 -.00000051 00000-0 10000-3 0 5559
2 21216 64.8612 317.8573 0012969 190.8568 169.1129 2.13103252 43992
Glonass 51
1 21217U 91025B 96335.02912482 -.00000032 00000-0 10000-3 0 9668
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UARS
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2 21701 56.9854 186.0347 0005519 104.4127 255.7519 14.96553586284413
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1 21853U 92005A 96330.18893668 -.00000039 00000-0 10000-4 0 1377
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2 21867 97.6760 52.1777 0001904 70.1503 289.9717 14.98655300263050
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GPS BIIA-18
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UFO F2
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TUBSAT-B
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Glonass 73
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TDRS 7
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2 23868 97.1189 160.5186 0010030 308.6015 51.4353 15.46644609 30119
TOMS-EP
1 23940U 96037A 96329.26567624 .00002882 00000-0 13063-3 0 605
2 23940 97.4320 232.7264 0013477 136.5603 223.6695 15.21579988 21974
GPS BIIA-26
1 23953U 96041A 96336.33604672 .00000016 00000-0 00000+0 0 830
```

```
2 23953 55.0899 101.5861 0018813 333.0647 26.8217 2.00563569 2823
ADEOS
1 24277U 96046A 96336.19185773 -.00000044 00000-0 00000+0 0 1131
2 24277 98.6178 50.7299 0001376 56.1001 304.0311 14.27642902 15112
FO-29
1 24278U 96046B 96328.72767464 .00000002 00000-0 38803-4 0 381
2 24278 98.5695 31.6872 0351594 358.5730 1.4374 13.52626520 13344
Soyuz TM-24
1 24280U 96047A 96337.13224325 .00008360 00000-0 97427-4 0 1039
2 24280 51.6519 357.3859 0013662 95.0348 265.1714 15.62546132 16673
FAST
1 24285U 96049A 96336.95963425 .00001093 00000-0 10950-3 0 418
2 24285 82.9843 130.7328 2207630 341.0866 11.9238 10.81620670 11095
Microsat
1 24291U 96050A 96336.63790040 .00040547 62598-5 26747-3 0 797
2 24291 62.7943 65.4897 0616068 121.2291 245.0664 14.66314896 13802
MO-30
1 24305U 96052B 96336.89028135 .00000204 00000-0 20364-3 0 466
2 24305 82.9288 140.3814 0030866 34.9128 325.4018 13.73087950 11989
GPS BIIA-27
1 24320U 96056A 96333.70702017 -.00000048 00000-0 00000+0 0 448
2 24320 54.6833 281.8100 0055114 139.8798 220.4368 2.00568282 1439
1996059C
1 24644U 96059C 96309.34412794 .30092023 75539-5 40968-2 0 16
2 24644 62.8803 27.5661 0238849 94.8971 267.9365 15.88259486 35
SAC-B/HETE
1 24645U 96061A 96331.91373374 .00000457 00000-0 30145-4 0 244
2 24645 37.9773 350.8790 0046985 118.1526 242.4000 15.14775616 3375
1996062B
1 24649U 96062B 96336.32720738 .00190634 -17588-5 70929-3 0 334
2 24649 25.3166 36.1072 2525026 40.2076 335.9467 10.55655900 2465
1996062D
1 24651U 96062D 96336.23259795 .00198087 -17652-5 69828-3 0 357
2 24651 25.3075 36.4334 2527020 39.6496 336.3919 10.55624076 2541
Arabsat 2B
1 24652U 96063A 96325.31372041 .00010406 00000-0 31079-2 0 61
2 24652 3.9925 208.1383 7284808 182.9551 165.5729 2.27503266 145
Measat 2
1 24653U 96063B 96335.82213714 -.00000215 00000-0 00000+0 0 212
2 24653 0.0232 261.6192 0002441 78.9452 173.4516 1.00275849 230
1996063C
1 24654U 96063C 96334.82933675 .00000053 00000-0 34949-3 0 141
2 24654 3.8632 204.5401 7278149 190.3154 136.4242 2.22875213 387
1996063D
1 24655U 96063D 96332.75221977 .00011374 00000-0 43872-2 0 105
2 24655 3.9386 204.6567 7278096 189.3756 140.3269 2.27680996 319
Mars-96
1 24656U 96064A 96323.01130778 .13328068 12842-4 45328-4 0 133
2 24656 51.4998 11.2010 0005797 231.1092 129.2833 16.58057739 180
STS 80
```

```
1 24660U 96065A 96337.33333333 .00000839 00000-0 32806-5 0 474
2 24660 28.4672 97.6293 0008640 48.7001 17.5812 15.72199943 1963
ORFEUS-SPAS II
1 24661U 96065B 96336.31250000 .00000872 00000-0 35107-5 0 240
2 24661 28.4682 105.0579 0008932 38.2515 357.3865 15.72267705 1802
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
Progress M-33
1 24663U 96066A 96337.13224325 .00008360 00000-0 97427-4 0 168
2 24663 51.6519 357.3859 0013662 95.0348 265.1714 15.62546132 1919
1996066B
1 24664U 96066B 96327.41277526 .58399191 12743-4 19260-3 0 190
2 24664 51.6425 45.7297 0017318 127.1554 233.1175 16.57786928 401
Hot Bird 2
1 24665U 96067A 96327.75000000 .00002618 73664-6 10000-3 0 62
2 24665 23.8873 196.7180 7311335 179.2354 352.6087 2.28438038 23
1996067B
1 24666U 96067B 96334.44525599 .00075191 -24710-6 17051-2 0 137
2 24666 23.8859 192.8974 7292216 184.8161 159.0209 2.31284077 177
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

2579. NORAD Two-Line Orbital Element Set: Space Shuttle (96337.33333333)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57vqo0$93@blackbird.afit.af.mil>
Source record: 20754

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96337.33333333 .00000839 00000-0 32806-5 0 474
2 24660 28.4672 97.6293 0008640 48.7001 17.5812 15.72199943 1963
ORFEUS-SPAS II
1 24661U 96065B 96336.31250000 .00000872 00000-0 35107-5 0 240
2 24661 28.4682 105.0579 0008932 38.2515 357.3865 15.72267705 1802
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2580. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <57vr7n$9s@blackbird.afit.af.mil>
Source record: 20755

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2581. Sound Blaster... and ARRL Lawyer... Threads

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: mbv@flash.net
Message-ID: <57vqv1$ps4$1@excalibur.flash.net>
Source record: 20756

Worst I've ever seen this usegroup trashed.
Surely everyone has seen the shareware ad by
now. What the Hell does an ARRL lawyer have
to do with Ham satellites anyway?

Ken K5MBV mbv@flash.net

2582. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: drx1001@ibm.net
Message-ID: <5806pv$77a$1@news-s01.ca.us.ibm.net>
Source record: 20757

I saw somthing about a metheor shower that happens every 50 years or so.It said that it will return in nov 97
and nov98.I'll try to find the mag.

Tim KF4FCO-EM70 Spamless Ham REPLY WITH CARE
I'AM PC HANDICAPED AND I TYPE WITH TWO FINGERS
AND I SUFFER FROM LAP TOP FEVER!!!!!!!!!!!!!
:***]

2583. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: orion@capital.net
Message-ID: <32a3c306.53668979@news.capital.net>
Source record: 20758

trandall@mhv.net wrote:

>In article <57vdie$84@server-b.cs.interbusiness.it>, rmander@mbox.4net.it wrote:
>>Hello all !
>>I wonder what is the likelyhood for a satellite to be hit by a metheor
>>or another celestial body.
>>That is the fact that mostly worries me when I think of spending money
>>to prepare a P3D station.... :-)
>>73 de IK4JQW, Roberto
>
> I think we have to worry more about all the space junk floating around in
>orbit alot more than meteors. But then again it depends how high or low of an
>orbit P3D will be. It's orbit will be pretty high I understand, I'll have to
>check on it though..
>
>Tom

I don't know the odds of a meteor hitting a satellite, (pretty low I
would guess.) but NORAD has the orbits of EVERYTHING going around the
Earth plotted and documented. This information will be taken into
account when Phase 3-D's orbit is set up.
--
73,
Butch N2YMJ

2584. Re: Sound Blaster 16 Spectral display & Filtering FREEWARE

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: bartelar@telkom04.telkom.co.za
Message-ID: <580kp2$jtl@news1.saix.net>
Source record: 20759
Cross-posted to: alt.radio.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,alt.ham-radio.binaries,alt.ham-radio.am,alt.ham-radio.amtor,alt.ham-radio.digital-voice,alt.ham-radio.dxing,alt.ham-radio.eme,alt.ham-radio.spread,alt.ham-radio.exotic-modes,alt.ham-radio.fax,alt.ham-radio.fm,alt.ham-radio.hf,alt.ham-radio.nocode,alt.ham-radio.slowscan,alt.ham-radio.packet,alt.ham-radio.ssb,alt.ham-radio.uwave,alt.ham-radio.morse,alt.ham-radio.vhf-uhf,alt.ham-radio.rtty

>> >>Can you tell me what the s/w is called and where I could d/l it?
>> >>
>> >>> http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip
>> >>> ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft11.zip 1032518 bytes
>> >>>
>> >>> sbfft11.zip Sound Blaster spectral display and filtering

>> Is the software anywhere else on the net?? I can't connect to
>> simtel.net for some reason. Netscape keeps giving me "no DNS entry"

Let's settle this one for once and for all. The Simtel collection is
available all over the place and should be very well know:

"Simtel.Net : List of authorized FTP mirror sites

Simtel.Net, located at Walnut Creek CDROM, is the origin point of
Keith Petersen's world-wide distribution network for Shareware,
Freeware, and Public Domain programs for MS-DOS, Windows 3.x, and
Windows 95. It has more mirror sites than any other archive on the
Internet. Its web pages are also mirrored on many servers around the
world.

FTP.Simtel.Net is the name of the primary distribution site for these
collections. It is actually several ftp sites arranged in a rotating
pattern of IP addresses to help balance the load and to avoid access
problems due to network outages and simultaneous user limits. At the
present time ftp.ou.edu and oak.oakland.edu are the primary sites. Our
files are located in the /pub/simtelnet directory tree on these hosts.

The following sites are authorized mirrors of Simtel.Net as of the
revision date at the end of this document. This list will be
frequently updated as new sites are added.

Country URL (host and directory path)
--------- ---
Argentina ftp://ftp.satlink.com/pub/mirrors/simtelnet/
Australia ftp://ftp.iniaccess.net.au/pub/simtelnet/
Australia ftp://ftp.tas.gov.au/pub/simtelnet/
Australia ftp://sunsite.anu.edu.au/pub/pc/simtelnet/
Austria, Vienna ftp://ftp.univie.ac.at/mirror/simtelnet/
Belgium ftp://ftp.linkline.be/mirror/simtelnet/
Belgium ftp://ftp.tornado.be/pub/simtelnet/

Bulgaria ftp://ftp.eunet.bg/pub/simtelnet/
Brazil ftp://ftp.iis.com.br/pub/simtelnet/
Brazil ftp://ftp.unicamp.br/pub/simtelnet/
Canada, Ottawa ftp://ftp.crc.doc.ca/systems/ibmpc/simtelnet/
Canada, Vancouver ftp://ftp.direct.ca/pub/simtelnet/
Chile ftp://sunsite.dcc.uchile.cl/pub/Mirror/simtelnet/
China ftp://ftp.pku.edu.cn/pub/simtelnet/
Czech Republic ftp://ftp.eunet.cz/pub/simtelnet/
Czech Republic ftp://ftp.zcu.cz/pub/simtelnet/
Czech Republic ftp://pub.vse.cz/pub/simtelnet/
Finland
ftp://ftp.funet.fi/mirrors/ftp.simtel.net/pub/simtelnet/
France ftp://ftp.grolier.fr/pub/simtelnet/
France ftp://ftp.ibp.fr/pub/simtelnet/
Germany ftp://ftp.mpi-sb.mpg.de/pub/simtelnet/
Germany ftp://ftp.rz.ruhr-uni-bochum.de/pub/simtelnet/
Germany ftp://ftp.tu-chemnitz.de/pub/simtelnet/
Germany ftp://ftp.uni-heidelberg.de/pub/simtelnet/
Germany ftp://ftp.uni-magdeburg.de/pub/mirrors/simtelnet/
Germany ftp://ftp.uni-paderborn.de/pub/simtelnet/
Germany ftp://ftp.uni-trier.de/pub/pc/mirrors/simtelnet/
Germany ftp://ftp.rz.uni-wuerzburg.de/pub/pc/simtelnet/
Greece ftp://ftp.ntua.gr/pub/pc/simtelnet/
Hong Kong ftp://ftp.cs.cuhk.hk/pub/simtelnet/
Hong Kong ftp://ftp.hkstar.com/pub/simtelnet/
Hong Kong ftp://sunsite.ust.hk/pub/simtelnet/
Ireland ftp://ftp.iol.ie/pub/simtelnet/
Israel ftp://ftp.huji.ac.il/pub/simtelnet/
Italy ftp://cis.utovrm.it/simtelnet/
Italy ftp://ftp.flashnet.it/pub/simtelnet/
Italy ftp://ftp.unina.it/pub/simtelnet/
Italy ftp://mcftp.mclink.it/pub/simtelnet/
Japan ftp://ftp.iij.ad.jp/pub/simtelnet/
Japan ftp://ftp.riken.go.jp/pub/simtelnet/
Japan ftp://ftp.saitama-u.ac.jp/pub/simtelnet/
Japan ftp://ftp.u-aizu.ac.jp/pub/PC/simtelnet/
Japan ftp://ftp.web.ad.jp/pub/simtelnet/
Japan ftp://ring.aist.go.jp/pub/simtelnet/
Japan ftp://ring.asahi-net.or.jp/pub/simtelnet/
Latvia ftp://ftp.lanet.lv/pub/mirror/simtelnet/
Malaysia ftp://ftp.jaring.my/pub/simtelnet/
Malaysia ftp://ftp.mimos.my/pub/simtelnet/
Mexico ftp://ftp.gdl.iteso.mx/pub/simtelnet/
Netherlands ftp://ftp.euro.net/d5/simtelnet/
Netherlands
ftp://ftp.nic.surfnet.nl/mirror-archive/software/simtelnet/
New Zealand ftp://ftp.vuw.ac.nz/pub/simtelnet/
Norway ftp://ftp.bitcon.no/pub/simtelnet/
Poland ftp://ftp.cyf-kr.edu.pl/pub/mirror/Simtel.Net/
Poland ftp://ftp.icm.edu.pl/pub/simtelnet/

Poland ftp://ftp.man.poznan.pl/pub/simtelnet/
Portugal ftp://ftp.ip.pt/pub/simtelnet/
Portugal ftp://ftp.ua.pt/pub/simtelnet/
Romania ftp://ftp.sorostm.ro/pub/simtelnet/
Singapore ftp://ftp.nus.sg/pub/simtelnet/
Slovakia ftp://ftp.uakom.sk/pub/simtelnet/
Slovenia ftp://ftp.arnes.si/software/simtelnet/
South Africa ftp://ftp.is.co.za/pub/simtelnet/
South Africa ftp://ftp.sun.ac.za/pub/simtelnet/
South Korea ftp://ftp.nuri.net/pub/simtelnet/
South Korea ftp://ftp.sogang.ac.kr/pub/simtelnet/
South Korea ftp://sunsite.snu.ac.kr/pub/simtelnet/
Spain ftp://ftp.rediris.es/mirror/simtelnet/
Sweden ftp://ftp.sunet.se/pub/simtelnet/
Switzerland ftp://sunsite.cnlab-switch.ch/mirror/simtelnet/
Taiwan ftp://ftp.ncu.edu.tw/Packages/simtelnet/
Taiwan ftp://nctuccca.edu.tw/mirror/simtelnet/
Thailand ftp://ftp.nectec.or.th/pub/mirrors/simtelnet/
UK, Edinburgh ftp://emwac.ed.ac.uk/mirrors/simtelnet/
UK, London ftp://ftp.demon.co.uk/pub/simtelnet/
UK, Lancaster ftp://micros.hensa.ac.uk/pub/simtelnet/
UK, London ftp://sunsite.doc.ic.ac.uk/packages/simtelnet/
US, California ftp://ftp.cdrom.com/pub/simtelnet/
US, California ftp://ftp.digital.com/pub/micro/pc/simtelnet/
US, California ftp://ftp.lib.sonoma.edu/pub/simtelnet/
US, Illinois
ftp://uiarchive.cso.uiuc.edu/pub/systems/pc/simtelnet/
US, Massachusetts ftp://ftp.bu.edu/pub/mirrors/simtelnet/
US, Michigan ftp://oak.oakland.edu/pub/simtelnet/
US, New York ftp://ftp.rge.com/pub/systems/simtelnet/
US, Oklahoma ftp://ftp.ou.edu/pub/simtelnet/
US, Oregon ftp://ftp.orst.edu/pub/simtelnet/
US, Utah ftp://ftp.cyber-naut.com/pub/simtelnet/
US, Virginia ftp://mirrors.aol.com/pub/simtelnet/ "

Now that's more than enough wasted bandwidth, but at least it answers
the question! ;-)

Cheers
Adrian

"It does not do to leave a live dragon
out of your calculations." -- Tolkien

2585. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: hammond_g@drkclu.meng.ucl.ac.uk
Message-ID: <1996Dec3.113441.54532@ucl.ac.uk>
Source record: 20760
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca>,
"Intrepid" <chrisb@connect.ab.ca> writes:
|>
|> This is not a joke. Serious business, guys. Please read and take
|>some action.
|>
|>>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
|>>>>>"rec.music.white-power", so that they can get their message of hate out
|>>>>>to young people using the Internet. Newsgroups are public discussions
|>on
|>>>>>the Internet and their formation requires enough support from the
|>Internet
|>>>>>community.

so what? let them have their say, along with anyone else who wants to
form a newsgroup. Whatever you (or I) may think of them, they're just as
valid as anything else - just check out some of the crap in alt.*

As long as they keep to themselves, I think they should be left alone. If
they start a crossposting campaign, they'll get stomped on.

--
/** Java G <hammond_g@meng.ucl.ac.uk>
* Virtual Reality ROV Docking Planner
* http://www.ucl.ac.uk/~zcemm23
* "it's not about money... it's about pasta..." */

2586. Re: Is ther a FAQ for Weather Sat stuff?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: Tfugate@pop.uky.edu
Message-ID: <581ajn$bq5@service3.uky.edu>
Source record: 20761

In article <len.205.0001662E@isdi.com>, len@isdi.com (Len Bayles) says:
>
>Hi:
>
> I am looking for info on Wweather Satellite gear. Is ther a FAQ around?
>
>len - KA7FTP

Try "http://www.rig.org.uk/index.html"
You may need to leave the "/index.html" off, sometimes when I include
that, it gives me a DNS not found.
Good luck.

2587. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: Roy Keeley <rkeeley@dibbs.net>
Message-ID: <32A45FE2.3E97@dibbs.net>
Source record: 20762
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

Jim Hutchings wrote:
>
> Anthony S. Pelliccio wrote:
> >
> > In article <32a1b458.7226315@news.uark.edu>, <bs02@engr.uark.edu> wrote:
> > >There are only 3 laywer jokes...
> > >
> > >all the rest are true stories!
> >
> > I can pretty much believe that. After reading those it makes me wish
> > I had a daughter so I could forbid her to marry a lawyer. :)
> >
> > >>Why is it that when you tell a 'joke' about an Irishman it is called
> > >>tasteless; when you tell a joke about a black it is called racist, and
> > >>when you tell a joke about a lawyer it is called funny?
> >
> > Even though you didn't post this, I missed the original response so here
> > goes:
> >
> > The reason it's funny is because by and large most lawyers are lower
> > than slime.
> >
> > Tony
>
> first of all, I doubt that this is a reasonable place to be posting this
> stuff.
> second, I have been in the unfortunate position where a qualified capable
> lawyer was required. To my great relief, we won our case and I vowed to
> never again tell another lawyer joke...I no longer get the humor
> Jim Hutchings VE5HM

I too once needed a lawyer, and he came thru for me. I think the problem
is the
bottom half of the class. This lower 50% has contemp for the law, and
they are
who the lawyer joke are for. Basically, it is the Judges who have my
contemp, but
then they are lawyers also. And if you say, "What about the judge in my
case, where
I won", I will just say, at one point, the Judge fell asleep, and I won
in spite of him, mainly because of the strength of my lawyer.
--
73's

Roy KC4IMC

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rkeeley@MAF.mobile.al.us
kc4imc@maf.wa4wbi.ampr.org
Snail Mail = 10675 Salt Aire Rd, E., Theodore, AL 36582, USA

2588. Trackbox

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: kb4qzh@pipeline.com
Message-ID: <58045d$b1l@camel4.mindspring.com>
Source record: 20763

Hello All,
I am looking for some help with getting the mic click to work with the
Yaesu FT-726R and the Trakbox. I am using the AEA DSP-2232.
Thanks and 73 Fred KB4QZH

73 Fred KB4QZH
kb4qzh@pipeline.com

2589. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: kd1hz@anomaly.ideamation.com
Message-ID: <581s1b$1fg@anomaly.ideamation.com>
Source record: 20764
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

In article <32A3A0FA.50CB@sk.sympatico.ca>,
Jim Hutchings <jim.hutchings@sk.sympatico.ca> wrote:

>> The anti-gun control groups have a snappy slogan that basically says,
>"guns don't cause crime any more than flys cause garbage". Without
>debating the validity of that particular statement, I think that it's
>unfair to blame lawyers for the state of our society.

You are, to some degree, correct.

The proliferation of lawsuits really isn't the fault of the Trial
Lawyers Association. In a sense, they are merely providing a service
to accomodate a demand for legal services in our country.

It is the desire to "get rich quick" (and sueing someone seems to
be a way of doing that with little to no risk if you can get a
lawyer to take your case on a percentage basis, which most will)
that the American people have today [inherently lazy bastards
they are -- the Japanese were right -- they want to lay around
with the good life, no work, have everything paid for them by
someone else -- basically an extension of the welfare-state
mentality that permeates this country today].

MD
--
--
-- "Guns don't kill people. I kill people." -- T-shirt slogan
--
-- If you don't like my opinions, that's just too damn bad.

2590. Re: Dish Positioning Formula

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: rodda@ccu1.auckland.ac.nz
Message-ID: <58204t$o34@scream.auckland.ac.nz>
Source record: 20765

scott <acepilot@mwt.net> writes:

>Michael Wallace wrote:
>>
>> I'm trying to find the formula used in calculating the
>> azimuth and elevation for an antenna given a geostationary
>> satellite's longitude.
>>
>> Typically, you must input your own antenna lat/long and
>> possibly elevation as well.
>>
>> If you know it, I'd sure like to see it please.
>>
>> Thankx!
>>
>> Michael Wallace
>> N3LFH
>>
>> mewalla@worldnet.att.net

>The ARRL book "The Satellite Experimenter's Handbook" has a graph on page
>6-13 that shows how to compute AZ/EL for geosynchronous sats. The book I
>refer to is 2nd edition, 2nd printing, copyright 1990.
>--
>Gotta FLY or gonna Die !
> Ask me about my
> Aeronca Super Chief !

.... if you really want a formula:

If A=latitude of earth station (+ve for north, -ve for south of
equator)
B = longitude east of the earth station minus the longitude east of
the satellite
m = 6.61 (the radius of the geostat. satellites orbit divided by
the equatorial radius of earth.
s = square root of (1-sqr[cos(A)*cos(B)])
where sqr = square of
t = [m*cos(A)*cos(B)]-1

then Elevation angle = inverse tangent[t/(m*s)] degrees

and if you're in the northern hemisphere,
azimuth angle = 180+inverse tangent[tan(B)/sin(A)] degrees

if you're south of the equator, forget the 180 term in the azimuth.

Note that the eqn for elevation gives the geometric value. Taking into account atmospheric refraction, you get:

True elevation = (EL + sqr.root[sqr[EL] + 4.132])/2 degrees

where EL = the geometric elevation found using the first elevation formula above.

Taken from pg.411-412, Satellite to Ground Radiowave Propagation by J. Allnutt.

Hope this helps,

Mitchell.

2591. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: rmander@wonderland.linux.it
Message-ID: <581teg$2tp@server-b.cs.interbusiness.it>
Source record: 20766

orion@capital.net wrote:

>I don't know the odds of a meteor hitting a satellite, (pretty low I
>would guess.) but NORAD has the orbits of EVERYTHING going around the
>Earth plotted and documented. This information will be taken into
>account when Phase 3-D's orbit is set up.
>--
>73,
>Butch N2YMJ

How about the russian space junk ? How small pieces of junk are they
able to monitor ? I'm thinking of a lost small bolt that could bring
severe damages to P3D !!

73 IK4JQW , Rob

2592. NORAD Two-Line Orbital Element Set: Space Shuttle (96338.11984256)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <582cff$4sb@blackbird.afit.af.mil>
Source record: 20767

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96338.11984256 .00000816 00000-0 30968-5 0 491
2 24660 28.4709 91.9048 0008735 60.9947 146.4217 15.72301219 2085
ORFEUS-SPAS II
1 24661U 96065B 96337.33333333 .00000842 00000-0 32871-5 0 257
2 24661 28.4666 97.6298 0009176 50.6670 15.2383 15.72283207 1966
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2593. Make money fast, hey, this really works!!!! [1/1]

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: Nick Laurinas <nl.@ix.netcom.com>
Message-ID: <582e7v$l0a@dfw-ixnews5.ix.netcom.com>
Source record: 20768
Body handling: Inline uuencoded payload not displayed: money.txt

[Inline uuencoded payload not displayed: money.txt]

2594. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: Keith MacDonald <kmacdona@chat.carleton.ca>
Message-ID: <32A4DAE7.38C0@chat.carleton.ca>
Source record: 20769
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Jay Farrell wrote:
>
> In article <01bbdd81$59290200$c94d22cf@jaclen.connect.ab.ca>, "Intrepid"
> <chrisb@connect.ab.ca> wrote:
>
> | This is not a joke. Serious business, guys. Please read and take
> | some action.
> |
> | >>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
> | >>>>"rec.music.white-power", so that they can get their message of hate out
> | >>>>to young people using the Internet. Newsgroups are public discussions
>
> It may as well be a joke. The vote *was* held _many months ago_ and the
> proposed newsgroup was defeated.
>
> Cheers,
> Jayfar

Jay, this gives me the oportunity to ask a question I've wanted an
answer to for a while. If an NG about racism was defeated, how were the
pedophilia & binaries.teen.sex(or whatever it's called) & like groups
allowed to come into being. My first thought was that they were
originally intended f/discussion, but then became overridden
w/pedophiles. This scenario, though, doesn't explain the binary NGs
that feature child/teen sex.

2595. Re: Trackbox

Newsgroup: rec.radio.amateur.space
Date: 1996-12-03 00:00:00 UTC
From: "Mitch, W4OA" <w4oa@vibroplex.com>
Message-ID: <32A4D982.64E7135@vibroplex.com>
Source record: 20770

i have a trakbox for sale... email or call if interested...

mitch
--
Felton "Mitch" Mitchell, W4OA w4oa@vibroplex.com
The Vibroplex Co., Inc., 11 Midtown Park, E., Mobile, AL 36606-4141
800-840-8873 orders, 334-478-8873 info, 334-476-0465 FAX
Visit our web site at - http://www.vibroplex.com

2596. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <582kb1$8ni@sjx-ixn6.ix.netcom.com>
Source record: 20671
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

In <57nfph$3hp@news.Hawaii.Edu> jherman@Hawaii.Edu (Jeffrey Herman) writes:
>
>In article <3296bd68.23361085@news.tfs.net>, Bob <chainsaw.at.tfs.net> wrote:
>>Wouldn't it have been a little more fair of you to caveat your ad here
>>with the note that they who buy AEA products now do so with little to
>>no possibility of product support, since AEA is about to go belly up?
>>Oh well, bidness is bidness!!!
>
>Ah, "product support" - the cry of the appliance operator. Maybe you
>should invest in a soldering gun and test equipment, Bob.
>
>KH2PZ

And how exactly will the soldering iron panacea help with the lack of promised firmware? Please restrict your answer to one (1) Blue Book.

Jerry

2597. Amlog 3

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <65502.57759284@midnet.com>
Source record: 20672

Zentek, the authors of the Amlog 3 logging program, now
have a small web site at:

http://www.midnet.com/midnet/zentek/

There is a screen shot and details of Amlog 3 plus details
about getting a demo copy for 1 pound (UK).

2598. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: peter.kruse@psychologie.uni-regensburg.de
Message-ID: <KRP02078.96Dec4134035@psychologie.uni-regensburg.de>
Source record: 20673
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

this really does not belong here, but...

In article <32A0B6B3.2B34@mad.scientist.com> Jeff Power <lunatic@mad.scientist.com> writes:

> Jean-Michel P. Decombe wrote:
> >
> > I see no reason to vote NO as long as they don't crosspost unrelated stuff
> > to my favourite newsgroups, just like YOU do.
> >
> > Whatever happened to freedom of speech? You can't bar people from having
> > (even lame) opinions. Your mission, should you accept it, is to convince
> > them that they're wrong :). Well good luck, in my case I'd rather ignore
> > them.
>
> Here, here. Someone with a brain. (Just my opinion.)
>

What did you learn from history?

--
~~~~~~
Peter.Kruse@psychologie.uni-regensburg.de
http://www.psychologie.uni-regensburg.de/peter/
~~~~~~

2599. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: hot_keys@connectnet.com
Message-ID: <hot_keys-ya023080000412960711240001@news.connectnet.com>
Source record: 20674
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <32A4DAE7.38C0@chat.carleton.ca>, kmacdona@chat.carleton.ca wrote:

> Jay, this gives me the oportunity to ask a question I've wanted an
> answer to for a while. If an NG about racism was defeated, how were the
> pedophilia & binaries.teen.sex(or whatever it's called) & like groups
> allowed to come into being. My first thought was that they were
> originally intended f/discussion, but then became overridden
> w/pedophiles. This scenario, though, doesn't explain the binary NGs
> that feature child/teen sex.

those are alt.* s this is rec.*

ANYONE can create an alt.* w/whatever they want (well almost anyone).

2600. Re: *** AEA DSP-232 only $ 379.00 ***

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Dec4.170551.22207@ke4zv.atl.ga.us>
Source record: 20675
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.scanner,rec.radio.amateur.policy

In article <57nfph$3hp@news.Hawaii.Edu> jherman@Hawaii.Edu (Jeffrey Herman) writes:
>In article <3296bd68.23361085@news.tfs.net>, Bob <chainsaw.at.tfs.net> wrote:
>>Wouldn't it have been a little more fair of you to caveat your ad here
>>with the note that they who buy AEA products now do so with little to
>>no possibility of product support, since AEA is about to go belly up?
>>Oh well, bidness is bidness!!!
>
>Ah, "product support" - the cry of the appliance operator. Maybe you
>should invest in a soldering gun and test equipment, Bob.
>
>KH2PZ

And an ICE, a good disassembler, a logic analyzer with a *deep* FIFO,
an EPROM burner and a PLA programmer, etc. Just be sure to keep that
soldering *gun* well away from the unit. There's nothing inside that
can tolerate that kind of abuse.

You *can* reverse engineer the unit if it isn't too badly fried,
but it'll be a lot easier to do it now while it is working rather
than waiting for a custom ASIC or EPROM to fail. Of course if AEA
releases source, you won't need any of that, other than the burner
and PLA programmer.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

2601. TRAKSAT 4.00

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: "Paul E. Traufler" <paul.traufler@pobox.tbe.com>
Message-ID: <01bbe21e$82424ce0$0d17a58c@spider.tbe.com.140.165.2.99>
Source record: 20676

TRAKSAT 4.00 is in BETA test now. This version is a fully protected mode
with great new graphics and features. Take a look for your self!

Home Page
http://www.hsv.tis.net/~wintrak

Paul Traufler

2602. Re: Amsat Phase 3D scheduled to be launched April 1997.

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: fiscus@mcn.net
Message-ID: <584ld7$nqh@news.mcn.net>
Source record: 20677
Cross-posted to: alt.radio.scanner,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.scanner,sci.space.policy,sci.space.shuttle

You can be a part of this history making event by becoming a member of the
Radio Amateur Satellite Corporation(Amsat).

For more information about Amsat and Phase 3D
Write:

AMSAT-NA
850 Sligo Ave.
Silver Spring, MD. 20910-4703

or

http://www.amsat.org/amsat/AmsatHome.html

73 de KB7ADL

1997 Countdown to Phase 3D !

2603. AIRCOM cable inquiry

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: rmander@wonderland.linux.it
Message-ID: <584o8m$63j@server-b.cs.interbusiness.it>
Source record: 20678

Hello all,
I wonder if anyone out there has used the AIRCOM cable for satellite
purposes.I was told that the condense could be a concern for this
cable since the inside isolator is mostly air.
73 , IK4JQW
Rob

2604. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: rmander@wonderland.linux.it
Message-ID: <584o8k$63j@server-b.cs.interbusiness.it>
Source record: 20679

rob@pe1chl.ampr.org (Rob Janssen) wrote:

>When you are afraid "your invenstment in equipment" would become worthless
>"because of a reason you can't control", you should probably not engage
>in amateur satellite experiments. Maybe you should get out of amateur
>radio completely. There is always a chance that the band your costly
>transceiver operates in, is lost because some other use is deemed more
>useful by your government.

You're mostly right, Rob .But indeed, I don't want to get out of
amateur radio.I only have to get used to be a satellite amateur radio
not because of the cost of the new setup but just because:
- I live in a condominium and fought *a lot* to put a three elements
beam
- The roof is not so good so I had a very bad time in planning
everything and actually put everything up.

Now, I absolutely can not put up also a satellite system without
removing the existing HF beam because of the limited room up there so
my great fear is to find myself in a nightmare situation in case of a
P3D failure.The accessibility of the roof is bad, a 3el beam is heavy
, I should call some friends of mine to help and more, I must pass
through my neighbor's penthouse to go to the roof ...

With a satellite system it should be easier for me to access antennas,
make modification by myself , etc.

Also let me say that it'll be very unlikely that any government will
take all the HF bands, at least much less likely than a satellite
damage !

73 , IK4JQW
Rob

>Rob
>--
>+-----------------------------------+---------------------------------------+
>| Rob Janssen pe1chl@amsat.org | WWWhome: http://www.pe1chl.demon.nl/ |
>| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
>+-----------------------------------+---------------------------------------+

2605. Mirage Preamps - WEB Pages ??

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: Mike Tatum <miket@cybatek.dungeon.com>
Message-ID: <01bbe237$308dd220$ae9482c1@cybatek.dungeon.com>
Source record: 20680

Hi All!

I've had the Mirage Preamps recommended to me for SAT usage as aparently
they have a gain of 25db and only 0.8db noise (??)

Can anyone tell me where I can get more details of these preamps, or even
if there is a WEB page from the manufacturer ???

Also, if you would recommend any other Preamp for the job!!

Thanks ...

Mike de G1SYT ...

miket@cybatek.dungeon.com

==========

2606. NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <584vct$9l6@blackbird.afit.af.mil>
Source record: 20681

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96338.91666667 .00000797 00000-0 29624-5 0 521
2 24660 28.4668 86.1084 0009660 68.9504 338.1506 15.72258869 2218
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2607. Ashley's Space World WEB Page

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: Scotty <druid@ionet.net>
Message-ID: <01bbe235$8f56e000$3e4381d0@scotty>
Source record: 20682

Ashley's Space World WEB Page is now up and running with many links for those interested in the space field. Coming soon will be actual communications that Ashley has made via Ham Radio with members of the Mir Space Station. Point your WEB Browser to:

http://www.sirinet.net/~acagle

Enjoy yourself, fill out the questionnaire or send Ashley some email.

Scotty
KC5HSO

2608. web site

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: order@commonwealth.net
Message-ID: <5851s2$fv0@herald.concentric.net>
Source record: 20683

http://www.commonwealth.net/rockets

2609. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: Dan O'Connell <oconneld@OIT.EDU>
Message-ID: <Pine.OSF.3.95.961204150917.26390C-100000@internet.oit.edu>
Source record: 20684

> - I live in a condominium and fought *a lot* to put a three elements
> beam
> - The roof is not so good so I had a very bad time in planning
> everything and actually put everything up.
>
> Now, I absolutely can not put up also a satellite system without
> removing the existing HF beam because of the limited room up there so
> my great fear is to find myself in a nightmare situation in case of a

I have used indoor antennas for satellites since the RS5/6/7/8 days up through AO-13. try it! Dan WA7TDZ

2610. Re: ARRL lawyer to sue member

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: Don Labriola <dplabriola@ccgate.dp.beckman.com>
Message-ID: <32A5DABB.15B0@ccgate.dp.beckman.com>
Source record: 20685
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space

FUman wrote:
...
> Don't you ever wonder about the screwball laws being written everyday
> to restrict and regulate our laws? Do you think they're written by
> Joe Concerned Citizen?
>
I personally think that the best thing we could do was to give congress,
(etc.) 5 years to re-touch all of the laws to make them understandable
by the average product of our school system. It would be their choice as
to modifying the laws or improving the education system! ;o)

If it has been so poorly written that only a lawyer can read it, and two
lawyers come to different opinions of what it means, then it should not
be binding! (Think what that would do the the tax structure).

$.02 from W6QS -- Don

2611. Re: AIRCOM cable inquiry

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32A676EF.370B@wco.com>
Source record: 20686

Roberto wrote:
>
> Hello all,
> I wonder if anyone out there has used the AIRCOM cable for satellite
> purposes.I was told that the condense could be a concern for this
> cable since the inside isolator is mostly air.
> 73 , IK4JQW
> Rob

rob,i have had a 60' run on 1296 for 2 winters on the russian river,
(read very wet),and no problems.i have the pl-259 type, n connectors
on each end with no goop. hope this helps.
73 steve

2612. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-04 00:00:00 UTC
From: Cam Chalmers <cchalmers@atldev.com>
Message-ID: <32A57EC3.121B@atldev.com>
Source record: 20687
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Keith MacDonald wrote:
>
> Jay, this gives me the oportunity to ask a question I've wanted an
> answer to for a while. If an NG about racism was defeated, how were the
> pedophilia & binaries.teen.sex(or whatever it's called) & like groups
> allowed to come into being. My first thought was that they were
> originally intended f/discussion, but then became overridden
> w/pedophiles. This scenario, though, doesn't explain the binary NGs
> that feature child/teen sex.

I don't claim to understand the Usenet all to well. First time I tried
it, I got well over 300+ messages a day. I dropped it quickly.
However, has the addition of new newsgroups always been democratic? Or
was it republic, where anyone with a Usenet server could create a group?
If these alt.binary.craddle_rape newsgroups came around before the
democratic system, then they would have a basis to stay. My question is,
why haven't they been taken down?
I'll admit, this is against my usual stand of "The net is a wilderness,
take as is, or get out" view of the net, but I do believe in limits, and
NGs like aformentioned are beyond them.

--Cam

2613. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <585f0f$ru3@news.mhv.net>
Source record: 20688

In article <32a3c306.53668979@news.capital.net>, orion@capital.net wrote:
>trandall@mhv.net wrote:

>>
>> I think we have to worry more about all the space junk floating around in
>>orbit alot more than meteors. But then again it depends how high or low of an
>>orbit P3D will be. It's orbit will be pretty high I understand, I'll have to
>>check on it though..
>>
>>Tom
>
>I don't know the odds of a meteor hitting a satellite, (pretty low I
>would guess.) but NORAD has the orbits of EVERYTHING going around the
>Earth plotted and documented. This information will be taken into
>account when Phase 3-D's orbit is set up.
>--
>73,
>Butch N2YMJ

Good point however I think they can only track objects starting at a
certain size, I thought I heard softball sized and larger. Anything smaller is
not seen. This is a real problem as evident by the shuttle years ago getting
hit by a paint speck putting a 1/4" gouge in a window. I wonder how many hits
Mir has taken all these years?

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2614. DXER.COM Ham Radio Resource Site

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: kb7ub@dxer.com
Message-ID: <32a6614f.3866179@news.pacbell.net>
Source record: 20689

Stop by and check out - http://www.dxer.com
A new amateur radio website, with a on line BBS,
links to DX Clubs, Contest Clubs, On line Magazines,
Packet Clusters, 6 meter links, Maritime, Scanners,
Radio Mods, VHF/HF Packet Cluster and more.

DXER.COM offers unique e-mail and webspace for personal
pages and more..

CHECK IT OUT

"http://www.dxer.com"

2615. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: orion@capital.net
Message-ID: <32a65ed2.52477476@news.capital.net>
Source record: 20690

Dan O'Connell <oconneld@OIT.EDU> wrote:

> I have used indoor antennas for satellites since the RS5/6/7/8 days up
>through AO-13. try it! Dan WA7TDZ
>

Can you go into details of your antennas, Dan? Sounds interesting.
--
73,
Butch N2YMJ

2616. Re: Mirage Preamps - WEB Pages ??

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: Chris Lewicki <chrisl@seds.org>
Message-ID: <585qp5$jl2@news.ccit.arizona.edu>
Source record: 20691

Mike Tatum <miket@cybatek.dungeon.com> wrote:

: Can anyone tell me where I can get more details of these preamps, or even
: if there is a WEB page from the manufacturer ???

http://www.ssbusa.com/

--

Christopher A. Lewicki KC7NYV 520.621.4662 Maintainer of SEDS.LPL.Arizona.EDU
Chair, Students for the Exploration and Development of Space (SEDS-USA)
"Watch the stars, and from them learn." - Albert Einstein

2617. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: problah <problah@ix.netcom.com>
Message-ID: <01bbe2b3$57654aa0$71895dcf@aries3>
Source record: 20692
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

I can't do that. I'm not a nazi in the least but to refrain someone from their right of religion and freedom of speech would make me a hypocrate.

2618. NORAD Two-Line Orbital Element Set: Space Shuttle (96339.91666667)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-05 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <587lt8$f69@blackbird.afit.af.mil>
Source record: 20693

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96339.91666667 .00000717 00000-0 26798-5 0 545
2 24660 28.4671 78.8393 0021501 81.9930 233.9286 15.69485475 2374
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2619. SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: kevinm@eden.com
Message-ID: <588536$1s5$6@boris.eden.com>
Source record: 20694

I have uploaded to Simtel.Net:

http://www.simtel.net/pub/simtelnet/msdos/hamradio/sbfft12.zip
ftp://ftp.simtel.net/pub/simtelnet/msdos/hamradio/sbfft12.zip 1558410 bytes

sbfft12.zip Sound Blaster spectral display & filtering

Features:
* Sound Blaster 16 (or 100% compatible) input and output.
* Band widths of 2K, 4K, 8K or 16K Hz.
* Spectral resolutions of 1 Hz to 16 Hz per pixel.
* Display of power spectral density with any of 4 color maps in either
linear or logarithmic scale.
* Define and use up to six filters simultaneously -- band pass, band
stop, low pass, and high pass. Filters have 25 Hz skirts at 3 to 50
dB points.
* Filters are defined graphically by mouse movement based upon the
displayed spectrum. Once you see a signal, you can quickly define a
pass or stop filter around the signal by clicking and dragging the
mouse.
* Net filter passband is displayed at all times.
* Filters can be selectively enabled and disabled by a single keystroke
or mouse click.

Special requirements: DOS 3.0 or higher, SB16 or 100% compatible, SVGA,
VESA 640x480 & 1024x768, mouse, 486/66 or higher to display spectra,
Pentium 120 or higher to filter.

Changes: Differences from version 1.1:
* Compatible with many more graphics cards.
* Full screen mouse support with faster response at high resolutions.
* Mouse click to enable/disable and delete filters.
* Defaults are assumed for the Blaster environment variable.
* Support for PCX graphics files instead of TIFF.

Freeware. Uploaded by the author.

Kevin McWilliams, KW5Q, Applied Mathematician
kevinm@eden.com

$$e^{-\frac12 K^2} \frac d{dK} e^{\frac12 K^2}e^{\sqrt{in}}$$
Kevin McWilliams
KW5Q
Applied Mathematician

2620. #1 UNIQUE XMAS GIFT IN THE UNIVERSE! NAME-A-REAL-STAR!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: netglide@washdc.mindspring.com
Message-ID: <5885so$s9h@camel1.mindspring.com>
Source record: 20695

The ultimate Christmas gift for that special someone. The Star Directory gives you the opportunity to register and name individual stars in someone's honor. A beautiful registration certificate is issued which includes the star location coordinates, and a map is provided.

In addition, The Star Directory will include each registered name in their forthcoming publication, Claiming Your Part of the Universe which will then be copyrighted and filed by The United States Copyright Office. All customers will be individually notified when this has been completed.

This is gift which, like stars themselves, is guaranteed to provide more than a lifetime of enjoyment! The gift may be passed on from generation to generation, further enhancing it's value. You will not find this gift available in retail stores. Besides being a beautiful and innovative gift, it makes a great conversation piece. How many of your friends or loved ones can say an existing, real star has been named in their honor?

For further details and to Order, call:
1-800-479-9476 (If calling within the U.S.A.)
1-310-490-6747 (If calling from outside the U.S.A.)

Netglide@mindspring.com

2621. Re: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: mbv@flash.net
Message-ID: <5887hvkjd3@excalibur.flash.net>
Source record: 20696

n article <588536$1s5$6@boris.eden.com>, kevinm@eden.com says...
Aren't you done cluttering the newsgroup yet?
Enough ads already! Cheez.........

2622. Re: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: Klaus Lutsch <lrt20892@rpool5.rus.uni-stuttgart.de>
Message-ID: <Pine.A32.3.94.961206094942.18089A-100000@rpool5.rus.uni-stuttgart.de>
Source record: 20697

Thank 's for this real nice programm .. it's what I have dreamt of,
for a long time. .. but I get kicked out everytime I try starting
it. Reason: the prog whants to run in a special graphics mode..

I have the ELSA 1000TrioV installed with 2MB of RAM .. and no special
driver loaded under DOS ... (maybe) a stupid question .. how can I fix
it. What do I have to do to run the prog.

Maybe anybody out there has encountered the same problem ?
My new computer surely is capable of running sbfft (P133 32MB-ram)
It just refuses to do so becouse it does not find the adequat
grahpics mode ..

tnx fer ur knd hlp 73's de Klaus

2623. Re: whats the best tracker

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: phavorite@aol.com
Message-ID: <19961206153200.KAA21833@ladder01.news.aol.com>
Source record: 20698

I use PC Track. Its DOS based but I like it. Download it anywhere.

2624. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: phavorite@aol.com
Message-ID: <19961206153800.KAA21921@ladder01.news.aol.com>
Source record: 20699

As long as the Neo-Nazis dont infiltrate rec.radio.amateur.space I dont
care if they
have there own group.

2625. Re: What is the best cable ?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: mbv@ti.com
Message-ID: <589jck$c2f@tilde.csc.ti.com>
Source record: 20700

In article <57vdij$84@server-b.cs.interbusiness.it>, rmander@mbox.4net.it
says...
>
>Hello all,
>I am thinking of buying some coaxial cable for a line 20 mt. long at
>430 Mhz.I have the problem that the cable must go inside a tube to
>reach the roof.At a certain point the tube makes an angle that so far
>hasn't brought me problems with RG213 cable .I have seen that Marlow
>50/20 has the same external dimension of RG213 but I also know that
>the bending curve may be different.Is 50/20 really suitable for a line
>like that and in case, will its bending curve allow me to fit it
>properly into the tube that goes to the roof ?
>Thanks in advance
>73 IK4JQW, Rob
>
~~~~~~~~~~~~~~~~~~~~~~~~
Bob, at this length and freq, you probably need to use
a coax that won't go thru the pipe. At least 1/2" Heliax
for 430MHZ and 20m. consider another route.
Ken K5MBV
~~~~~~~~~~~~~~~~~~~~~~~~

2626. Re: VERY IMPORTANT!! PLEASE READ THIS!!!!!!!!!!!!!!!1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: richard@beulah.demon.co.uk
Message-ID: <589fgm$bkr@beulah.demon.co.uk>
Source record: 20701
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <32A57EC3.121B@atldev.com>,
Cam Chalmers <cchalmers@atldev.com> wrote:
>
> I'll admit, this is against my usual stand of "The net is a wilderness,
>take as is, or get out" view of the net, but I do believe in limits, and
>NGs like aformentioned are beyond them.

There is also an idea that messages are best posted to appropriate
newsgroups. The one I am reading this in, for example, is
comp.lang.java.programmer, where it has very little connection to the
topic (theoretically) under discussion. If you could look for a way of
trimming down the list of groups you post to, this might be helpful.

Thanks.

--
Richard Robinson, Leeds, UK.
"The whole plan hinged upon the natural curiosity of potatoes" - S. Lem
Nothing in the above should be read as suggesting that
I may wish to receive bulk mailshots. I do *NOT*.

2627. Re: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: Jim <nospam@the.net>
Message-ID: <32A87EB2.41C6@the.net>
Source record: 20702

Ken Durham wrote:
>
> n article <588536$1s5$6@boris.eden.com>, kevinm@eden.com says...
> Aren't you done cluttering the newsgroup yet?
> Enough ads already! Cheez.........

Pardon the parody but...

Aren't you done cluttering the newsgroup yet?
Enough complaints already! Whiizz........

Just because *you* can't figure out an application that uses the
FREEWARE, does not mean it has no use to others interested in weak
signal satellite work.

I think this software is great, and applaude KW5Q for literally giving
us free this excellent package that would otherwise cost thousands of $s
if it were to be purchased from a commercial software house.

Getting ready to download and looking forward using the newest.

Jim

--
My from line is not machine readable my real e-mail address is:
jimf@corp.sgi.com Do not hit reply to send back to me.

Sending unsolicited e-mails to my address that are not of a
previously established personal nature nor directly related
to my business will be considered a request of my proof reading
services. My rates are $50 per word and punctuation. Sending
to my address is considered acceptance of these terms.

2628. Re: TRAKSAT 4.00

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: mbv@ti.com
Message-ID: <58a0ci$lqr@tilde.csc.ti.com>
Source record: 20703

. Take a look for your self!
>
>Home Page
>http://www.hsv.tis.net/~wintrak
>
>Paul Traufler
~~~~~~

Paul, could there be an error here? Netscape says URL doesn't exist.
Ken K5MBV
~~~~~~

2629. Re: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: mbv@ti.com
Message-ID: <58a98o$b3@tilde.csc.ti.com>
Source record: 20704

>
>Just because *you* can't figure out an application that uses the
>FREEWARE, does not mean it has no use to others interested in weak
>signal satellite work.
>
~~~~~~

Just because *you* can't understand what I'm talking about doesn't
mean we need to see the ad every few lines in the newsgroup. I don't
need another DSP thank you. (I sure don't need to hear about another
ARRL lawyer either ;(
and your horsie
Ken K5MBV
~~~~~~

2630. NORAD Two-Line Orbital Element Set: Space Shuttle (96341.33039352)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <58aa9h$jrs@blackbird.afit.af.mil>
Source record: 20705

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

****

STS 80
1 24660U 96065A 96341.33039352 .00000726 00000-0 27426-5 0 593
2 24660 28.4683 68.5999 0022256 98.8817 301.5184 15.69476679 2593
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2631. test

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: ke9pq@netnet.net
Message-ID: <58avqm$ju1@laslo.netnet.net>
Source record: 20706

All prices are plus shipping

Mark Olson "KE9PQ" 1490 Norfield Rd.
Suamico,Wi. 54173
Call (414) 434-8097 after 6:00pm central time.
Email ke9pq@netnet.net Thanks and 73 Mark
NOTE: All items listed are guaranteed to be
as described or your money back.

2632. Cu-Seeme Video conferencing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-06 00:00:00 UTC
From: wa4twa@versoft.com
Message-ID: <32a84b2c.12461577@nntp.cntfl.com>
Source record: 20707

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

2633. How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: sbabb@lpub.com
Message-ID: <58aocb$n8g@news-central.tiac.net>
Source record: 20708

I'm looking for advice.

How do I start out cheap in satellite/EME communication? I'll take advice on anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.

Thanks de wa1vht

2634. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: orion@capital.net
Message-ID: <32a9091c.55466673@news.capital.net>
Source record: 20709

rmander@wonderland.linux.it (Roberto) wrote:

>orion@capital.net wrote:
>
>>I don't know the odds of a meteor hitting a satellite, (pretty low I
>>would guess.) but NORAD has the orbits of EVERYTHING going around the
>>Earth plotted and documented. This information will be taken into
>>account when Phase 3-D's orbit is set up.
>>--
>>73,
>>Butch N2YMJ
>
>How about the russian space junk ? How small pieces of junk are they
>able to monitor ? I'm thinking of a lost small bolt that could bring
>severe damages to P3D !!
>
>73 IK4JQW , Rob
>
Have you ever heard of an OSCAR satellite being hit by something?
There is VERY little chance of this happening.
--
73,
Butch N2YMJ

2635. AO-13 Burned Up On Re-Entry

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: fsperber@aol.com
Message-ID: <19961207072600.CAA10212@ladder01.news.aol.com>
Source record: 20710

AMSAT-Deutschland e.V. (Germany)
Press-Release

Telecommunications Satellite AMSAT-OSCAR 13 Burned Up On Re-Entry

On December 5th, 1996, the international telecommunications satellite AMSAT OSCAR-13 burned up upon re-entering the Earth's atmosphere. AMSAT OSCAR-13 was successfully launched on June 15th, 1988, into a highly elliptical orbit on board the first test flight of the new European ARIANE 4 rocket. Over the years, AMSAT OSCAR-13 has enabled direct radio contacts among the world-wide community of nearly 2 million radio amateurs.

AMSAT OSCAR-13 had been constructed within four years by an international project group under the leadership of Dr. Karl Meinzer of AMSAT-Germany. AMSAT (Amateur Radio Satellite Corporation) is a world-wide alliance of approximately 6000 scientists, engineers, technicians and radio amateurs who voluntarily build and operate scientific and communications satellites.
During its operational period, AMSAT OSCAR-13 was monitored and controlled by a group of ground stations in Germany, the United Kingdom, Australia, New Zealand and the United States of America.

Upon its re-entry, AMSAT OSCAR-13 has had a lifespan of over eight years. Originally the mission had been conceived to last only seven years. Overheating of the satellite due to air friction in the upper atmosphere resulted in the destruction of the solar panels on November 24th and the consequent interruption of all radio links. Prior to this event, the on-board monitoring system had transmitted much data relating to the satellite's behavior in the upper atmosphere to ground stations for evaluation.

The decay of the orbit was caused by the gravitational attraction of the Sun and the Moon. The elliptical orbit was stretched so that the satellite gradually approached the Earth which lies at one of the two focal points of
the ellipse. This phenomenon motivated AMSAT to develop new analytical and computational methods to allow long term predictions for future satellites on similar, highly elliptical orbits.

The orbit of the next satellite, AMSAT Phase 3-D, has been calculated using
these new methods and will therefore be more stable over the long term. AMSAT Phase 3-D is scheduled to be launched into space during the first half of 1997 as apparently the only satellite payload for the second test flight of the new ARIANE 5 launcher.

(AMSAT-DL Journal Editor)

For more information see:
http://www.amsat.org
ftp://ftp.amsat.org/amsat/satinfo/ao13

2636. Re: TRAKSAT 4.00

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: Clyde Young <ceyoung@gte.net>
Message-ID: <32A95D10.4E15@gte.net>
Source record: 20711

Ken Durham wrote:
>
> . Take a look for your self!
> >
> >Home Page
> >http://www.hsv.tis.net/~wintrak
> >
> >Paul Traufler
> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
> Paul, could there be an error here? Netscape says URL doesn't exist.
> Ken K5MBV

What version of Netscape are you using 2.01E finds just fine.

KF5QU

2637. Radio Meteor Obs. Bull. Nov 1996: Leonids!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: steyaert@vvs.innet.be
Message-ID: <steyaert.90.32A97778@vvs.innet.be>
Source record: 20712

Radio Meteor Observation Bulletin No. 40 December 1996

1. FORWARD SCATTER METEOR OBSERVATIONS

Observing method: listening

Observer: E.P.Bus
Location: near Salamanca, Spain (5 26' W, 41 12' N)
Frequency: 87.9 MHz
Transmitter Location: Lousa, Portugal, 50 kW, distance 268 km
Antenna: Yagi, 3 elements, Azimuth 242 o (=WSW), elevation 36 o
Receiver: Bearcat UBC 177XLT Scanning Radio, sensitivity: 0.5 microvolt
Observing method: Listening

Leonids 1996

Long duration reflections >1 sec during one hour intervals
starting at 4h UT:

1996 UT
Nov 17 4h 5h 6h 7h 8h

Refl 23 13 16 35 23

The most favourable antenna geometry for detecting Leonids is around
4h 30m UT. Unfavourable antenna geometry between 6h45m and 9h15m UT.
After correction for Observability Function (after Hines) the Leonids
showed the strongest activity since 1993. A small maximum was monitored
around 4h45m UT (Solar Longitude 235.16 degrees) and a high maximum
around 7h25m UT (Solar Longitude 235.29 degrees), shortly after that
the Earth passed the node of the orbit of comet 55P/Tempel-Tuttle
(235.255 degrees). Previous maxima were monitored at Solar Longitudes
235.82 degrees in 1994 and 235.32 degrees in 1995. (All longitudes for
Epoch 2000).

Peter Bus / via Ton Schoenmaker

Observer: Maurice De Meyere
Location: Deurle, Belgium (3 37' E, 51 00' N)
Frequency: 66.51 MHz
Transmitter locations (all stations of more than 10 kW):
66.35 MHz, Klaipeda, Lithuania 12 kW, 05h00-22h00
66.41 Siedlce Poland 39 04h57(Sun05h57)-02h00(Sat03h00)
66.47 Viesintos Lithuania 12 05h00-22h00
66.50 Sofia Bulgaria 10 24hrs
66.56 Poznan Poland 56 04h57(Sun05h57)-02h00(Sat03h00)

66.62 Budapest Hungary 100 24hrs
66.68 Valmiera Latvia 20 06h00-22h00
Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East),
elevation 27 o
Antenna amplifier: 25 dB max level 90 dBmuV
Receiver: commercial, Progresson 447A, TESLA (Bratislava)
The receiver was calibrated with a Marconi TF2008 signal
generator. Sensitivity: 5 muV (modulation frequency
1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.
[Time and details of all individual meteor reflections are stored
on file in the University of Ghent format (Prometeos), and are
available for further analysis. Reduction software for DOS and
Windows available].

November 1996
Leonids

Raw counts of reflections with a duration of at least 0.027 s
during one hour interval starting at UT:

Nov	UT											
1996	21h	22	23	00	01	02	03	04	05	06	07	08	09	10
1- 2	31	29	41	47	53	35	63	42	46	89	87			
2- 3	12	18	15	17	19	28	28	29	30	25	31			
3- 4	18	22	23	30	38	48	51	44	36	54	26			
4- 5	7	19	14	34	39	40	41	23	37	34	36			
5- 6	15	13	19	28	30	38	32	25	27	41	48			
6- 7														
7- 8	8	19	18	26	23	29	25	20	43	48	23			
8- 9	6	13	23	27	33	21	29	25	29	44	38			
9-10														
10-11	9	12	14	17	15	18	18	30	24	27	26			
11-12														
12-13	10	10	9	11	5	12	8	13	19	29	36			
13-14	8	15	20	29	33	59	35	48	54	50	41			
14-15	7	11	29	38	38	33	65	41	48	79	49			
15-16	9	14	15	16	25	18	19	35	57	147	172	108	161	46
16-17	25	23	48	106*	233*	199*	316*	393*	333*	313*	394*	364*	248*	143
17-18	15	22	29	23	42	43	47	69	60	66	61	45	44	45
18-19	9	18	18	35	24	66	26	42	44	59	68			
19-20	25	26	16	31	32	39	36	43	53	58	48			
20-21	11	16	17	26	30	27	29	54	38	34	37			
21-22	19	42	24	35	31	37	43	36	25	25	21			
22-23	14	25	35	33	56	55	45	30	49	54	57			
23-24	12	17	14	31	42	49	45	33	32	25	45			
24-25	11	18	35	40	38	38	40	40	35	45	36			
25-26	17	24	39	34	24	39	57	42	49	62	39			
26-27	18	27	20	28	42	26	37	27	26	43	23			

```
27-28 | 20 6 27 31 37 46 30 28 29 37 17
28-29 | 17 29 52 54 57 64 81 46 40 38 49
29-30 | 14 32 43 51 54 33 39 46 35 36 46
30-01 | 15 16 37 22 39 37 32 36 39 52 83
------+------------------------------------------------------------------
1996 | 21h 22 23 00 01 02 03 04 05 06 07 08 09 10
Nov | UT
```

Notes:
. local time = UT + 1 hour
* intense Leonid activity during the morning of Nov 17.
The Leonid radiant rises at 22h30m, and sets at 14h UT.
Best forward scatter conditions for this setup between 7h and 8h UT.
Peak activity on Nov 17, 4h UT.

. Radio-amateur comments:
Johan, PE1LAU, Netherlands: "Leonids were very nice this time"
(Nov 17, 7h-11h UT). I heard only few pings (=short reflections), it
were every time bursts from 10 to 80 s at least!
At one moment I thought it was like Es signal".

Lasse, KP02, Finland: "what fun I had on Sunday morning (=Nov 17)...
Great signals between 3h43 UT and 4h05 UT".

Steffen, DD0VF, Dresden: "long burst on Nov 17, 3h 06 UT, 123 seconds...
In the late morning of Nov 17th the longest burst was about 2 minutes
with 4 different stations".

Maurice De Meyere

Observer: Werfried Kuneth
Location: near Villach, Austria (13 37' E, 46 45 ' N)
Antenna: 3 element Yagi
Receiver: AR-8000 at 48.25000 MHz, SSB mode
Narrow passband filter, no preamplifier.
Transmitter: 250 kW TV video carrier in Madrid (Spain),
distance 1550 km, southwest.
Observing method: automatic setup using FFTDSP42t software by AF9Y to
record the audio signal. 20 channels of 2 Hz width are used for
meteor identification.
More details see <http://www.net4you.co.at/user/kuneth/info.html>

This month I will report reflections duration (instead of reflection
time percentage).

Raw counts (minimum reflection duration of 0.5 seconds)

```
Nov | UT
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
-----+-----------------------------------------------------------
11 | 78 106 119 69 198 136 142 126 141 159 138 132 115 99 64
12 | 82 87 103 100 144 162 175 139 128 135 124 131 103 101 79 71
```

```
13 | 102 94 124 103 75 170 175 130 140 157 131 128 55 33
14 | 67 69 73 74 78 189 142 125 154 167 131 123 113 106 40
15 | 113
16 | 191 160 46 39 93 29
17 | 190 239 271 226 265 241 305 207 197 254 212 172 152 101 72
18 | 120 98 130 119 157 247 269 188 186 194 169 87 90 89 70
19 | 55 148 162 105 144 103 63 90 52 58 66 43
20 | 77 77 92 96 103 116 88
21 | 70 81 84 101 119 198 204 173 169 186 155 125 95 115 77 58
22 | 144 100 150 107 137 215 204 171 168 162 159 124 131 128 69
-----+--------------------------------------------------------------
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Nov | UT
```

Raw counts (minumum reflection duration of 3 seconds)

```
Nov | UT
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 | 21 22 23
-----+--------------------------------------------------------------
1 | 7 5. 8 5 1 8 0. 6 5 3 10 5 10 6 5. 2. | 2. 1 4
2 | 3 9 2 4 7 15 11 9 9 6 6. 7. | 2. 2.
3 | 5 4. 0. 7 2 2 2. 2 1. 3. | 1 4 2
4 | 5. 4 6 3 1. 7 11 6 4 7 6 4 1 2 4 1. 2.| 6 1 5
5 | 3 4 6 3 7 9 20 6 4 13 7 2 5 2 3 2 | 3 6 3
6 | 2 6 3 8 9 3 9 3 5 0 1 | 5. 7 6
7 | 8 4 3 3 7 6 7 6 12 5 4 2 3 3 3 5 0.| 1 4 2
8 | 7 5 4 4 3 7 5 7 7 1. 0. 3. 3. 2. 9 2 1 | 2 2 4
9 |10 7 5 2 2 7 16 3 4 7 5 5 5 1 2 4 2 | 2 0 3
10 | 8 13 7 10 11 14 10 3. 4 8 1 | 6 2
11 | 9 9 12 2.10 10 5 5 6 5 3 11 8 2 2 4.| 5 4 6
12 | 5 6 3 5 3 7 12 7 5 9 5 3 2 3 2 3 2 | 7
13 |11 4 9 4 0. 6 9 4 2 11 4 12 4. 3. | 4 8
14 | 1 6 6 9. 4 14 5 7 9 4 7 7 5 9 1. | 5 7 6
15 | 5 |
16 | 17 8 3. 4. 1 2. | 4 4 8
17 |23 41 46 40 54 42 62 43 52 43 23 15 10 3 4 | 4 8 10
18 | 8 14 9 8 25 23 19 15 6 13 5 3 6 5 3 4 | 6 3
19 | 5. 6 8 3 9 3 6 10 3 3 3 4 0.| 1 4 3
20 | 7 5 7 4 5 4 2 | 0. 5 5
21 | 5 5 7 2 7 7 2 6 3 8 8 7 5 1 0 3 3.| 7 7
22 |12 10 4 4 7 6 11 5 10 5 9 5 7 5 2. |
23 | 4 6 21 11 8 3. 6 9 13 10 | 2. 9
24 | 8 7 6 9 4. 5 16 9 5 8. 1. | 6 4 7
25 | 4 6 4 7 3 9 9 4 13 15 9 5 5 5 4. 1. 3.| 5 8
26 | 4 9 6 2 8 4 9 7 15 7 6 9 3 6 5 6 | 4 6 6
27 | 4 8 8 9 10 6 7 4 7 6 5 7 2 5 4 1 2.| 4 6 0
28 | 3. 1. 2 5 6 11 5 10 6 11 8 6 8 10 3 4 4 | 4 6 6
29 | 5 5 7 4 9 10 8 4 3 11 12 1. 5 5 2 | 10 18 10
30 |11 15 10 7 4 13 15 5. 5 4 7 8 10 2. 5.| 0 5 7
-----+--------------------------------------------------------------
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 | 21 22 23
```

Nov | UT

Raw counts (minumum reflection duration of 10 seconds)

Nov | UT
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 | 21 22 23
-----+--
11 | 2 0 0 0. 3 2 1 1 2 1 0 0 2 0 0 0.| 1 0 0
12 | 0 1 0 0 0 1 1 2 1 4 2 1 0 0 0 0 0 | 0
13 | 2 1 2 1 0. 2 2 1 0 2 1 2 1. 0. | 1 3
14 | 0 1 1 2. 1 6 2 0 2 0 1 2 1 1 0. | 0 0 0
15 | 0 |
16 | 7 1 0. 1. 0 0. | 0 0 2
17 | 8 14 22 21 21 20 23 22 22 15 10 4 2 0 0 | 1 0 0
18 | 3 2 0 2 9 7 7 7 1 3 2 0 0 0 0 0 | 0 0
19 | 1. 1 2 0 3 2 1 1 0 0 1 0 0.| 0 0 0
20 | 1 0 2 0 0 1 0 | 0. 1 1
21 | 2 0 1 0 1 4 1 1 0 0 1 0 1 0 0 0 1.| 0 2
22 | 1 1 0 0 0 1 2 0 0 0 0 0 1 0 0. |
------+--
1996 | 0h 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 | 21 22 23
Nov | UT

The Leonids showed up very well on November 17, and best in the 10 seconds
(the longest) counts.

Notes:
. a dot (.) after the number stands for a lower observation period: 20-40 min.
. blank value means either few or no data available, interference,
power failure or transmitter shutdown.
. local time conversion: 1 hours ahead of UT (07h00 UT is 08h00 local)
. lots of thunderstorms on Nov. 15 and 16.

Werfried Kuneth

Observer: Kimio Maegawa
Transmitter: 50 W CW 53.7500 MHz
Transmitter antenna: 2 element Cross Yagi 4dBi, zenith
Transmitting Location: Sabae city (136 11' E, 35 56' N)
Receiver: IC726 500 Hz BW SSB, sensitivity -150 dBm sensit
Receiver antenna: 3el Yagi 7 dBi (70 deg, SE direction) height 10 m
Receiving Location: Ohno city (136 53' E, 36 00' N)
Data processing : Receiver output is fed into DX2-66 MHz PC and analyzed by
AF9Y's FFTDSP42 software.
Then stored every 4.22 min automaticaly with GIF format.
Play back GIF files and count echoes manually by the doppler
shift rejecting tropo signal or airplane echo.

Hourly echo counts
A: all echoes
L1: long echoes (T > 2.5 s)

L2: long echoes (T > 15 s)

```
13 Nov 14 Nov 15 Nov 16 Nov 17 Nov
UT | A L1 L2 A L1 L2 A L1 L2 A L1 L2 A L1 L2
----+-----------------------------------------------------
00h | 52 0 0 54 3 0 89 5 2 77 1 2 80 8 12
01 | 66 1 0 46 1 0 78 2 1 86 3 0 73 2 6
02 | 46 3 0 30 2 0 53 3 0 67 3 1 69 5 3
03 | 35 3 0 22 1 0 50 3 0 55 2 0 49 1 1
04 | 58 4 0 38 0 0 38 0 0 47 2 0 36 0 0
05 | 40 1 0 31 2 0 32 1 1 46 2 0 44 0 0
06 | 19 0 0 30 0 0 32 2 0 33 1 0 26 2 0
07 | 19 0 0 30 2 0 32 2 0 22 1 0 26 1 1
08 | 26 1 0 45 6 0 18 0 0 16 2 0 17 0 0
09 | 31 1 0 28 3 0 26 2 0 @19 @0 @0 20 1 0
10 | 44 2 0 26 1 0 25 1 0 16 0 0 28 2 0
11 | 46 1 0 36 0 0 44 5 1 36 1 0 @31 @2 @0
12 | 68 1 0 51 1 0 52 2 0 51 2 0 - - -
13 | 76 4 1 57 5 1 69 8 0 41 2 0 111 7 1
14 | 69 2 0 62 2 0 82 9 0 77 1 0 76 3 0
15 | 78 2 1 80 3 0 63 4 0 82 2 0 99 5 0
16 | 93 4 0 70 2 1 106 10 1 94 11 1 121 7 3
17 | 95 5 0 78 12 1 89 7 1 104 6 6 122 11 5
18 | 117 5 0 110 11 0 110 13 1 130 10 6 147 7 5
19 | 110 9 0 96 5 1 110 2 2 118 18 6 125 14 7
20 | @118@11 0 @89 @9 0 @97 @5 0 @122@12 @9 105 6 7
21 | @109@14 1 106 7 1 111 12 1 132 13 13
22 | 91 6 0 99 12 3 100 8 0 82 9 11
23 | 85 2 1 97 6 0 93 2 1 95 10 12
----+-----------------------------------------------------
UT | A L1 L2 A L1 L2 A L1 L2 A L1 L2 A L1 L2
13 Nov 14 Nov 15 Nov 16 Nov 17 Nov
```

Notes:
. @ means less than 60min.
. local time = JST = UT + 9 hours
. additional information is available at
Home Page http://www.tcp-ip.or.jp/~kaze/rmd.htm
Anonymous FTP ftp:rasc5.kurasc.kyoto-u.ac.jp/pub/nakamura/hro
Graph: 96leo_km.gif, Images: leo96boh.lzh

Kimio Maegawa

Observer: Ton Schoenmaker
Location: Roden, Netherlands (6 26' E, 53 08' N)
Frequency: 72.11 MHz
Transmitter location:
Wroclaw, Poland, 130 kW, distance 756 km
Antenna: Horizontal Yagi, 5 elements, geographical azimuth
105 degrees (ESE), elevation 15 degrees

Receiver: Homemade convertor 65-67 MHz to 28-30 MHz + Barlow-Wadley
0-30 MHz receiver; total sensitivity 0.3 uV for 20 dB S/N
with a bandwidth of 3 kHz
Observing method: Servogor strip-chart recorder, 120 or 600 mm/h

Leonids (yes!) and Alpha-Monocerotids (no!) in November

The numbers below give the hourly percentage of total meteor reflection
time during a few nights around the Leonids and the Alpha-Monocerotids.
Only reflections longer than 10 seconds were taken into account. A broad
maximum of Leonids was observed between 01h and 09h UT on 17 November 1996,
but also the observability function (Hines, Steyaert) was most favourable
during that period.
During the above-horizon-period of the radiant of the Alpha-Monocerotids
no activity was measured on 20/21 November.

| November 1996
UT | 10-11 15-16 16-17 17-18 20-21
----+--
22h | 0.3 1.7 7.5
23 | 0.0 14.0 3.9 1.0
00 | 0.6 0.0 26.2 12.1 1.5
01 | 1.0 1.1 40.0 4.2 0.6
02 | 1.8 1.0 35.0 6.9 1.7
03 | 0.8 2.2 58.5 4.2 2.9
04 | 0.4 6.8 56.0 6.4 4.0
05 | 2.8 4.9 60.3 6.7 2.8
06 | 1.4 16.5 * 6.5 1.1
07 | 2.2 * * 7.2 1.4
08 | 21.8 45.8 2.9 3.3
09 | 9.6 33.9 2.5 1.1
10 | 16.3 4.7
11 | 14.6
----+--
UT | 10/11 15/16 16/17 17/18 20/21
| November 1996

* problems with pen of recorder

Ton Schoenmaker

Observer: Chikara Shimoda
Location: Asahi, Nagano, Japan (137 51' E, 36 07' N)
Frequency: 81.4 MHz
Transmitter Location: FM-Japan 81.3 MHz, 10 kW, distance 180 km
Antenna: 5 element Yagi directed to the Zenith.
Receiver: AM-FM Tuner (TRIO KT-1100)
Observing method: Meteor echoes output from center-tuning meter were
recorded on a pen-recorder chart.

```
Nov | UT
1996 | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
-----+---------------------------------------------+-----------
1 | 17 19 25 21 17 13 25 39 23 29 29 27 | 18.7 28.7
2 | 10 24 22 19 17 10 22 18 34 25 22 | 18.4 21.8
3 | 18 15 23 15 15 17 18 21 21 23 20 27 | 17.2 21.7
4 | 17 15 22 13 22 15 18 19 24 21 26 22 | 17.3 21.7
5 | 23 26 26 26 22 15 20 18 24 21 25 26 | 23.0 22.3
6 | 13 22 21 22 14 25 28 23 20 22 21 23 | 19.5 22.8
7 | 8 15 14 | 12.3
8 | 24 15 24 23 24 29 28 23 26 | 21.0 25.5
9 | 8 24 19 18 12 24 23 30 17 18 29 28 | 17.5 24.2
10 | 12 21 14 16 19 14 22 | 16.0 22.0
11 | 28 23 15 20 13 21 19 18 27 31 23 | 19.8 23.2
12 | 17 22 13 20 12 15 24 15 19 20 21 29 | 16.5 21.3
13 | 17 15 19 20 15 23 21 18 33 25 22 20 | 18.2 23.2
14 | 17 16 16 16 14 23 21 21 25 17 29 24 | 17.0 22.8
15 | 14 17 25 16 17 15 16 22 18 27 29 27 | 17.3 23.2
16 | 13 25 21 14 20 30 26 24 30 23 36 44 | 20.5 30.5
17 | 22 27 25 17 16 24 35 34 37 27 40 35 | 21.8 34.7
18 | 19 14 17 18 22 19 29 26 34 18 31 29 | 18.2 27.8
19 | 11 23 8 17 14 16 20 18 20 23 34 18 | 14.8 22.2
20 | 18 22 20 13 17 13 24 21 28 32 14 18 | 17.2 22.8
21 | 17 18 18 10 17 22 13 21 21 24 20 23 | 17.0 20.3
22 | 9 18 21 15 16 19 19 31 25 21 21 26 | 16.3 23.8
23 | 13 15 16 13 14 19 21 18 18 19 18 20 | 15.0 19.0
24 | 13 11 19 13 21 22 15 27 20 21 19 | 16.5 17.0
25 | 14 11 9 9 11 16 21 18 22 | 11.7 20.3
26 | 10 13 16 19 18 21 27 21 22 33 22 15 | 16.2 23.3
27 | 16 18 21 17 24 14 20 19 29 19 24 19 | 18.3 21.7
28 | 15 20 17 17 22 21 14 31 29 24 26 31 | 18.7 25.8
29 | 14 13 26 16 16 21 20 28 23 21 27 26 | 17.7 24.2
30 | 8 18 13 12 16 18 14 26 28 24 21 11 | 14.2 20.7
-----+---------------------------------------------+-----------
1996 | 11 12 13 14 15 16 17 18 19 20 21 22 | *(1) **(2)
Nov | UT
```

* (1) average hourly rate between 11-17 UT
**(2) average hourly rate between 17-23 UT

- local time = JST = UT + 9 hours

Chikara Shimoda

Observer: Kazuhiro Suzuki
HRO (Radio Meteor Observation using HAM)
Location: Toyokawa Meteor Observatory (137.32 deg E, 34.81 deg N)
Shiinoki, Toyokawa-city, Aichi, 442, JAPAN
Transmitter: JA9BOH 53.7500 MHz, CW 50 W
Antenna: Dipole (height 7 m, to zenith)
Receiver: IC-575 (ICOM) LSB BW 2.5 kHz

Transmitter location: Sabae (in Fukui pref.), about 150 km
north north-west from receiving station.
Method of echo sampling: After image procedure was done by PC with FFT
software, echoes(>10 dB(S/N)) were counted.

Total echo rates

```
Nov | UT
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-----------------------------------------------------------------------
31- 1 | 44 73 67 45 50 48 44 54 47 52 32 26 34 25 22 24 20 18 13@17 21 26 28 37
1- 2 | 34 46 46 38 32 33 51 44 48 34 33 36 30 20 18 16 16 15 16 19@21 26 30 33
2- 3 | 35 54 43 56 45 31 33 37 37 38 40 32 26 31 21 25 15 14 15 19 17 30 27 35
3- 4 | 40 46 43 44 34 48 30 32 33 42 37 29 26 22 18 20 16 15 16 22 25 39 34 49
4- 5 | 37 76 65 71 65 62 54 50 48 47 48 38 35 25 24 24 16 19 14@17 26 37 36 45
5- 6 | 59 68 66 54 54 63 51 50 66 54 54 36 37 26 24 28 19 14 21@29@27 35 31 26
6- 7 | 46 53 61 61 59 53 51 59 47 47 34 35 30 34 27 21 18 23 20 16@20 38 36 44
7- 8 | 45 57 58 64 47 51 56@60 49 55 37 44 35 33 30 19 25 21 19 21 24 41 33@34
8- 9 | 54 58 62 59 62 50 66 53 44 45 42 34 29 25@25 18 19 16 17 19 28 32 37 31
9-10 | 51 50 53 48 45 39 43 53 36 32 45 30 31 23@21@18 18 15 13 18 19 28 28 37
10-11 | 36 44 55 44 47 41 36 46 45 40 43 29 26 20 16 21 14 15 16@21@21 29 27 24
11-12 | 33 39 37 39 32 35 33 32 26 25 23 20 21 17 18 13 14 14 13@17@19 31 32 31
12-13 | 26 41 39 33 34 36 37 42 45 39 34 27 24 27 27 16 14 1 416@21@17 27 29 32
13-14 | 28 36 37 33 35 31 37 38 28 28 21 20 23 21 20 17 13 16 15@18 21 28 32 29
14-15 | 41 49 51 56 52 44 38 32 33 33 27 25 23 23 18 15 14 13 13@14 19 28 27 35
15-16 | 34 46 48 60 35 46 41 30 37 29 29 19 25 17 15 18 14 16 14 16@21 25 25
16-17 | 25 41 46 38 41 34 41 50 41 47 25 28 31 21 13 14 15 12 12@13@15 20 24 22
17-18 | 25 32 42 32 30 31 32 28 34 27 34 28 19 25 21 18 17 12 13@15@17 23 25 18
18-19 | 20 30 27 34 44 31 32 30 29 29 28 28 16 15 20 14 12 13 12@11@13 28 37 33
19-20 | 39 38 46 34 40 53 36 39 22 34 24 23 24 17 16 16 15 15 15@14@21 28 31 40
20-21 | 24 39 52 41 45 39 49 46 37 34 31 29 23 16 18 14 17 14 17 16@28 23 32 25
21-22 | 28 36 31 42 31 38 50 35 39 25 24 24 24 19 18 16 13 17 13 16@20 24 35 33
22-23 | 28 47 57 50 50 36 42 32 39 34 25 35 24 22 23 21 17 17 14@19@23 32 33 28
23-24 | 40 31 36 35 39 32 38 32 39 42 35 30 30 23 24 18 17 14 16@18@19 35 26 44
24-25 | 33 49 56 60 47 54 42 40 43 33 28 33 27 19 17 20 16 17 14@21@20 26 32 38
25-26 | 39 58 45 56 58 59 66 48 44 51 30 36 27 20 20 16 16 13 16@18@19 26 41 44
26-27 | 38 53 56 57 46 38 33 47 45 33 35 38 25 20 21 19 13 15 13@15 18 22 25 39
27-28 | 35 51 56 44 59 53 57 42 45 38 43 21 28 23 22 23 19 11 14@15@18 31 32 48
28-29 | 42 44 66 60 57 46 51 56 45 44 35 31 23 23 28 15 14 13 17 17@18 26 26 28
29-30 | 44 49 75 75 74 54 55 49 61 41 38 33 36 32 27 30 26 16 15@17 22 27 26 36
------+-----------------------------------------------------------------------
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
Nov | UT
```

Hourly rate of long (> 20 s) echoes

```
Nov | UT
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
------+-----------------------------------------------------------------------
6- 7 | 1 1
7- 8 | 1 1 1
```

```
8- 9 | 1 1 3 1
9-10 | 1 1 1 1
10-11 | 1 1
11-12 | 1 2 1
12-13 | 1 2 1
13-14 | 2 1
14-15 | 2 1 2 2 3 1 2 1
15-16 | 1 1 1 2 1 0 0 1 2 1 2 1 0 0 0 0 0 0 0 0 0 0 0
16-17 | 0 1 7 4 5 3 8 11 12 14 8 4 1 0 0 0 0 0 0 0 0 0 0 0
17-18 | 1 1 2 3 0 1 5 1 3 5 3 1 0 0 0 0 0 0 0 0 0 0 0 0
18-19 | 0 0 1 0 0 1 1 1 3 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
19-20 | 0 0 1 2 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
20-21 | 1 1 1 1
21-22 | 1 1 2 1
22-23 | 1 1 1
23-24 | 1 1
24-25 | 1 1
25-26 | 1 1 1
26-27 | 1 1
27-28 | 1 1 1 3 1
28-29 | 1 1 2 2 1
29-30 | 2 1 1 1
------+------------------------------------------------------------------------
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14
Nov | UT

Dead time (in 0.1 minute) of observation due to persistant meteor echo.
For example, 116 means 11.6 minutes.
All dead times observed zero for 04h - 14h UT.

Nov | UT
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03
------+-------------------------------------------
16-17 | 01 11 40 26 34 23 80 116 124 112 77 44 21
17-18 | 07 07 13 22 0 07 51 03 19 30 25 03 0
------+-------------------------------------------
1996 | 15 16 17 18 19 20 21 22 23 00 01 02 03
Nov | UT

Notes:
. local time = JST = UT + 9 hours.
@ means converted hourly rate.

Kazuhiro Suzuki

--------------------------------------------------------------------------------
Observer: Ilkka Yrjola
Location: Finland (26 35' E, 60 54' N)
Frequency: 87.360 MHz
Receiver: Salora SRP-22 modified, narrow band FM (B=15 kHz).
detected signal level >-122 dBm.
FM detection, no pulse noise rejection required.
```

Antenna: 2 element Yagi with 4 dBd gain to SW, azimuth: 45 o (SW)
Data sampling system: threshold triggering, sampling rate 64 ms.
Computer logs total hourly elapsed reflection time, number of
threshold crossings for the hour, the longest time the signal was
continuously above detection level for the hour.
Data stored in the Compact MS-Soft format. Software for viewing available
from FTP.FUNET.FI pub/ham/vhf-work/mssoft43.zip (new version!)

Counts in one hour intervals starting at:

| 1996
UT | 16 Nov 17 Nov 18 Nov 19 Nov
----+----------------------------------
0 | 322 775* 347 282
1 | 359 1025* 376 306
2 | 321 1252* 496 311
3 | 342 1216* 387 302
4 | 348 1423* 415 282
5 | 503 1355* 362 323
6 | 383 1684* 283 331
7 | 325 1391* 381 361
8 | 455 1425* 279 245
9 | 411 677* 313 308
10 | 305 361 248 266
11 | 422 288 229 275
12 | 300 439 223 246
13 | 184 432 193 194
14 | 172 208 228 187
15 | 184 155 188 157
16 | 201 167 182 188
17 | 201 215 194 192
18 | 199 224 210 243
19 | 275 229 246 248
20 | 275 206 275 279
21 | 272 250 288 274
22 | 338 279 304 277
23 | 391* 329 279 295
----+----------------------------------
UT | 16 Nov 17 Nov 18 Nov 19 Nov
| 1996

* very strong Leonid activity during the morning of Nov 17.

Ilkka Yrjola / via M. De Meyere

2. ABOUT THE RMOB

The RMOB is an independent initiative of some workers in the field of radio
meteor scatter observations and data reduction. It started in August 1993
in order to spread rapidly the Perseid results via E-mail. Since then, it
has appeared monthly, and it has gradually been expanded. In regularly
publishing summaries of observations, potential radio observers are kept

up to date of existing installations, possibilities and limitations of radio meteor observations. In the long run, there should be sufficient observing stations to cover the whole globe, allowing to detect stream outbursts which may remain unnoticed visually.

RMOB contains typically: summaries of recent observations, equipment data, first results of stream activity by radio methods, relations between radio and optical meteors, references to other publications in the field of meteor astronomy and radio scatter techniques, announcements of meetings, short questions and answers, non-commercial (second hand) sale of radio equipment, available software.

Contributors are mentioned, and interested persons are asked to contact them directly.

RMOB can be copied freely in unabridged and unmodified form. Extracts should indicate the source (Radio Meteor Obs Bulletin, month and year).

If you want to subscribe (or un-subscribe) to the E-mail distribution list, please send a message to C. Steyaert.
Those not having access to E-mail can obtain a printed copy free of charge from J. Van Wassenhove (current or back-issues).

3. CONTRIB

2638. Updated Satellite Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: John Harmon <n4okl@amsat.org>
Message-ID: <01bbe453$c9548a80$3aac63ce@Pjharmon>
Source record: 20713

Hello and thanks for reading this...
I have updated my Amateur Radio Satellite Web Page and would like to get
some more input about
the layout. Let me know what you think...
73, John - N4OKL

--
Email: n4okl@amsat.org
homepage: http://www.newwave.net/~jharmon

2639. ARLK090 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk090.1996@arrl.org>
Source record: 20714
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK090
ARLK090 Keplerian data

ZCZC SK90
QST de W1AW
Keplerian Bulletin 90 ARLK090
From ARRL Headquarters
Newington, CT December 7, 1996
To all radio amateurs

SB KEP ARL ARLK090
ARLK090 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

STS-80
1 24660U 96065A 96341.33039352 .00000726 00000-0 27426-5 0 593
2 24660 28.4683 68.5999 0022256 98.8817 301.5184 15.69476679 2593
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96340.45662415 .00000015 00000-0 -23021-7 0 03075
2 18129 82.9279 21.9431 0013021 43.3816 316.8377 13.72372068473662
UO-11
1 14781U 84021B 96341.06630549 .00000107 00000-0 25878-4 0 09501
2 14781 97.8137 324.2820 0010774 263.1509 96.8469 14.69504855682896
RS-12/13
1 21089U 91007A 96341.76333624 .00000020 00000-0 44304-5 0 9390
2 21089 82.9219 61.3627 0030330 111.0389 249.4015 13.74074888292738
AO-13
1 19216U 88051B 96340.36293920 .64194205 34729-4 46505-3 0 3848
2 19216 56.9100 66.0967 1385719 63.2476 313.9974 13.38919575 33595
UO-14
1 20437U 90005B 96341.18453856 .00000049 00000-0 35863-4 0 02460
2 20437 98.5341 60.8954 0012022 56.9672 303.2665 14.29941469358631
RS-15
1 23439U 94085A 96340.80958899 -.00000039 00000-0 10000-3 0 02030
2 23439 64.8120 105.5416 0155269 168.5231 191.9297 11.27529350080135
```

```
AO-16
1 20439U 90005D 96340.78609949 .00000029 00000-0 28163-4 0 00420
2 20439 98.5518 63.0420 0012141 59.2863 300.9528 14.29992146358597
DO-17
1 20440U 90005E 96341.07115897 .00000029 00000-0 28108-4 0 00451
2 20440 98.5547 64.0572 0012339 57.6647 302.5729 14.30134562358662
WO-18
1 20441U 90005F 96340.78484834 .00000012 00000-0 21555-4 0 00472
2 20441 98.5538 63.6956 0012739 59.4227 300.8220 14.30102983358627
LO-19
1 20442U 90005G 96341.18722617 .00000040 00000-0 32132-4 0 00421
2 20442 98.5564 64.6633 0013195 56.3247 303.9195 14.30214724358706
FO-20
1 20480U 90013C 96340.98938601 -.00000057 00000-0 -63832-4 0 09498
2 20480 99.0226 333.1523 0541104 95.0868 271.2192 12.83235189319925
AO-21
1 21087U 91006A 96341.08693025 .00000094 00000-0 82657-4 0 07713
2 21087 82.9419 194.4831 0036964 85.3660 275.1716 13.74575043293629
UO-22
1 21575U 91050B 96341.17070750 .00000021 00000-0 21347-4 0 07504
2 21575 98.3317 42.2599 0008291 107.7584 252.4510 14.37047479282766
KO-23
1 22077U 92052B 96341.07983251 -.00000037 00000-0 10000-3 0 06491
2 22077 66.0783 189.5614 0015295 258.5889 101.3411 12.86298938202912
KO-25
1 22828U 93061F 96341.19262451 .00000054 00000-0 38967-4 0 05143
2 22828 98.5631 53.7801 0011148 69.1789 291.0601 14.28161771134662
IO-26
1 22826U 93061D 96341.18223832 .00000005 00000-0 19463-4 0 05326
2 22826 98.5680 53.7007 0009901 83.7900 276.4407 14.27820494166549
AO-27
1 22825U 93061C 96341.12895030 .00000001 00000-0 17706-4 0 05317
2 22825 98.5671 53.4461 0009391 83.6199 276.6046 14.27711356166526
FO-29
1 24278U 96046B 96341.15412561 .00000020 00000-0 58659-4 0 00604
2 24278 98.5688 42.4565 0351517 326.3857 31.5408 13.52627812015027
Mir
1 16609U 86017A 96341.86493042 .00001916 00000-0 26978-4 0 8524
2 16609 51.6541 333.4984 0013484 113.1353 247.1070 15.62565442616999

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
December 10, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2640. NEED CASH $$$

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: "L.PAGE" <Stone78@juno.com>
Message-ID: <01bbe492$aa217c60$6b09f880@UIC>
Source record: 20715

***EASY MONEY - FAST !!!!!

THIS IS THE FAIREST MOST WAY HONEST WAY I KNOW TO SHARE THE WEALTH !

Would you like to make thousands of dollars, quick, legally, with NO CATCH? then keep reading......please take 5 minutes to read this article it will change your life, just like it did mine.. it's true! you can make up to $50,000 in 4 - 6 weeks, maybe sooner!

I SWEAR I'M NOT LYING TO YOU.AND THIS IS NOT A SCAM! if your interested then keep reading;if your not, i apologize for wasting your time.

this is my second time i am doing this. the first time was 7 weeks ago and i have received $48,000. the first week i received $37 dollars,the second week i received $1,364 dollars and by end of the 3rd week i had received $12,856 dollars and to this date i have received $48,074 and money is still coming in.

when i first saw this article i though it was some kind of scam, but for $5 dollars and 5 stamps i thought i would give it a try.after buying a new car,new computer and putting a down payment on a house i relized this was the best $5 dollars i ever spent!

this process is very simple, and it consists of 3 easy steps:

(this whole process will take only a few hours of your time)

STEP 1: get 5 separate pieces of paper and write the following on each sheet of paper..."PLEASE PUT MY NAME ON YOUR MAILING LIST.YOU ARE NUMBER 4." get 5 $1 dollar bills and place one inside of each paper that you just wrote on,and fold each piece of paper so the bill will not be seen in the envolope (otherwise,nosey people who like to steal envolopes with money in it will get yours). put one paper inside the envolopes and seal it. do the same for all 5. you should now have 5 envolopes sealed,each

with a piece of paper and a $1 bill stuffed inside the paper.make sure those words that were stated above are stated on each paper. what you are doing is creating a service by this, this is PERFECTLY LEGAL. now then, mail the 5 envolopes with the paper and $1 dollar bill in each to the following addresses:

1. Dan Wood

1201 #A Anderson ST

San Clemente, CA 92672

2. S. Stapleton

6329 HWY 135 N.

Lake City, AR 72401

3. C. Crafton

1231 SW 61st Terr. #2

Gainesville, FL 32607

4. Michael Barratt

27 Park Ave

Poughkeepsie,NY 12603

5. Louie Page

2907 W. Gregory

Chicago, IL 60625

STEP 2: now take the first name off the list that you see above, move the other 4 names up (5 becoming 4 , 4 becoming 3 ect.)and put your name as number 5 on the list. you can slightly alter this article if you need to, editing what you need to edit.

STEP 3: post your amended article (with your name at number 5 of the list) to at least 200 newsgroups (i think there are 18,000 of them). all need is say, at least 200. HOW TO DO THIS: IF YOU HAVE NETSCAPE DO EXACTLY THE FOLLOWING:

1) click on any news group like normal,then click on "to news",which is on the far left when your in the newsgroups page. this will bring up a box to type a message in.

2) leave the newsgroup box like it is, change the subject box to something flashy like, "NEED CASH $$$" ,"READ HERE $$$" or "FAST CASH $$$!!.

3) tab once and you should be ready to type. now, retype (only once) this whole article,execpt to insert your name at #5, and remove #1 off the list, plus any other small changes you think you need to make, keep almost all of it the same.

4) when your done typing the whole article, click on file in this box, right above send, not where it says netscape news on the first box. click on "save as" when your under file. save your article as a text file to your c: or a: drive. do not send or post your article until you do this. once save move on to number 5 below.

5) if you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below file, and right above Cc: .

6) here's where your going to post all 200. ok, click on any news group then click on "to news", again in the top left coner. leave the newsgroupss box alone again, put a flashy subject title in the subject box, hit tab once your in the body of the message, then click on "attachments", which is below the subject box. you will get another box to come up. click on "attach file" then find your file below that you have saved; click once on the file,and then click open' now click on ok; if you did this right , you should see your file name in the attachments box, and it will be shaded.

if you use explorer its just as easy.... holding down the left mouse button,highlight the article. then press "ctrl" key and the "c" key at the same time to copy this article. then print this article for your records to have the names of those you will be sending $1 bills to. next go to the news groups and press "post an article", a window will open. next go to the news groups and press "post an article" a window will open. type your headline in the subject area and then

click in the large window below. press "ctrl" and the "v" and the article will be placed in the window. if you want to edit the article do so and then highlight and copy it again.now everytime you post the article in a new newsgroup you only have to repeat "ctrl" and "v" and press post.

7) THATS IT. each time you do this , all you have to do is type in a different newsgroup,so that way, it posts to 200 different newsgroups ..you see? now you just have 199 to go!! (dont worry, each only takes about 30 seconds once you get the hang of it).REMEMBER 200 IS THE MINIMUM.

THE MORE YOU POST THE MORE MONEY YOU WILL RECEIVE !!!

AND THATS IT !!! THATS THE ONLY 3 STEPS THERE IS !!!

you are now in the mail order business and will start receiving your $1 envolopes from various people all over the world within days. hint: you may want to rent a po box eventually because of all the mail you will be receiving. JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT, PLEASE.

LET ME TELL YOU WHY THIS SYSTEM WORKS !!!!

out of every 200 postings, lets say i only receive 5 replies (which is actually very low!) so i made $5 dollars with my name at # 5.

now then,each person that just sent me $1 makes, say only 200 postings now with your name at #4, which is a total of 1000 postings,not including yours too. 50 people send you $1 now; thats $50.00 you just made! now, then your 50 agents post 200 each with your name at #3,or 10,000 postings (50x200). average return is 500 a $1 each is $500.

they make 200 postings, which is 5,000 returns at $1 each, which is $5,000 dollars! and finally, 5000 people make 200 postings which with your name at #1. you now get a return or $50,000 before your name drops off the list. and thats if everyone only makes 200 postings and if only 5 people respond !!!!

no like me when your name drops off the list just find the latest

posting and start over again..YOU WONT BE SORRY !!!!

2641. DX and Satellite Cyberscheds available at http://www.sarrio

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: wb6siv@telis.org
Message-ID: <wb6siv-0712962253130001@s06-pm04-ontro-t.telis.org>
Source record: 20716

This is a new use of the WWW that can benefit ham radio operators throughout the world.

You can now schedule contacts with hams all over the world simply and easily by using the WWW and e-mail.I have set aside a section of my web site http://www.sarrio.com for hams to post their request for over-the-air schedules. Included in each posting is a place to list the posters specific ham radio contact needs (countries, zones,IOTA, grid squares ect...). The postings will also include an e-mail link that will allow hams that read the posts, to easily request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2642. Re: Trackbox

Newsgroup: rec.radio.amateur.space
Date: 1996-12-07 00:00:00 UTC
From: Guenter.Stautz@t-online.de
Message-ID: <58cs9a$caj@news01.btx.dtag.de>
Source record: 20717

Fred Moeves wrote:
>
> Hello All,
> I am looking for some help with getting the mic click to work with the
> Yaesu FT-726R and the Trakbox. I am using the AEA DSP-2232.
> Thanks and 73 Fred KB4QZH
>
> 73 Fred KB4QZH
> kb4qzh@pipeline.com

Hi Fred,
I have a TrakBox, but do not yet use MicClick, because I've just
finished
work on that box. (and still have some problems with it-> no 1296.300Mhz
or so switching via CAT on my FT736R ! hi).
But _you_ need the discriminator voltage of your radio or modem
to let it happen(CN12 pin 4)(0 Volt to 5 Volt and 2.5 in centered
position) ,and at least for the FT736R are pull-up resistors for the UP
and DOWN-lines required.
If this doesn't help, you know at least, that others are also deep in
Murphy's law results.
73 Guenter DK7KV

2643. Re: AIRCOM cable inquiry

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: Christine Hillebrand <chrishil@erols.com>
Message-ID: <32AAB820.6141@erols.com>
Source record: 20572

Roberto wrote:
>
> Hello all,
> I wonder if anyone out there has used the AIRCOM cable for satellite
> purposes.I was told that the condense could be a concern for this
> cable since the inside isolator is mostly air.
> 73 , IK4JQW
> Rob
Roberto,

I have been using AirComm cables to my antenna pointing system on top of a 40 foot tower for the past 2 years.... I have 4 runs , 2 meter, 70 cm, L Band and S Band... Here in Maryland it is quite hot and humid during part of the year and very cold during other parts.... this year has been the one with the most rain in recorded history for Maryland and also the most snowfall... Although I operate on the digital satellites 24 hours a day (full auto)... I have not had a single problem with the cable and VSWR remains low. I used the Type N connectors that I bought from SSB when I got the cable. They go on very easily. I did put coax seal at all external connections, but I would suggest this regardless of the type of cable used...

Hope this helps,
73
Art -- AA3GU

2644. Re: TRAKSAT 4.00

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: mbv@flash.net
Message-ID: <58erga$h7l$1@excalibur.flash.net>
Source record: 20573

In article <32A95D10.4E15@gte.net>, ceyoung@gte.net says...
>
>Ken Durham wrote:
>>
>> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
>> Paul, could there be an error here? Netscape says URL doesn't exist.
>> Ken K5MBV
>
>
>What version of Netscape are you using 2.01E finds just fine.
>
>KF5QU
~~~~~~~~~~~~~~~~~~~~~~~~~
Sorry for any confusion, my Netscape 3.0 hiccupped or something, cause
it finds the page OK now. I tried about 3 times before posting. Later
it worked fine......nevermind.... :) BTW, *great* looking program.

Ken K5MBV
~~~~~~~~~~~~~~~~~~~~~~~~~

2645. QSL rts UB5EIE,UL7CY,UL7PL,UM8MM

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: wb4mle@worldnet.att.net
Message-ID: <32aaf4cb.12698932@netnews2.worldnet.att.net>
Source record: 20574

Unable to confirm the following on AO-13
UB5EIE/UO5 - Tried several to Box 32, Kriwoj Rog
UL7CY via UL7CC - Tried 3 times
UL7PL via ?
Ul7T/UM8MM via ES1RA - Oleg did not have Vlad's UL7 logs

Would like to confirm these AO-13 qso's if anyone can offer any
suggestions or routes.
Eddie Seymour, WB4MLE
E-Mail wb4mle@worldnet.att.net

Packet wb4mle@wb4mle.#cenal.al.usa.noam

2646. Re: Where is MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: thomsona@netcom.com
Message-ID: <thomsonaE23w0E.86v@netcom.com>
Source record: 20575

In article <58dl5c$34o@faatcrl.faa.gov> nobody@nowhere writes:
>Hello everyone. Does anyone know what happened to MIR ?
>73 Jeff kb2wqm@juno.com

Sad to say, it's been abducted by the aliens in the giant spaceship
accompanying comet Hale-Bopp.

(Just kidding. It's still going around the world, somewhat
pointlessly, with two Russians and an American aboard. Check
ftp://kilroy.jpl.nasa.gov/pub/space/elements/molczan/new_molc.Z
for recent orbital elements if you want to look for yourself.)

BTW, it's Mir, a noun, not MIR, an acronym.

2647. Test 1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: italy <italian@aa.net>
Message-ID: <01bbe4dd$873196e0$bedc9dcc@italian>
Source record: 20576

```
just a test!
```

2648. Re: Where is MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32AB59F7.6895@wco.com>
Source record: 20577

nobody@nowhere wrote:
>
> Hello everyone. Does anyone know what happened to MIR ?
> 73 Jeff kb2wqm@juno.com
>

jeff,i am still working mir uhf but havent heard vhf for 8 days.

i heard a rumor they are thinking of moving up a little from 145.800.

73 steve

2649. Re: Where is MIR? update

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32AB5C6E.5D2@wco.com>
Source record: 20578

steve wrote:
>
> nobody@nowhere wrote:
> >
> > Hello everyone. Does anyone know what happened to MIR ?
> > 73 Jeff kb2wqm@juno.com
> >
>
> jeff,i am still working mir uhf but havent heard vhf for 8 days.
>
> i heard a rumor they are thinking of moving up a little from 145.800.
>
> 73 steve

...- ...- ...-

just got a message from amsat bb. 2 meter antenna has been damaged.

73 steve

2650. NoNo?:TrakBox, Ft736R and 23cm(P3D)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: Guenter.Stautz@t-online.de
Message-ID: <58f4nv$udl@news00.btx.dtag.de>
Source record: 20579

Hi All
after long nights with my TrakBox version 3.3h , I came to the
conclusion, that TrakBox designers had never in mind to let it
work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and
I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this
failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the
following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,
12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

2651. Where is MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: nobody@nowhere
Message-ID: <58dl5c$34o@faatcrl.faa.gov>
Source record: 20718

Hello everyone. Does anyone know what happened to MIR ?
73 Jeff kb2wqm@juno.com

2652. AMSAT-OSCAR 13 Burned Up On Re-Entry

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: fsperber@aol.com
Message-ID: <19961208064600.BAA04778@ladder01.news.aol.com>
Source record: 20719

AMSAT-Deutschland e.V. (Germany)
Press-Release

Telecommunications Satellite AMSAT-OSCAR 13 Burned Up On Re-Entry

On December 5th, 1996, the international telecommunications satellite AMSAT OSCAR-13 burned up upon re-entering the Earth's atmosphere. AMSAT OSCAR-13 was successfully launched on June 15th, 1988, into a highly elliptical orbit on board the first test flight of the new European ARIANE 4 rocket. Over the years, AMSAT OSCAR-13 has enabled direct radio contacts among the world-wide community of nearly 2 million radio amateurs.

AMSAT OSCAR-13 had been constructed within four years by an international project group under the leadership of Dr. Karl Meinzer of AMSAT-Germany. AMSAT (Amateur Radio Satellite Corporation) is a world-wide alliance of approximately 6000 scientists, engineers, technicians and radio amateurs who voluntarily build and operate scientific and communications satellites.
During its operational period, AMSAT OSCAR-13 was monitored and controlled by a group of ground stations in Germany, the United Kingdom, Australia, New Zealand and the United States of America.

Upon its re-entry, AMSAT OSCAR-13 has had a lifespan of over eight years. Originally the mission had been conceived to last only seven years. Overheating of the satellite due to air friction in the upper atmosphere resulted in the destruction of the solar panels on November 24th and the consequent interruption of all radio links. Prior to this event, the on-board monitoring system had transmitted much data relating to the satellite's behavior in the upper atmosphere to ground stations for evaluation.

The decay of the orbit was caused by the gravitational attraction of the Sun and the Moon. The elliptical orbit was stretched so that the satellite gradually approached the Earth which lies at one of the two focal points of
the ellipse. This phenomenon motivated AMSAT to develop new analytical and computational methods to allow long term predictions for future satellites on similar, highly elliptical orbits.

The orbit of the next satellite, AMSAT Phase 3-D, has been calculated using
these new methods and will therefore be more stable over the long term. AMSAT Phase 3-D is scheduled to be launched into space during the first half of 1997 as apparently the only satellite payload for the second test flight of the new ARIANE 5 launcher.

(AMSAT-DL Journal Editors)

For more information see:
http://www.amsat.org
ftp://ftp.amsat.org/amsat/satinfo/ao13

2653. Satellites for $2000?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-08 00:00:00 UTC
From: cathrynm@aol.com
Message-ID: <19961208095400.EAA07586@ladder01.news.aol.com>
Source record: 20720

For this year, I've allocated about $2000 to spend on ham radio stuff. I think I'd like to get involved with ham satellites in some way, and am wondering if there's any way to get in for the first $2000, and have stuff that'll still be useful for me later if I decide to go for a more complete station later. I can spend more later if I really get into this, but I want to limit the damage for now.

Currently, I have a pretty average ham setup. An old IC730 HF transceiver that still works a PK232 and an old 2 Meter FM radio that I use for packet. I have no tower, but do have a house with a small yard, and can get a tower up if I need to. I own many PC's of various speed, so I don't need to spend any money for more computer stuff -- aside from ham radio stuff.

I'm interested both in packet and voice, I think, and would prefer some kind of setup where I could work both. So, what do you guys think? What's the best way to do this that gives me the most operating time on hamsats per dollar?

reply here or to cathrynm@aol.com

2654. Re: Where is MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: Klaus Lutsch <lrt20892@rpool5.rus.uni-stuttgart.de>
Message-ID: <Pine.A32.3.94.961209091044.19668A-100000@rpool5.rus.uni-stuttgart.de>
Source record: 20580

On Sun, 8 Dec 1996 nobody@nowhere wrote:

> Hello everyone. Does anyone know what happened to MIR ?
> 73 Jeff kb2wqm@juno.com
>
>
>

2m antenna was acidently damaged in the last EVA of Korzun ..
will take some time to find a repacement .. many planned schollcontacts
will suffer from that.

73's de Klaus, dl8ser

2655. Re: Likelyhood for a sat to be hit by a metheor

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: dj1km@aol.com
Message-ID: <19961209112700.GAA09325@ladder01.news.aol.com>
Source record: 20581

Im Artikel <32a9091c.55466673@news.capital.net>, orion@capital.net
schreibt:

>Re: Likelyhood for a sat to be hit by a metheor

Hi,
I just came across an article which exactly describes what you suspect.
Look at:

http://www.ee.surrey.ac.uk/CSER/UOSAT/press/cerisepr1.html

73
Reinhard in Hannover
DJ1KM

2656. Re: Where is MIR?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <58hr0d$74a@faatcrl.faa.gov>
Source record: 20582

Thanks for the replys guys. Lets hope they get a new antenna on the next re-supply. I also know mir means peace in Russian. I should know better then to make a typo in a newsgroup. Don't you think we should flame Klass for his misspelling ? Let me know its very important, as I didn't know this post also went to rec.amateur.english.

73 Jeff kb2wqm@juno.com

2657. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: dschultz@ti.com
Message-ID: <dschultz.4128.000F0428@ti.com>
Source record: 20583
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca> "Intrepid"
<chrisb@connect.ab.ca> writes:

> This is not a joke. Serious business, guys. Please read and take
>some action.

>>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
>>>>>"rec.music.white-power", so that they can get their message of hate out
>>>>>to young people using the Internet.

So I gather that censorship of individuals and groups is 'ok' if it suits YOUR
agenda, "Intrepid"? Is that right? You wish to censor these individuals from
the Internet and control their rights to access what is essentially a public
forum????

How very ironic, since one of the cornerstones of the Third Reich & Nazi
Germany was censorship and control of individuals and information.

Where does it end?

Grab a clue,

Douglas A. Schultz II <dschultz@ti.com>

"Yeah, well, sometimes nuthin' can be a real cool hand."
- C.H.L.

2658. Re: Where is MIR? update

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: Charlie Rubenstein <rubenc@iglou.com>
Message-ID: <32ACA6B4.F66@iglou.com>
Source record: 20584

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >
> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

2659. NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: "Charles M. Clark" <charlie@smarty.smart.net>
Message-ID: <32AC8067.3BBA@smarty.smart.net>
Source record: 20585

Can anyone give me the low down on what is required in order to receive live NASA TV. I don't know much about this, but would like to learn. I would like to be able to receive NASA live TV during the shuttle flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

2660. The big picture

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: Tim Shaw <TIMSHAW@msn.com>
Message-ID: <01bbe5e2$7fb10da0$2b5b868b@timshaw>
Source record: 20586

Tim Shaw
Sydney.
Australia.
TIMSHAW@msn.com

Hi,

This is an open letter to my friends and family concerning information necessary for you to know for our immediate future. Feel free to copy it and pass it on if you choose.

It's hard to know where to start, and some of you may choose not to believe the info that follows. It is how-ever going to dominate our existence in the near future, and you will have to come to terms with it one way or another. I believe it's almost impossible you will get the truth about these matters from the powers that be, and in our rip and read corporate media, true investigative journalism is a myth.

Just for the record, in 1970, I observed a UFO on the north coast of Tasmania. It was directly outside the house I was in, and was there for 4-5 minutes. It was about 25 feet from where I was. They do exist, they are not tourists! They have been observed throughout all history.

I have done an immense amount of research into the following info. As far as I am concerned, it's the truth.
The truth will be your best ally.

Everything that has happened this century, (as opposed to the previous 2 and more thousand years) the technology, the wars, the political expansionism of Western control, has been a lead up to what's about to happen shortly.

Hale-Bopp

Currently there is a comet named "Hale-Bopp" out near Jupiter, headed our way. (Not on a collision course) It makes it's closest approach by earth in April of 97. It has a number of characteristics that distinguish it from normal comets. It changes course, emits huge jets of material (250,000 kilometres long!) in symmetrical patterns, that are turned on and off. It emits it's own light source. It was first noticed in 1993.
The earliest an unknown comet has ever been discovered until Hal-Bopp was 7 months before it's closest approach. Hale-Bopp was observed 44 months before. This is actually supposed to be impossible under current comet theory, due to the fact that comets only emit light when they get close and react with our sun.
There is another object that appears from behind Hale-Bopp at certain times. This object is 4 times the size of earth, and emits radio signals

that show intelligent origin. This object has been Photographed a number of times by astronomers. NASA's huge space telescope named "Hubble", stopped releasing photos of Hale-Bopp in October of 1995, over a year ago. All major telescopes have not released detailed photos since May this year. The NASA internet site has only about 5 fuzzy amateur photos since May, yet there is another smaller comet named "Hyatake" which has hundreds of photos available. NASA has acknowledged the strange behaviour of the Comet in it's comet news releases. There have been thousands of people claiming to have contact with UFOs this year. A common theme from these people is that there will be a landing of many craft in the near future, maybe even before Christmas, to make the knowledge of UFO craft and their occupants common knowledge. For many decades, UFOs have been debunked in the mass media. This campaign of debunking has been successfully orchestrated by the most powerful intelligence agencies. Remember, we only took to the skies and invented radar a relatively short time ago.

There are a number of important issues to consider with contact of others in the universe.

We as a race have contemplated if we are the only ones in the galaxy. From the research I've done, the joke seems to be that every star system has life. NASA recently announced a 3 billion year old fossil confirming life on mars. This was followed a week later by a similar announcement in Britain from geologists. What a co-incidence. What they didn't tell you was that they knew this decades ago. Indeed, I myself read all about it at the beginning of the year, and was amazed to see it on the front page news, eight months later. I thought it was old news. You see, it doesn't become our accepted reality until an official agency calls a press conference and tells the press to print it. Then the masses accept it as fact. They recently announced "possible life on Jupiter's moon - Europa". What they have not told you, that they have known for decades is that there is still life on mars, Europa and Venus. In the last 18 months they have started discovering planets orbiting other stars, over a dozen in 18 months, from nil until that time. Astronomers are now saying that most stars, maybe even all stars have planets. It is becoming apparent, universe is teaming with life. Many NASA officials, including astronaughts, have broken their silence about life not of this planet.

So, this begs the question: Are they good guys or bad guys?

I think, like on earth, there are both. Many of the well documented alien contact cases (that won't become fact until NASA or some official agency calls a press conference. Don't hold your breath, it ain't gonna happen!) have described some entities that seem to have a spiritual origin. Off planet beings are aware of each other, and are completely aware of what the soul/spirit is. So not only is the universe filled with life, but it encompasses different forms of life, not just physical/biological. Spiritual beings as well. We have on earth been cut off from the rest of the universe for a long long time. We are about to be reconnected.

So, this begs the question: Who's going to show up first, the good guys or the bad guys?

I think it's anyone's guess. There seems to be some power play taking place between those that want to keep us under control, and those that would tell us the truth about the Universe. I think we'll have to judge the visitors by the lies they tell when they get here.
This is why it is so important to know the truth, and ponder this topic.

In the last couple of years, Hollywood, Television and other media (including the music industry) have pushed the Alien theme hard. Hollywood has had just this year, Independence day, The Arrival, Star Trek First Contact, Mars Attacks (a new one with Jack Nicholson) and a number of others. T.V has X Files, 3rd rock from the sun, Star Trek, Sightings and more. Disneyland has opened an E.T. theme park, claiming openly that contact is imminent. This is actually part of a campaign. Have you noticed how much E.T related stuff has come onto the market? Even magazines are carrying abduction stories without making fun of them.

McDonald Douglas aircraft Corporation are producing anti gravity craft (flying saucers) that can get to the moon in no time flat, they have for many years. They have already had help from off planet intelligence. This is documented by a number of employees, that these guys are helping with technology. Very strange things happen when you mess with powerful fields of gravity. It affects time itself, as well as making things disappear. The power plants that power these craft develop immense levels of energy with no pollution. The craft can exceed the speed of light.

There have been sightings of UFOs around a number of recent airline crashes, including the TWA 800 crash out of New York. It is not out of the question that these particular UFOs are of human origin, and are part of a fear based manipulation for future events. (along with the movie Independence day)

I have lost count of the number of free energy devices that have been invented this century, and subverted by whatever means necessary. Just one avenue of free energy is the fact that there have been a number of cars designed that actually run on water. I have checked this out, it is absolutely true. An device called an electrolysis chamber can split water into hydrogen and oxygen and feed the engine hydrogen fuel instead of petrol, with absolutely no pollution! And a number of people have designed electrolysis units that are efficient enough to run our vehicles. People have been killed to subvert this knowledge. We have become within one human life-time, totally dependent on oil. As such, we have fought wars for it (notably the recent Gulf war, killing hundreds of thousands) , built up huge military industrial complexes to protect our "natural resources", and it in turn, has polluted our earth to the brink of extinction. We are brainwashed through the rip and read mass media into thinking this pollution is because we as a race are too stupid to handle technology. We carry the burden of guilt for attempting to kill ourselves off..

BUT, you and I and the rest of the planet would vote in a second for clean in-exhaustible energy. Are we given the opportunity? The truth is, we have no choice but to use the disgusting technology we have ended up with, The pollution problem is not your fault!! It is the fault of a system that has forced this on you, it is totally out of your control, and against anything

you would vote for.

So who controls it?

There are a number of key players involved in this. Notable ones are the name of Rothschild and Rockefella. Both family Dynasties have been going for nearly three hundred years.

Under their control is:

The world bank,
International Monetary Fund
American Federal reserve
American Council of Foreign relations
Tri-lateral commission
United Nations
All of the American banking System
All of the the former Soviet Union banking System
Most of the banking system of the rest of the world, excluding China.
The military Industrial complex, both American and former Soviet Union
Media conglomerates (including Reuters and AAP)
Hollywood
The major intelligence agencies. CIA/Mossad.
The Oil Industry

The list goes on and on, even Sony and Mitsubishi is owned by Rockefella. Don't believe the myth that Bill Gates is the richest man around. Rothschild is actually a Trillionaire!

These guys are sick of democracy, and have engineered through the United Nations, a plan for a World government. They already are the unseen Government. Part of their agenda is population control. As far out as that seems, these guys funded both sides of the second world war. They backed hitler and made a fortune from both sides. Now they've decided there are too many of us. A number of researchers have found incontrovertible evidence that Aids and Ebola are actually viruses produced in laboratories of the biological warfare industry, owned by the fore-mentioned, and disseminated on purpose!

The plan for world government is well advanced, and close to being implemented. Suffice to say, the pattern of behaviour of these powerful manipulators is usually to create a problem, then step in with the solution. There's much I can say about the details of this plan, but the bottom line is that there will be a huge economic crash. The biggest. They can engineer it. On top of that we have this new contact with other races of the universe. Out of the chaos that ensues, they will offer a solution that will solve our economic/ecological/alien threat problems; (Problems they created!) WORLD GOVERNMENT! with a new global currency. "We must unite against a possible Alien attack", we will be told. A shell shot bewildered desperate population will see sense in this solution, and will accept this noble attempt to rebuild the system. That will be the last you see of freedom.

Recently three huge trading blocks were ratified.
1. NAFTA (North American free trade agreement)
2. The European Economic Union
3. APEC. (Asia Pacific economic union)

The head of the NAFTA block is Bill Clinton. And as you saw in the news recently, The head of the APEC trading block meeting was Bill Clinton. Spot the mistake? Not a word of criticism from our media. Does the Managing Director of General Motors go and conduct the board meetings for Ford? They are competitors. What is Bill doing in APEC!? Our fearless leaders must have negotiated hard for that one!
The United Nations already has the power to overturn Australian court decisions. It also can sign in new agreements (in effect, laws) totally bypassing the Australian parliament. It already has signed in hundreds.

Bill Clinton actually signed over sovereignty of the U.S. military to the United Nations at the beginning of this year (96). A large militia movement in America is continuing to grow. It is estimated to be around a million strong at this time. They are armed and opposed to the "New World Order", as the push for world government is known. They are networked across the United States and have many experienced military personnel amongst their ranks. These guys are armed, organised, experienced and deadly serious! Internment camps have been built by the government right across the U.S. The court case for the suspects in the Oklahoma bombing tragedy, has turned up so much evidence of intelligence agents being involved, even the victims families are getting into the act to find out the truth behind this. There is a concerted effort to discredit the militia to such a degree that it will be a sinch to round them up and intern them without public outcry, when the time comes. Clinton also just signed in a law enabling road blocks to be set up, and cars to be searched for illegal guns. While in Australia and the U.K. guns are being taken out of the community.

The theory of evolution can explain many changes through-out species. The famous example of proof that is offered for Darwinism is that of butterflies of various colours on a tree trunk. The most obvious uncamouflaged ones are the first targets to fall prey to birds, thus resulting in a colour change in a species, a more camouflaged species. Of course, this applies to humans as well. If Hitler had his way, most of us would have blonde hair and blue eyes. BUT, did you realise that there is absolutely no evidence that a bacteria can turn into an elephant! Nor do the fossil records show any proof that man came from apes. There are glaring gaps in the fossil records. Scientists are still looking for these fossils to fill in the gaps, in order to validate the man from apes theory. Of course, this hasn't stopped the education system teaching it as fact this century. They also teach that Christopher Columbus discovered the world was round. Yet I stood next to a globe in Florence, Italy that was made in 1175. I saw evidence in the Cairo museum of Egyptian Global knowledge, thousands of years old. In fact ,nearly every ancient civilisation shows evidence of global knowledge. Chris Columbus was actually thick as a brick, and thousands of years behind the times. To get western culture to believe the world was flat, while at the same time,

ships of all cultures were sailing all over the place, took a totalitarian education process that hid the truth. This is also what has happened re our knowledge of earth and the rest of the universe.

Consider this:

* An iron cup was recovered in an Oklahoma coal mine
* Metal tube recovered from a 65 million year old chalk pit
* A gold chain encased in a lump of Illinois coal
* A grooved metal sphere taken from a pre - Cambrian mineral deposit
* A nail embedded in sandstone in Scotland.

Items of this nature have been discovered and documented. They totally disprove the theory that we came from apes, and that we are the first advanced culture on this planet. Scientists are so tuned into the education paradigm, they think that these anomalies will somehow, one day, as if by magic, fit into the history and evolution theory we have been taught, and continue to teach our young. You cannot put a square peg into a round hole. Our true history has been erased.

There are many secret societies, throughout different continents, that have been traced back thousands of years.. They have brought about changes in governments and in the education system over that time. Freemasonry is a prominent name that comes to mind. This is not to say that all freemasons are part of some world control conspiracy. The freemasonry is full of good people doing good things, who wouldn't hear of such a wild idea. The trouble with secret societies, be it the CIA,Mafia, or freemasonry is; you follow orders and are not told the game plan. Compartmentalisation is what keeps the secrets. You just take a vow of allegiance and do your bit, probably in the belief that where-ever the orders originate, there's some wise sage looking after your interests. Incidentally, the mafia and Italian intelligence agency have a secret society called P2. This organisation was involved in the murder of the good Pope John Paul a few decades back. There is a heirachy to these societies that is trans-continental. Control eminates from a central few. We could call them the Illuminati for want of a better name, but these guys are so devious that like "Prince" the pop star, they have no name. Who are they? Rothschild, and Rockefella! Understand the implications of that; the CIA and Mafia answer to the same command! All those CIA drug scandals of recent years, including Iran Contra scandal. Who runs the drug markets of the world? The CIA/Mafia implications in the JFK assassination - it was both! Now you know who's toes JFK stepped on!
And what about the space shuttle? It exists solely to keep you stupid!

So, In summing up;

* Stock up on non perishable food.
* If any Alien race shows up with Bill Clinton and tries to tell you they just stumbled over us recently, and are here to give us free non-polluting energy to solve our problems, they are lying. (they could have given them to us anytime throughout history)

* You live beyond this lifetime, and these guys can only manipulate you if you are in doubt about this. It's also why an alien race never has and never will wipe us out. It's why they keep you in the dark and tell you nothing. You are controlled through a fear based society, that has always been influenced from beyond our earth. At the moment you are almost too scared to walk down the street, due to the mass media barage of negativity, which in turn causes a decline. This is no accident. It is the influence of intelligences more advanced than us. As much as we'd like to think we were the first ones in the universe to invent TV, if we believe that, it is a supreme act of human stupidity.

Everything that has happened this century, (as opposed to the previous 2 and more thousand years) particularly the technology, has been a lead up to what's about to happen shortly. The negative influences on us know that their control is coming to an end, this is they're last ditch effort before the end of game siren sounds. Due to the biological/spiritual nature of life throughout the universe, any open contact with other races eventually must lead to learning the truth about who you are, where you came from, and where you are going, a nuts and bolts knowledge and conscious connection of your powerful soul - a spiritual awakening.
It is about to happen within our lifetime!
We are going home.
The truth shall set us free.

2661. Re: How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-09 00:00:00 UTC
From: cathryn@junglevision.junglevision.com
Message-ID: <slrn5amsi8.3am.cathryn@junglevision.junglevision.com>
Source record: 20587

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I'm kind of on the same quest. At least to figure out where to spend the
first $2K. Which I don't think is really cheap by most people's standards,
but which is a little bit less than what it takes to walk into HRO and
just do the whole thing brand new. My impression is that the guys who
are pretty serious about this seem to have the 726 or 736 and the KLM/M2
antenna set. Personally, I put a lot of confidence in conventional
wisdom. So, to go this way, the game seems to become, how to scrounge up
this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages
is to do the antenna side first. New. At least deal with
the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
Maybe working RS-10 , Mir or something, and then trying to hear sats on
440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear
what's going on, and either I'll be anxious to be rid of the whole thing
or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
know whether P3d is going to be really cool, etc. Fingers crossed.

2662. NORAD Two-Line Orbital Element Sets (TLE912)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <58i9dv$l3a@blackbird.afit.af.mil>
Source record: 20588

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #912 -
Alouette 1
1 00424U 62049A 96338.91682839 .00000050 00000-0 48956-4 0 2507
2 00424 80.4630 116.2753 0022995 319.1220 40.8200 13.67881887705545
ATS 1
1 02608U 66110A 96330.36489924 -.00000181 00000-0 10000-3 0 9890
2 02608 14.5792 351.0997 0007742 104.0277 256.0277 1.00293435 26487
ATS 3
1 03029U 67111A 96344.18843400 -.00000107 00000-0 10000-3 0 5870
2 03029 14.9157 357.9074 0010751 249.0678 153.8636 1.00273190106527
Starlette
1 07646U 75010A 96342.78238266 -.00000146 00000-0 -59908-6 0 184
2 07646 49.8300 183.6732 0206284 83.8301 278.6060 13.82192091102978
LAGEOS
1 08820U 76039A 96343.82981144 -.00000001 00000-0 00000+0 0 2472
2 08820 109.8525 85.8469 0043384 90.5532 270.0041 6.38664548224985
ETS-2
1 09852U 77014A 96343.27079014 .00000111 00000-0 10000-3 0 907
2 09852 13.4400 30.9317 0006386 146.9783 213.0419 1.00006436 19383
GOES 2
1 10061U 77048A 96343.38272865 .00000057 00000-0 10000-3 0 7736
2 10061 12.5977 35.1030 0012387 131.3391 231.4933 1.00274627 16196
IUE
1 10637U 78012A 96343.38078274 -.00000032 00000-0 10000-3 0 3252
2 10637 35.7411 80.7735 1340343 62.4540 319.4179 1.00056574 21688
GOES 3
1 10953U 78062A 96343.29221228 -.00000104 00000-0 10000-3 0 7521
2 10953 11.5997 38.0507 0003540 190.9485 209.7876 1.00265084 20808

```
SeaSat 1
1 10967U 78064A 96342.21726447 -.00000048 00000-0 28777-4 0 5360
2 10967 107.9994 172.7772 0001831 245.1921 114.9029 14.38137300966326
Nimbus 7
1 11080U 78098A 96342.53194911 -.00000068 00000-0 -24349-4 0 6336
2 11080 98.9207 196.1243 0008287 219.7949 140.2601 13.83689335915142
GOES 5
1 12472U 81049A 96341.31715955 .00000108 00000-0 10000-3 0 9721
2 12472 8.4667 48.4528 0007060 86.6975 273.2844 1.00285628 14821
Cosmos 1383
1 13301U 82066A 96342.51270776 .00000053 00000-0 44185-4 0 5494
2 13301 82.9324 6.7172 0028404 119.8675 240.5308 13.68079517721072
LandSat 4
1 13367U 82072A 96342.54872967 .00000040 00000-0 18700-4 0 277
2 13367 98.0531 27.9938 0006949 330.1598 29.9204 14.57195418765787
DMSP B5D2-1
1 13736U 82118A 96343.89397666 .00000003 00000-0 19458-4 0 1355
2 13736 98.6232 169.4663 0007901 239.0505 120.9897 14.25814352725968
IRAS
1 13777U 83004A 96344.12068658 -.00000259 00000-0 -14864-3 0 5149
2 13777 98.9681 165.9292 0013363 334.3567 25.6931 13.99262964377834
Cosmos 1447
1 13916U 83021A 96342.27190526 .00000047 00000-0 33637-4 0 6411
2 13916 82.9462 63.0261 0039199 31.1850 329.1614 13.74349587687514
TDRS 1
1 13969U 83026B 96344.21367698 -.00000284 00000-0 00000+0 0 6806
2 13969 9.2411 41.9930 0003679 215.5292 208.2885 1.00260139 23149
GOES 6
1 14050U 83041A 96343.31530345 -.00000092 00000-0 10000-3 0 5852
2 14050 7.3196 52.0290 0008054 88.6623 306.9964 1.00217213107941
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96340.21332687 .00000087 00000-0 29673-4 0 5733
2 14780 98.3109 37.8381 0003004 102.5740 257.5794 14.57060946678864
UO-11
1 14781U 84021B 96342.01958317 .00000139 00000-0 31257-4 0 9348
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1 22275U 92089A 96341.70523721 .00000110 00000-0 00000+0 0 8356
2 22275 54.6363 160.3092 0052482 251.6297 107.8409 2.00588158 29031
TDRS 6
1 22314U 93003B 96331.20938647 -.00000284 00000-0 10000-3 0 6747
2 22314 0.1142 106.0217 0002651 191.2480 156.5492 1.00269336 14207
GPS BIIA-18
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1 22446U 93007A 96343.30448521 -.00000038 00000-0 10000-3 0 8242
2 22446 54.0916 280.0497 0096419 6.8216 353.2857 2.00573780 28057
Glonass 59
1 22512U 93010A 96343.33031571 -.00000020 00000-0 10000-3 0 8483
2 22512 65.2287 78.3297 0008637 179.7286 180.2818 2.13102179 29403
Glonass 60
1 22513U 93010B 96341.39121855 -.00000024 00000-0 00000+0 0 46
2 22513 65.2232 78.4061 0007738 195.2353 164.7505 2.13102648 29550
Glonass 61
1 22514U 93010C 96342.62394805 -.00000022 00000-0 00000+0 0 38
2 22514 65.2458 78.3592 0011368 187.8260 172.1644 2.13102169 29585
ASTRO-D
1 22521U 93011A 96342.47405264 .00000733 00000-0 44854-4 0 5439
2 22521 31.1028 39.9931 0055629 86.3935 274.3063 15.03201234208561
UFO F1
1 22563U 93015A 96337.04584315 -.00000018 00000-0 00000+0 0 5438
2 22563 25.0078 285.9617 0010148 264.9217 94.9657 0.99252643 17744
GPS BIIA-19
1 22581U 93017A 96341.95387478 -.00000043 00000-0 10000-3 0 6148
2 22581 55.1594 341.0325 0065082 41.1949 319.3259 2.00574343 27083
GPS BIIA-20
1 22657U 93032A 96343.08215385 -.00000043 00000-0 00000+0 0 7856
2 22657 55.1942 340.8785 0083184 232.5930 126.6694 2.00564702 22434
RADCAL
1 22698U 93041A 96342.84163693 .00000041 00000-0 11767-4 0 5388
2 22698 89.5457 262.3493 0092702 119.2530 241.7972 14.21385075179091
GPS BIIA-21
1 22700U 93042A 96342.55095854 .00000054 00000-0 10000-3 0 6196
2 22700 54.1525 221.2450 0054984 4.7486 355.3947 2.00562791 25229
NOAA 13
1 22739U 93050A 96343.43326166 .00000069 00000-0 63990-4 0 2142
2 22739 99.0655 300.0344 0010678 94.9390 265.3001 14.10979032171629
GPS BIIA-22
1 22779U 93054A 96341.63922959 -.00000046 00000-0 10000-3 0 6853
2 22779 54.2526 280.2028 0014846 279.7745 80.0630 2.00552886 23962
Meteor 2-21
1 22782U 93055A 96342.68375381 .00000065 00000-0 46182-4 0 5305
2 22782 82.5496 209.6343 0020842 211.3165 148.6746 13.83065345165117
UFO F2
1 22787U 93056A 96338.28645816 -.00000056 00000-0 00000+0 0 6963
2 22787 4.0232 327.4706 0006655 245.0202 34.4624 1.00273933 10524
SPOT 3
1 22823U 93061A 96343.27034680 -.00000044 00000-0 00000+0 0 6345
2 22823 98.7379 54.4424 0016203 257.7837 102.1523 14.16974652165939
STELLA
1 22824U 93061B 96342.77477126 -.00000038 00000-0 19414-5 0 5208
2 22824 98.5666 54.3142 0006934 79.0073 281.1885 14.27106363166691
AO-27
1 22825U 93061C 96342.74083840 .00000012 00000-0 22344-4 0 5219
2 22825 98.5670 55.0264 0009435 79.0582 281.1660 14.27711602166750
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IO-26
1 22826U 93061D 96342.72392684 .00000002 00000-0 18353-4 0 5198
2 22826 98.5680 55.2124 0009949 79.4943 280.7360 14.27820602166768
HEATHSAT
1 22827U 93061E 96342.27481502 .00000035 00000-0 31557-4 0 5824
2 22827 98.5650 54.6592 0010182 68.5167 291.7094 14.27959701166710
KO-25
1 22828U 93061F 96342.73394407 .00000041 00000-0 33895-4 0 4994
2 22828 98.5631 55.2915 0011165 64.5736 295.6591 14.28161937134881
POSAT
1 22829U 93061G 96342.75283402 .00000008 00000-0 20442-4 0 5133
2 22829 98.5652 55.3837 0010938 69.0819 291.1533 14.28143249166808
GPS BIIA-23
1 22877U 93068A 96343.18483997 -.00000048 00000-0 10000-3 0 5214
2 22877 55.7574 42.2218 0044935 300.3713 59.2407 2.00563111 22888
METEOSAT 6
1 22912U 93073B 96335.09544771 -.00000080 00000-0 00000+0 0 5872
2 22912 0.3053 65.9407 0003591 157.1427 230.7314 1.00271215 9520
HST Array
1 22920U 90037C 96344.07302234 .00004729 00000-0 30171-3 0 5567
2 22920 28.4714 65.3207 0002772 181.3467 178.7095 15.06370398165803
Meteor 3-6
1 22969U 94003A 96341.55573472 .00000051 00000-0 10000-3 0 3056
2 22969 82.5575 138.8886 0014756 164.9436 195.2135 13.16740100137730
TUBSAT-B
1 22970U 94003B 96341.86005603 .00000051 00000-0 10000-3 0 2956
2 22970 82.5581 138.5566 0016031 160.8493 199.3248 13.16828715137781
GPS BIIA-24
1 23027U 94016A 96341.27261441 -.00000044 00000-0 10000-3 0 4576
2 23027 55.0491 342.8905 0083503 203.8795 155.7223 2.00566837 20154
Glonass 62
1 23043U 94021A 96344.10846988 -.00000025 00000-0 00000+0 0 4406
2 23043 64.5802 317.7902 0006447 210.3692 149.5915 2.13103191 20739
Glonass 63
1 23044U 94021B 96343.05238297 -.00000024 00000-0 00000+0 0 4104
2 23044 64.5739 317.8211 0030985 207.7027 152.1274 2.13103157 20717
Glonass 64
1 23045U 94021C 96341.82243206 -.00000021 00000-0 00000+0 0 4088
2 23045 64.5640 317.8684 0010448 25.0851 334.9731 2.13102717 20686
GOES 8
1 23051U 94022A 96344.10352641 -.00000240 00000-0 10000-3 0 6242
2 23051 0.3821 87.8202 0004059 160.0153 152.7739 1.00278666 17129
MSTI 2
1 23101U 94028A 96343.58018444 .00003804 00000-0 56554-4 0 3830
2 23101 97.0749 175.2020 0011950 39.9797 320.2336 15.55710744146393
STRV-1A
1 23125U 94034B 96340.91805143 .00000691 00000-0 30668-3 0 3633
2 23125 7.1193 163.1177 7232205 208.7778 79.9647 2.32936182 20125
STRV-1B
1 23126U 94034C 96334.95871629 .00012955 00000-0 51553-2 0 3218
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2 23126 7.0816 165.9016 7233674 203.5475 90.6584 2.33114876 20025
Nadezhda 4
1 23179U 94041A 96342.21576263 .00000045 00000-0 30777-4 0 2402
2 23179 82.9452 108.3659 0036950 2.2483 357.8833 13.75687748120587
Glonass 65
1 23203U 94050A 96341.49067080 .00000101 00000-0 00000+0 0 3710
2 23203 64.7583 198.3374 0007595 137.9440 222.2053 2.13102136 18075
Glonass 66
1 23204U 94050B 96342.19344866 .00000107 00000-0 00000+0 0 3917
2 23204 64.7506 198.3392 0014853 353.7808 6.2922 2.13102553 18081
Glonass 67
1 23205U 94050C 96343.01430273 .00000111 00000-0 00000+0 0 3766
2 23205 64.7530 198.3017 0001062 357.4412 2.6509 2.13102871 18100
DMSP B5D2-7
1 23233U 94057A 96343.80364452 .00000020 00000-0 33974-4 0 314
2 23233 98.8050 39.8364 0013315 47.3579 312.8710 14.12758141117483
OKEAN 1-7
1 23317U 94066A 96341.18461389 .00000167 00000-0 21948-4 0 2034
2 23317 82.5421 260.7835 0024212 241.9577 117.9186 14.74060724115877
ELEKTRO (GOMS)
1 23327U 94069A 96339.93105324 -.00000090 00000-0 00000+0 0 2310
2 23327 0.4007 101.3981 0001103 97.8386 286.2925 1.00272162 7719
RESURS 1-3
1 23342U 94074A 96341.92068768 .00000089 00000-0 22794-4 0 6236
2 23342 97.9450 34.6631 0001687 85.8188 274.3225 14.69883048112182
Glonass 68
1 23396U 94076A 96343.32753949 -.00000020 00000-0 00000+0 0 3554
2 23396 65.1624 78.3716 0030104 191.3540 168.5883 2.13102659 15950
Glonass 69
1 23397U 94076B 96343.50394864 -.00000019 00000-0 00000+0 0 3381
2 23397 65.1459 78.3707 0011824 314.9544 44.9643 2.13102307 15953
Glonass 70
1 23398U 94076C 96343.38770202 -.00000020 00000-0 00000+0 0 3575
2 23398 65.1382 78.3501 0003126 269.1970 90.7776 2.13102048 15960
LUCH (Altair-2)
1 23426U 94082A 96343.38498182 -.00000259 00000-0 00000+0 0 4405
2 23426 1.0812 264.4451 0002910 7.4712 39.3890 1.00272686 7258
RS-15
1 23439U 94085A 96342.76084784 -.00000039 00000-0 10000-3 0 1826
2 23439 64.8119 102.3857 0155370 168.1618 192.3024 11.27529351 80353
NOAA 14
1 23455U 94089A 96343.86286321 .00000058 00000-0 56531-4 0 8558
2 23455 98.9658 288.9783 0010171 104.4612 255.7689 14.11630582100092
Glonass 71
1 23511U 95009A 96343.81464167 -.00000025 00000-0 00000+0 0 2717
2 23511 64.5977 318.0755 0007687 230.7716 129.1588 2.13103912 13690
Glonass 72
1 23512U 95009B 96342.99664518 -.00000023 00000-0 00000+0 0 2772
2 23512 64.5872 318.1064 0007568 307.4486 52.4857 2.13101696 13675
Glonass 73
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1 23513U 95009C 96343.28782152 -.00000024 00000-0 00000+0 0 2952
2 23513 64.5911 318.1113 0014268 211.0525 148.8650 2.13103225 13686
GMS 5
1 23522U 95011B 96343.37576044 -.00000271 00000-0 10000-3 0 1820
2 23522 0.4653 22.4740 0000725 177.8165 152.2827 1.00269521 6191
DMSP B5D2-8
1 23533U 95015A 96343.73228303 .00000000 00000-0 23813-4 0 7808
2 23533 98.8434 343.9836 0006654 287.0758 72.9681 14.12765159 88277
OSC 1
1 23545U 95017A 96342.52149710 .00000064 00000-0 35220-4 0 1846
2 23545 69.9713 127.9118 0015422 295.8233 64.1307 14.45445254 88703
OSC 2
1 23546U 95017B 96342.48659438 .00000419 00000-0 13574-3 0 2184
2 23546 69.9769 128.1818 0015069 288.9012 71.0481 14.45457543 88704
Microlab 1
1 23547U 95017C 96342.49414545 .00000165 00000-0 63744-4 0 1568
2 23547 69.9780 127.8604 0015169 287.2501 72.6968 14.45621195 88717
OFEQ 3
1 23549U 95018A 96343.39591692 .00007775 00000-0 17419-3 0 3888
2 23549 143.3640 213.0178 0210383 169.8878 190.6096 15.19511777 92828
GFZ-1
1 23558U 86017JE 96343.35100199 .00002088 00000-0 28066-4 0 1848
2 23558 51.6511 314.0645 0007467 159.1497 200.9831 15.63332890617240
ERS-2
1 23560U 95021A 96341.76550243 -.00000031 00000-0 46224-5 0 3080
2 23560 98.5502 53.3263 0001062 81.7305 278.3582 14.32244164 85270
Spektr
1 23579U 95024A 96344.10334380 -.00006221 00000-0 -62037-4 0 5164
2 23579 51.6524 322.2035 0013677 121.2946 238.9909 15.62567589 88771
GOES 9
1 23581U 95025A 96343.24908935 .00000102 00000-0 10000-3 0 2894
2 23581 0.0469 266.8320 0003754 5.3474 119.2942 1.00269688 5675
Helios 1A
1 23605U 95033A 96343.79060147 .00000111 00000-0 30285-4 0 3680
2 23605 98.1367 277.1053 0001644 61.8259 298.3108 14.63828615 76102
UPM SAT 1
1 23606U 95033B 96341.23467522 .00000251 00000-0 53150-4 0 2350
2 23606 98.1185 276.1982 0008393 10.3412 349.7962 14.67321183 75941
CERISE
1 23607U 95033C 96342.36003732 .00000081 00000-0 23154-4 0 1389
2 23607 98.1172 277.1137 0007100 4.5091 355.6176 14.66982667 76127
TDRS 7
1 23613U 95035B 96343.31638484 .00000113 00000-0 00000+0 0 2659
2 23613 1.0424 81.8027 0002986 162.8561 135.3957 1.00278856 5126
Glonass 74
1 23620U 95037A 96344.01025446 .00000113 00000-0 00000+0 0 2183
2 23620 64.8182 198.1279 0018436 163.3912 196.7621 2.13103243 10730
Glonass 75
1 23621U 95037B 96341.37249044 .00000100 00000-0 00000+0 0 2278
2 23621 64.8282 198.2162 0018036 174.6037 185.5071 2.13102445 10674
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Glonass 76
1 23622U 95037C 96342.83832906 .00000111 00000-0 00000+0 0 2324
2 23622 64.8154 198.1715 0036808 163.1207 197.0967 2.13102594 10706
Prognoz-M2
1 23632U 95039A 96343.64998010 -.00000937 00000-0 00000+0 0 950
2 23632 71.8250 247.8130 7821681 326.2050 2.5070 0.26367200 1312
SICH-1
1 23657U 95046A 96342.22745032 .00000199 00000-0 27114-4 0 1299
2 23657 82.5333 41.2882 0026601 205.4231 154.5668 14.73515356 68319
RADARSAT
1 23710U 95059A 96341.53794419 .00000142 00000-0 72025-4 0 2143
2 23710 98.5787 345.7761 0001281 51.7495 308.3799 14.29980179 56870
Glonass 79
1 23734U 95068A 96341.54853430 .00000102 00000-0 00000+0 0 2065
2 23734 64.8199 198.1269 0017406 327.4335 32.5445 2.13102418 7641
Glonass 78
1 23735U 95068B 96344.08875088 .00000113 00000-0 00000+0 0 1983
2 23735 64.8232 198.0302 0006088 202.1249 157.9445 2.13125245 7694
Glonass 77
1 23736U 95068C 96343.66001986 .00000113 00000-0 00000+0 0 1783
2 23736 64.8089 198.0624 0007268 187.7549 172.3272 2.13102337 7689
XTE
1 23757U 95074A 96342.20005451 .00000545 00000-0 16574-4 0 1061
2 23757 22.9812 314.0207 0013384 329.9826 29.9868 14.97737767 51438
Polar
1 23802U 96013A 96343.34114527 .00000106 00000-0 00000+0 0 836
2 23802 86.3142 24.1878 6538768 277.5141 17.8638 1.36264589 3933
1996010E
1 23824U 96010E 96339.51343231 .00212463 00000-0 43068-1 0 1461
2 23824 47.5071 206.0658 7239215 70.3322 350.2502 2.34094535 6422
GPS BIIA-25
1 23833U 96019A 96343.40132437 -.00000045 00000-0 00000+0 0 1208
2 23833 54.6522 340.9262 0026670 141.9074 218.3141 2.00565376 5175
Priroda
1 23848U 96023A 96344.10334380 -.00006221 00000-0 -62037-4 0 2047
2 23848 51.6524 322.2035 0013677 121.2946 238.9909 15.62567589 35862
MSX
1 23851U 96024A 96342.49661076 -.00000047 00000-0 00000+0 0 1435
2 23851 99.4079 325.5368 0006849 36.5160 323.6410 13.97508456 31707
SAX
1 23857U 96027A 96343.48681186 .00001179 00000-0 41425-4 0 456
2 23857 3.9494 284.3100 0012499 354.1731 6.1064 14.91674524 33212
MSTI 3
1 23868U 96031A 96343.89663558 -.00001772 00000-0 -33802-4 0 913
2 23868 97.1215 171.3306 0008948 260.1794 99.8445 15.46663651 31818
TOMS-EP
1 23940U 96037A 96343.79900611 .00001529 00000-0 70591-4 0 658
2 23940 97.4333 247.0811 0014692 89.6189 270.6732 15.21646466 24188
GPS BIIA-26
1 23953U 96041A 96342.31899547 .00000004 00000-0 00000+0 0 851
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2 23953 55.0926 101.3456 0018723 331.8569 27.9884 2.00562955 2944
ADEOS
1 24277U 96046A 96343.97132003 -.00000044 00000-0 00000+0 0 1199
2 24277 98.6170 58.3988 0001138 36.9838 323.1417 14.27645477 16225
FO-29
1 24278U 96046B 96342.18966757 .00000000 00000-0 38924-4 0 420
2 24278 98.5687 43.3539 0351499 323.7050 34.0691 13.52627717 15163
Soyuz TM-24
1 24280U 96047A 96344.10334380 -.00006221 00000-0 -62037-4 0 1087
2 24280 51.6524 322.2035 0013677 121.2946 238.9909 15.62567589 17762
FAST
1 24285U 96049A 96341.49117564 .00000852 00000-0 85639-4 0 428
2 24285 82.9856 128.6258 2207409 333.1040 17.0415 10.81628069 11585
Microsat
1 24291U 96050A 96343.25168273 .00024780 61020-5 16979-3 0 842
2 24291 62.7957 44.1163 0613115 122.1036 244.1090 14.66815718 14773
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 503
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653 12950
GPS BIIA-27
1 24320U 96056A 96338.69282732 -.00000050 00000-0 00000+0 0 463
2 24320 54.6759 281.5893 0047017 95.4287 264.5984 2.00568884 1537
SAC-B/HETE
1 24645U 96061A 96342.59258286 .00000365 00000-0 25225-4 0 289
2 24645 37.9776 287.0852 0048051 204.6916 155.1561 15.14788006 4996
1996062B
1 24649U 96062B 96344.17033170 .00151647 -15018-5 55985-3 0 492
2 24649 25.3015 9.5980 2512357 85.4093 302.6040 10.58357451 3296
1996062D
1 24651U 96062D 96338.40835312 .00215603 -16507-5 79013-3 0 363
2 24651 25.3073 29.1167 2521067 52.2443 328.7168 10.56595893 2771
Arabsat 2B
1 24652U 96063A 96325.31372041 .00010406 00000-0 31079-2 0 61
2 24652 3.9925 208.1383 7284808 182.9551 165.5729 2.27503266 145
Measat 2
1 24653U 96063B 96343.34820753 -.00000206 00000-0 00000+0 0 237
2 24653 0.0209 235.0143 0002620 127.2284 348.5658 1.00271385 306
1996063C
1 24654U 96063C 96335.72321759 .00000069 00000-0 38597-3 0 156
2 24654 3.8610 204.1993 7278097 191.0055 133.6259 2.22875806 403
1996063D
1 24655U 96063D 96340.18760924 .00007989 00000-0 33339-2 0 172
2 24655 3.9214 201.4738 7276210 195.6670 116.1002 2.27795085 474
Progress M-33
1 24663U 96066A 96344.10334380 -.00006221 00000-0 -62037-4 0 217
2 24663 51.6524 322.2035 0013677 121.2946 238.9909 15.62567589 3009
1996066B
1 24664U 96066B 96327.41277526 .58399191 12743-4 19260-3 0 190
2 24664 51.6425 45.7297 0017318 127.1554 233.1175 16.57786928 401
Hot Bird 2
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1 24665U 96067A 96327.75000000 .00002618 73664-6 10000-3 0 62
2 24665 23.8873 196.7180 7311335 179.2354 352.6087 2.28438038 23
1996067B
1 24666U 96067B 96342.60935228 .00090635 46573-6 17571-2 0 225
2 24666 23.8783 189.6608 7283001 190.4778 135.6232 2.32653376 360
1996068B
1 24668U 96068B 96344.20088294 .00235841 20107-5 58756-3 0 133
2 24668 36.4034 318.3593 1805587 46.2930 327.3794 12.12533823 597
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2663. Re: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: orion@capital.net
Message-ID: <32acf6b8.46997915@news.capital.net>
Source record: 20589

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie
>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

2664. Re: Where is MIR? update

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32AD1B0E.27A6@wco.com>
Source record: 20590

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >
>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

2665. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: darwin@indy.net
Message-ID: <58jjk3$nkh@news.indy.net>
Source record: 20591

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot would be about the minimum to get great video. you might be able to get by with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots of people have old ones they aren't using anymore. You'd need a few bags of cement and a pole, some cable to run into the house. If you only want it for the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc sometime fairly soon. The good news is the signal would be stronger. The bad news is that the new satellite would have others sats nearby, meaning the smaller your dish the greater the crosstalk. If you live on the west coast, it may be kind of low on the horizon in it's present location. Let me know where you live and I'll see if I can give you the particulars. Email me....

2666. RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: baack@maine.edu
Message-ID: <58jo6h$2a40@sol.caps.maine.edu>
Source record: 20592

Greetings all,
this post is a call for information. I am trying to setup a satellite station for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost more than that feel free to tell me about it. I just wanted to get an idea of what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

2667. Re: RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <58k9uj$980@freenet-news.carleton.ca>
Source record: 20593

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
> DN: Realistic HTX-100 dipole @ 17 feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

2668. Re: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: rlong@magnus.acs.ohio-state.edu
Message-ID: <rlong-1012961556360001@ts17-10.homenet.ohio-state.edu>
Source record: 20594

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

From : G3RUH
To : DL1CR
Uploader : G4WFQ
Uploaded : Wed May 13 09:09:31 1992

DL1CR de G3RUH 1992 May 11

Kurt, when I wrote my routines for FT736R CAT (published on this BBS) I discovered that Yaesu did a great job and introduced only 2 bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot change it to 70cm RX /2m TX! This is because you have to make the changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

2669. ARLK091 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk091.1996@arrl.org>
Source record: 20595
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091
From ARRL Headquarters
Newington, CT December 10, 1996
To all radio amateurs

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
```

```
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2670. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: wkrantz@voicenet.com
Message-ID: <wkrantz-1012962317320001@doyl114-pri.voicenet.com>
Source record: 20596

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

2671. Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-10 00:00:00 UTC
From: George Zafiropoulos <georgez@quickturn.com>
Message-ID: <32ADF9D3.71C@quickturn.com>
Source record: 20597

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

2672. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>
Source record: 20598

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

2673. PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: kwalker@qb.island.net
Message-ID: <58lbap$f6r@cliff.island.net>
Source record: 20599

I have not followed the development of the packet capable amateur satellites but I believe there are some in operation. As a sometimes off shore sailor and a radio amateur, I am asked by fellow sailors whether they should get a ham licence and how effective it would be. I tell them about 20m ssb, about hf packet and amtor but I also go on about how low earth store and forward packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham to prepare a packet message and the software would determine when a bird is overhead and send up the message and pick up any waiting mail. Are these birds ready to do this? Is there software that would do it? Am I right that these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

2674. Re: The big picture

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Robert Bissett <rbissett@monmouth.com>
Message-ID: <32AE5821.6B0A@monmouth.com>
Source record: 20600

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

2675. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612111258.EAA16839@UCSD.EDU>
Source record: 20601

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

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Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data
```

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first EVA and they did a second EVA today and did a makeshift repair which will work, but the signal will not be as strong or as steady as before.. but it will work for the time being, they will fix the coax and on the next planned EVA make the proper repair.. I have no idea when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>

>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

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all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
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overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
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feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427

```
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say ) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
```

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

2676. Re: RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <58mgv7$k41@faatcrl.faa.gov>
Source record: 20602

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

2677. FT290/790 9600 Bd mods?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Bob Smith <rsmith@internetmci.com>
Message-ID: <01bbe77b$1037b2e0$8fedbdcc@rsmith>
Source record: 20603
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.space

Investigating getting a FT290 or 790 and was wondering if either of these can be modified for 9600bd packet. If so can someone point me in the right direction...

Thanks and 73
de Bob, N3FTU

2678. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: jean@dont.spam.on.me.kcco.com
Message-ID: <58n030$j4r@kirin.wwa.com>
Source record: 20604
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <dschultz.4128.000F0428@ti.com>,
dschultz@ti.com (Douglas A. Schultz II) writes:
>
> [very appropriate rage and inappropriate call for censorship snipped]
>
> So I gather that censorship of individuals and groups is ok if it suits YOUR
> agenda, "Intrepid"? Is that right? You wish to censor these individuals from
> the Internet and control their rights to access what is essentially a public
> forum????
>
> How very ironic, since one of the cornerstones of the Third Reich & Nazi
> Germany was censorship and control of individuals and information.
>
> Where does it end?
>

Perhaps with the formation of a "counter" group, e.g. alt.human.power,
dedicated to promoting human rights, understanding, and cultural
pluralism, and to fighting racism, sexism, ethnic and religious hatreds,
etc.

Fight fire with fire, not censorship.
(and please take this discussion to a more appropriate group -- see
the Followup-to header for a best guess on my part as to what they might be)

jean.
------------------------------+---------------------------------------
Jean Liddle | DISCLAIMER: "My thoughts are my own.
email: jean@kcco.com | My employer probably has different
jean@interaccess.com | thoughts. Ergo, what I write here are
http://www.kcco.com/~jean/ | my own opinions, not my employer's."
------------------------------+---------------------------------------
PGP Public Key Available on my home page & public key servers worldwide
---
When you go out strolling through the world you do not have the "right
not to be offended" by the values and cultures of other
peoples/countries/religions. --internet user, condemning the CDA

2679. Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: ashleyb@ohsu.edu
Message-ID: <58n8qe$dvf@fremont.ohsu.edu>
Source record: 20605

To The Group:

I'm in the process of setting up a satelite system. A few local guys are having fun with RS-10. What I would like to do is to set up a nice beginners station. I currently have a IC-275A with a GP-3 for the Up link and two different HF xcvr's to set up the down link. My question is would an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V dipole. I am reading the ARRL satelite handbook but I'd like to hear from some people actually working the birds. Also should I get a pre-amp and if so does anyone have any recommendations ie buy,build?? Thanks for your help.

Brad WB7TSO
ashleyb@ohsu.edu

2680. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.961211161124.29968B-100000@spacelink>
Source record: 20606

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

2681. Re: RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Rod Adkins <rod@mail.border.com>
Message-ID: <32AF31C6.1CC2@mail.border.com>
Source record: 20607

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

2682. Re: RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Keith Erskine <kerskine@fetchsoft.com>
Message-ID: <32AF7553.F1B@fetchsoft.com>
Source record: 20608

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

2683. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Keith Erskine <kerskine@fetchsoft.com>
Message-ID: <32AF7431.4796@fetchsoft.com>
Source record: 20609

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

2684. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: robert@kd3bj.ampr.org
Message-ID: <robert.850269457@kd3bj.ampr.org>
Source record: 20610

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

2685. Re: Mir Message #1

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <58n9mp$pm4@news.mhv.net>
Source record: 20611

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2686. Keplerian Elements

Newsgroup: rec.radio.amateur.space
Date: 1996-12-11 00:00:00 UTC
From: Edgar@raudi.ms.sub.org
Message-ID: <6Mfv6HEk35B@raudi.ms.sub.org>
Source record: 20612

Muenster, Mi 11.12.96, 23:36 Uhr

Hi,
I'm looking for some FTP- Sites where I can download the Keplerian
Elements for my PCT 3.1

TNX for help ;)))

Greetings

EDGAR

E-Mail: edgar@raudi.ms.sub.org | edgar@aigm.westfalen.de
FIDO: 2:2449/515.13 | GER: 21:487/537.13
FS-Fan: 81:300/1100.13
WWW : http://members.aol.com/eneuh/home/index.htm
>>Fileserver: fileserver@aigm.westfalen.de; Betreff:PSERVER:HELP<<

2687. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Dale Martin <kg5u@hal-pc.org>
Message-ID: <01bbe7ce$2b0be660$b6a1dece@kg5u.hal-pc.org>
Source record: 20613

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local
cable companies, if enough of their subscribers request it. Having a few
school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all
the way. Maybe it can be compromised down to mission coverage.

Good luck,

2688. need info- 10 meter rec for mode A

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: dbarillo@texas.net
Message-ID: <58o1bj$pgq@news3.texas.net>
Source record: 20614

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB to use on mode A-- thinking of the Uniden HR 2510 or the radio shack HTX 100 does anyone have experiences/strong opinions on the pros and cons of these radios, or other suggestions for a easy way to recieve 10 m SSB? Thanks Dave

2689. DXER.COM Website Update

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: kb7ub@dxer.com
Message-ID: <32afa029.13158686@news.pacbell.net>
Source record: 20615

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the
amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)
Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)
Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

2690. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Erik Skovgaard <Erik_Skovgaard@bc.sympatico.ca>
Message-ID: <01bbe7e6$dc693f80$09d866cf@default>
Source record: 20616

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to
reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

2691. free money

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: river@venus.net
Message-ID: <river.199.32AF865C@venus.net>
Source record: 20617

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
(Save this file now...it will save you some time typing later if you
decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO
CATCH? Then keep reading....please take five minutes to read this
article it will change your life, just like it did mine. It's true!
You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
intrested, keep reading; if you're not, I apologize for wasting your
time.
Here we go. A little while back, I was browsing through these
newsgroups, just like you are now, and came across an article similar to
this that said you could make thousands of dollars in weeks with only
an initial investment of $5! So, I thought, "Yeah, right, must be a
scam", but I was curious, like most of us , so I kept reading. Anyway,
it
said that you send $1 to each of the 5 names and addresses stated in the
article. You then place your own name and address in the article at
the bottom of the list at #5, and post the article in at least 200
newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each
sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
of paper that
you just wrote on, and fold each piece of paper so the bill will not be
seen in the envelope (otherwise, nosey people who like to steal envelopes
with money in it will get yours). Put one paper inside the envelope

and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and

it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one

sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who did that and he only made $150 dollars, and that's AFTER seven or eight weeks! Then he sent the 5 $1 bills, people added him to their lists, and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

2692. Re: FT290/790 9600 Bd mods?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: karen@ra3apw.ampr.demos.su
Message-ID: <ADfqtSsyjN@ra3apw.ampr.demos.su>
Source record: 20618
Cross-posted to: rec.radio.amateur.space,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes
FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage.
FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a shielded cable to connect this pin with your 9k6-modem input. The IF-bandwidth of CF01 (CF01) CFW455F seems to be to small for very good results, so I recommend to exchange it with a CFW455D. With good RF-strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-signal below the main unit where R30124, C30120 and C30126 (R30117, C30117 and C30124) come together (all SMD). Is it necessary to say, use a shielded cable? As long as no other AF from the tone unit or the microphon reaches this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org

Satellites: UO-22, KO-23, KO-25

2693. WTB FT 736

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: rkling@umich.edu
Message-ID: <58ogfv$old@lastactionhero.rs.itd.umich.edu>
Source record: 20619

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing to part with yours.

Rob Kling(N8YBV)

2694. Re: Test - Do not read

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: John Straughn <JTarn@envirolink.org>
Message-ID: <850385791-0-24962@manatee.envirolink.org>
Source record: 20620
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.space,sci.astro,sci.astro.amateur

In note <58jjt6$p43$1@nova.thezone.net>, p.piercey@thezone.net (Paul J.
Piercey) writes:
>Test.

\MWAHAHAHAHAH I'M A REBEL WITHOUT A CAUSE!!!

The Triaist

2695. Re: Ham-Space Digest V96 #421

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: r.PHelan@www.mac.ul.IE
Message-ID: <2.2.32.19961212112957.006f9e90@mac.ul.ie>
Source record: 20621

```
--====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the
ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie ....EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>------------------------------------------------------------------------
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link
>
>To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
```

>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link
>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO
>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com
>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people
>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,
>
>
>73's

>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO
> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200
> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it
> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it
> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:
>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER

> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which
> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!
>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST
> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>
> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .

>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS
> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>
> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
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> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want
> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,
> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR
> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with

> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?
> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on
> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>
>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>
>Thanks and 73
>de Bob, N3FTU
>

>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>---
>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>---
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet
> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>

>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091
>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800
>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has
>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.
>
>Thanks very much for you advice in advance.
>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet

>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax
>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>
>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.
>
>------------------------------
>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>

>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>
>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:
>
>> Hi All
>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the

>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,
>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>
>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites
>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is
>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that
>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what is
>available. Anyone want to try to update me??
>
>Thanks.

>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>
>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>
>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:
>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite
>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>

>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.
>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>
>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>
>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com
> *********
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ

```
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21
>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
```

>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2
>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.
>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>
>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************

>
>------------------------------
>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>--
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before
> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency
> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to
> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss
> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to

> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact
> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>
>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>
>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...

>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >
>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>
>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.
>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>
>Good luck,
>
>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>

>73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:
>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>
>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>
>Rod Adkins wrote:
>>
>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************

>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316
E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

2696. Re: RS-10 /RS-15 what are you using?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Rod Adkins <rod@mail.border.com>
Message-ID: <32AFF34C.11C3@mail.border.com>
Source record: 20622

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

2697. Your GOD Loves You - YES YOU!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Someone <Someone@home.thinking.about.you.com>
Message-ID: <12121996091103166701333605001OSomeone@home.thinking.about.you.com>
Source record: 20623

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want you to. When we look closely at GOD we begin to realize that we all believe in the same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is a reason for everything...

God thank you.

Someone

2698. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Herb Perkins <wa2jrv@amsat.org>
Message-ID: <32B005D0.9C@amsat.org>
Source record: 20624

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

2699. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612121624.IAA06996@UCSD.EDU>
Source record: 20625

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

------------------------------------------------------------------------

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:
```

I'm in the process of setting up a satelite system. A few local guys are having fun with RS-10. What I would like to do is to set up a nice beginners station. I currently have a IC-275A with a GP-3 for the Up link and two different HF xcvr's to set up the down link. My question is would an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V dipole. I am reading the ARRL satelite handbook but I'd like to hear from some people actually working the birds. Also should I get a pre-amp and if so does anyone have any recommendations ie buy,build?? Thanks for your help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
(Save this file now...it will save you some time typing later if you
decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO
CATCH? Then keep reading....please take five minutes to read this
article it will change your life, just like it did mine. It's true!
You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
intrested, keep reading; if you're not, I apologize for wasting your
time.
Here we go. A little while back, I was browsing through these
newsgroups, just like you are now, and came across an article similar to
this that said you could make thousands of dollars in weeks with only
an initial investment of $5! So, I thought, "Yeah, right, must be a
scam", but I was curious, like most of us , so I kept reading. Anyway,
it
said that you send $1 to each of the 5 names and addresses stated in the
article. You then place your own name and address in the article at
the bottom of the list at #5, and post the article in at least 200
newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each
sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
of paper that
you just wrote on, and fold each piece of paper so the bill will not be
seen in the envelope (otherwise, nosey people who like to steal envelopes
with money in it will get yours). Put one paper inside the envelope
and seal it. Do the same for all 5. You should now have 5 envelopes

sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the

Internet and newsgroups everyday and are willing to give it a try?
Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
sure you print this article out RIGHT NOW, also, try to keep a list of
everyone that sends you money and always keep an eye on the mnewsgroups
to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]

Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first EVA and they did a second EVA today and did a makeshift repair which will work, but the signal will not be as strong or as steady as before.. but it will work for the time being, they will fix the coax and on the next planned EVA make the proper repair.. I have no idea when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these

birds ready to do this? Is there software that would do it? Am I right that these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost more than that feel free to tell me about it. I just wanted to get an idea of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea of
> what everyone was using.

>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ

```
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
```

2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)

Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening hatch) and 2028UTC (closing hatch). So a duration of 6 hrs 36 mins. The EVA lasted longer for Korzun wished to accomplish all what had to be done and there also was a problem with something which bungled loose. Before return they restored the connection of the radio-amateurantenne for the 145 mc. Probably this antenne had been disconnected by accident during the 1st EVA. They connected the antenna again and while they were flying over Chile and Brasil they asked John Blaha to listen out on the 145.800 mc to check whether the antenne was working or not. There was no traffic on that frequency in that area and so they had to wait until they came in range of European amateurs. I asked the English radio-amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as soon as MIR would come in range (at abt. 1934UTC). So he did and these signals could be heard by John Blaha while MIR was flying over France. He reported this to the still being on EVA Korzun and Kaleri and congratulated them with their success. Korzun urged John not to transmit, but to listen only. The cosmonauts fully accomplished their tasks: installing the truss construction Rapana at the truss Ferma-3 and the replacement of the Kurs-antenna on the outersurface of the P.Kh.O. (transitionsection). John Blaha who stayed inside the complex took care of the communications and executed commands given to him by TsUP. He gave the cosmonauts all possible moral and technical help. The cosmonauts and Blaha did an excellent job during this EVA, they gave an example of fruitful international cooperation and so they all deserve a loud: 'MOLODTSY' (very well done).
Of course the cosmonauts were very tired after the EVA and back in the airlock they had to do hard labour to put off their spacesuits.
Just before midnight Korzun could be heard in a contact with a Portugese radio-amateur via the repaired antenne for the 145 mc.

Thusfar there are no more EVA's on schedule for this crew.
I hope this fills in the gaps, it was working much better tonight, they must have found something else..

73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.

> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of Houston (near Johnson Space Center) carries NASA TV (NASA Select is a non-term....). It's been years since I was a subscriber, but back then, they were just carrying it during missions. I have heard they are carrying it 24 hours a day, now. But, I don't know that firsthand. I believe a lot of people asked the cable company for it and TCI (then Storer Cable) accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

2700. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Message-ID: <58pcvo$h7m@niven.ksc.nasa.gov>
Source record: 20626

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave homebrew groundplane up 30', which I feed with 25 watts from a Yaesu FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent transmitter. Much more than this would be overkill. Hope to work you on the birds someday.

73 de Roger, KD4ITU

2701. $$$$ $50,000 for the New Year $$$$

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: invest@goldbergservices.com
Message-ID: <58oa97$f2l@hil-news-svc-5.compuserve.com>
Source record: 20627

$$$$ $50,000 for the New Year $$$$

Take five minutes to read this and it WILL change your life.

The Internet has grown tremendously. It doubles in size every 4 months. think about it. You see those 'Make.Money.Fast' posts more and more.
That's ... because it WORKS ! So I thought, all those new users might make it work. And I decided to try it out, a few months ago. Besides, whats $5.00, I spend more than that in the morning on my way to work on coffee and cigs for the day. So I sent in my money and posted.Everyone was calling it a scam, but there are SO many new users from AOL, Netcom, etc. they will join in and make it work for you.

Well, two weeks later, I began recieving bucks in the mail! I couldn't believe it! Not just a little, I mean big bucks! At first only a few hundred dollars, then a week later, a couple of thousand, then BOOM.
By the end of the fourth week, I had recieved nearly $47,000.00. It came from all over the world. And every bit of it perfectly legal and on the up and up. I've been able to pay off all my bills and still had enough left over for a nice vacation for me and my family.

Not only does it work for me, it works for other folks as well. Markus Valppu says he made $57,883 in four weeks. Dave Manning claims he made $53,664 in the same amount of time. Dan Shepstone says it was only $17,000 for him. Do I know these folks? No, but when I read how they say they did it, it made sense to me. Enough sense that I'm taking a similar chance with $5 of my own bucks. Not a big chance, I admit--but one with incredible potential, because $5 is all anyone ever invests in this system. Period. That's all Markus, Dave, or Dan invested, yet their $5 netted them tens of thousands of dollars each, in a safe, legal, completely legitimate way. Here's how it works in 3 easy steps:

STEP 1.

Invest your $5 by writing your name and address on five seperate pieces of paper along with the words: "PLEASE ADD ME TO YOUR MAILING LIST." (In this way, you're not just sending a dollar to someone; you're paying for a legitimate service.) Fold a $1 bill inside each paper, and mail them by standard U. S. Mail to the following five addresses:

1-Aaron McDaniel
2014 Powell Dr.
ElCajon, Ca 92020

2-Faroon Khan
12343 77A Avenue
Surrey, BC V3W2W9

3-Hoffman Eric
3150 Riviere-Cachee
Boisbriand, PQ
Canada
J7H 1A3

4-Stuart Koch
Connolly Hall Box C115
501 E. St. Joseph
Rapid City, SD 57701-3995

5-Karen Lundgren
3889 Kencrest Ave.
Halifax, NS
Canada
B3K 3L4

STEP 2.

Now remove the top name from the list, and move the
other names up.This way, #5 becomes #4 and so on.
Put your name in as the fifth one on the list.

STEP 3.

Post the article to at least 250 newsgroups. There are at
least 19000 newsgroups at any given moment in time.
Try posting to as many newsgroups as you can. Remember
the more groups you post to, the more people will see your
article and send you cash!

STEP 4.

You are now in business for yourself, and should start seeing
returns within 7 to 14 days! Remember, the Internet is new
and huge. There is no way you can lose.

Now here is how and why this system works:

Out of every block of 250 posts I made, I got back 5 responses.
Yes, thats right,only 5. You make $5.00 in cash, not checks or
money orders, but real cash with your name at #5.

Each additional person who sent you $1.00 now also makes 250
additional postings with your name at #4, 1000 postings. On
average then, 50 people will send you $1.00 with your name at
#4,....$50.00 in your pocket!

Now these 50 new people will make 250 postings each with your
name at #3 or 10,000 postings. Average return, 500 people= $500.
They make 250 postings each with your name at #2= 100,000
postings=5000 returns at $1.00 each=$5,000.00 in cash!

Finally, 5,000 people make 250 postings each with your name at
#1 and you get a return of $60,000 before your name drops off

the list.And that's only if everyone down the line makes only 250 postings each! Your total income for this one cycle is $55,000.

From time to time when you see your name is no longer on the list, you take the latest posting you can find and start all over again.

The end result depends on you. You must follow through and repost this article everywhere you can think of. The more postings you make, the more cash ends up in your mailbox. It's too easy and too cheap to pass up!!!

So thats it. Pretty simple sounding stuff, huh? But believe me, it works. There are millions of people surfing the net every day, all day, all over the world. And 100,000 new people get on the net every day. You know that, you've seen the stories in the paper. So, my friend, read and follow the simple instructions and play fair. Thats the key, and thats all there is to it. Print this out right now so you can refer back to this article easily. Try to keep an eye on all the postings you made to make sure everyone is playing fairly. You know where your name should be.

If you're really not sure or still think this can't be for real, then don't do it. But please print this article and pass it along to someone you know who really needs the bucks, and see what happens.

REMEMBER....HONESTY IS THE BEST POLICY.YOU DON'T
NEED TO CHEAT THE BASIC IDEA TO MAKE THE BUCKS!
GOOD LUCK TO ALL, AND PLEASE PLAY FAIR AND YOU WILL
WIN AND MAKE SOME REAL INSTANT FREE CASH!

*** By the way, if you try to deceive people by posting the messages with your name in the list and not sending the bucks to the people already included, you will not get much. I know someone who did this and only got about $150 (and that's after two months). Then he sent the 5 bills, people added him to their lists, and in 4-5 weeks he had over $10,000!

TRY IT AND YOU'LL BE HAPPY!!! :o) !!!!!!!!!!

2702. Wisp Power Saver

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Message-ID: <32B03305.741A@qmserver.vtm.be>
Source record: 20628

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

2703. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612122003.MAA23283@UCSD.EDU>
Source record: 20629

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

-------------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
-------------------------------------------------------------------------------
```

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true!

You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200 newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it. I figured what have I got to lose except for 5 stamps and $5, right? Well, guess what...within 7 days, I started getting money in the mail! I was shocked! I still figured it would end soon, and didn't give it another thought. But then money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made about 20 to 30 dollars. But by the end of the second week, I had made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 11) and I've made about $42,000 TOTAL, and the money is still coming in.....
Let me tell you how this works and most importantly, WHY it works...also, make sure you print a copy of the article NOW, so you get the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1

NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the

> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites but I believe there are some in operation. As a sometimes off shore sailor and a radio amateur, I am asked by fellow sailors whether they should get a ham licence and how effective it would be. I tell them about 20m ssb, about hf packet and amtor but I also go on about how low earth store and forward packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham to prepare a packet message and the software would determine when a bird is overhead and send up the message and pick up any waiting mail. Are these birds ready to do this? Is there software that would do it? Am I right that these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM

kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525

```
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
```

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening
hatch) and 2028UTC (closing hatch). So a duration of 6
hrs 36 mins. The EVA lasted longer for Korzun wished to
accomplish all what had to be done and there also was a
problem with something which bungled loose. Before
return they restored the connection of the radio-
amateurantenne for the 145 mc. Probably this antenne had
been disconnected by accident during the 1st EVA. They

connected the antenna again and while they were flying
over Chile and Brasil they asked John Blaha to listen
out on the 145.800 mc to check whether the antenne was
working or not. There was no traffic on that frequency
in that area and so they had to wait until they came in
range of European amateurs. I asked the English radio-
amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
soon as MIR would come in range (at abt. 1934UTC). So he
did and these signals could be heard by John Blaha while
MIR was flying over France. He reported this to the
still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz

>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his
station together. He is a live aboard and blue water sailor. Last year
he was in the Bahamas and will be there again this year. He has been on
UO22 and has used his station very succesfully. AF4N Wes and I have both
put in a good bit of time getting his boat ready (all three of us are
sailors). George just went off internet and will be on the air for the
next six months. Wes and I will be on internet and can offer some
suggestions.

The first point is that it is not difficult and even underway the system
works just fine. However antenna placement is a problem. George uses one
J pole for up link and a small yagi for down link (3 elements). He
rotates it 180 degrees during the pass and has no difficulity going from
the radio to the cockpit to make the change. Since UO22 is basically
automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

2704. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612122048.MAA26551@UCSD.EDU>
Source record: 20630

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:47
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-10 04:30
Subject: Ham-Space Digest V96 #419

Ham-Space Digest Tue, 10 Dec 96 Volume 96 : Issue 419

Today's Topics:
NASA TV Links
NoNo?:TrakBox, Ft736R and 23cm(P3D)
SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT
Where is MIR? update (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 10 Dec 96 12:10:12 GMT
From: darwin@indy.net (Darwin Teague)
Subject: NASA TV Links

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?

>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot would be about the minimum to get great video. you might be able to get by with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots of people have old ones they aren't using anymore. You'd need a few bags of cement and a pole, some cable to run into the house. If you only want it for the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc sometime
fairly soon. The good news is the signal would be stronger. The bad news is that the new satellite would have others sats nearby, meaning the smaller your
dish the greater the crosstalk. If you live on the west coast, it may be kind of low on the horizon in it's present location. Let me know where you live and
I'll see if I can give you the particulars. Email me....

Date: 8 Dec 1996 19:25:51 GMT
From: Guenter.Stautz@t-online.de (gs)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Hi All
after long nights with my TrakBox version 3.3h , I came to the conclusion, that TrakBox designers had never in mind to let it work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,

12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

Date: Tue, 10 Dec 1996 05:36:58 GMT
From: orion@capital.net
Subject: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie
>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

Date: Mon, 9 Dec 1996 23:54:28 GMT
From: Charlie Rubenstein <rubenc@iglou.com>
Subject: Where is MIR? update

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >
> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

Date: Tue, 10 Dec 1996 00:10:54 -0800
From: steve <kd6fyk@wco.com>

Subject: Where is MIR? update

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >
>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

End of Ham-Space Digest V96 #419
****

2705. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-12 00:00:00 UTC
From: Bob Smith <rsmith@internetmci.com>
Message-ID: <01bbe87e$547ca9c0$51ecbdcc@rsmith>
Source record: 20631

What kind of radio does he use Herb?

Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
Ken,

73's
Herb WA2JRV

2706. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612122108.NAA27756@UCSD.EDU>
Source record: 20632

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:01
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 03:34
Subject: Ham-Space Digest V96 #422

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 422

Today's Topics:
Best Ant for RS-10 Down Link
DXER.COM Website Update
FT290/790 9600 Bd mods?
Ham-Space Digest V96 #421
need info- 10 meter rec for mode A
WTB FT 736

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 04:34:17 GMT
From: "Erik Skovgaard" <Erik_Skovgaard@bc.sympatico.ca>
Subject: Best Ant for RS-10 Down Link

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to

reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

Date: Thu, 12 Dec 1996 06:03:37 GMT
From: kb7ub@dxer.com
Subject: DXER.COM Website Update

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the
amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)
Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)

Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

Date: 12 Dec 1996 08:39:05 +0300
From: karen@ra3apw.ampr.demos.su (Karen Tadewosyan)
Subject: FT290/790 9600 Bd mods?

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes
FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage.
FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a shielded cable to connect this pin with your 9k6-modem input. The IF-bandwidth of CF01 (CF01) CFW455F seems to be to small for very good results, so I recommend to exchange it with a CFW455D. With good RF-strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-signal below the main unit where R30124, C30120 and C30126 (R30117, C30117 and C30124) come together (all SMD). Is it necessary to say, use a shielded cable? As long as no other AF from the tone unit or the microphon reaches this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org
Satellites: UO-22, KO-23, KO-25

Date: 12 Dec 96 11:29:57 GMT
From: r.PHelan@www.mac.ul.IE (Robbie Phelan)
Subject: Ham-Space Digest V96 #421

--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the
ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
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>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link

>
>To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link
>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO
>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com
>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people

>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,
>
>
>73's
>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO
> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200
> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it
> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it

> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:
>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which
> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!
>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST

> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>
> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .
>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS
> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>
> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
>
> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want
> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,

> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR
> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with
> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?
> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on
> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>

>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>
>Thanks and 73
>de Bob, N3FTU
>
>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>--
-
>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>--
-
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet
> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.

>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091
>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800
>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has
>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.
>
>Thanks very much for you advice in advance.

>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet
>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax
>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>
>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.
>
>------------------------------

>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>
>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>
>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:
>
>> Hi All

>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the
>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,
>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>
>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites
>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is
>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that

>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what
is
>available. Anyone want to try to update me??
>
>Thanks.
>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>
>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>
>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:
>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite

>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system
cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>
>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.
>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>
>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>
>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com
> *********
>

>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21

>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2
>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.
>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>

>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>---
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before
> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency
> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to
> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss

> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to
> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact
> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>
>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>
>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------

>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >
>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>
>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.
>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>
>Good luck,
>

>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>
>73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:
>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>
>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>
>Rod Adkins wrote:
>>

>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************
>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316
E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

Date: Thu, 12 Dec 1996 05:16:19 GMT
From: dbarillo@texas.net (Dave)
Subject: need info- 10 meter rec for mode A

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB
to use on mode A-- thinking of the Uniden HR 2510 or the radio shack
HTX 100 does anyone have experiences/strong opinions on the pros and
cons of these radios, or other suggestions for a easy way to recieve

10 m SSB? Thanks Dave

Date: 12 Dec 1996 08:41:35 GMT
From: rkling@umich.edu (Rob Kling)
Subject: WTB FT 736

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing to part with yours.

Rob Kling(N8YBV)

End of Ham-Space Digest V96 #422
****

2707. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612122133.NAA29407@UCSD.EDU>
Source record: 20633

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true!

You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200 newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it. I figured what have I got to lose except for 5 stamps and $5, right? Well, guess what...within 7 days, I started getting money in the mail! I was shocked! I still figured it would end soon, and didn't give it another thought. But then money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made about 20 to 30 dollars. But by the end of the second week, I had made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 11) and I've made about $42,000 TOTAL, and the money is still coming in.....
Let me tell you how this works and most importantly, WHY it works...also, make sure you print a copy of the article NOW, so you get the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1

NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the

> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM

kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525

```
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
```

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening
hatch) and 2028UTC (closing hatch). So a duration of 6
hrs 36 mins. The EVA lasted longer for Korzun wished to
accomplish all what had to be done and there also was a
problem with something which bungled loose. Before
return they restored the connection of the radio-
amateurantenne for the 145 mc. Probably this antenne had
been disconnected by accident during the 1st EVA. They

connected the antenna again and while they were flying
over Chile and Brasil they asked John Blaha to listen
out on the 145.800 mc to check whether the antenne was
working or not. There was no traffic on that frequency
in that area and so they had to wait until they came in
range of European amateurs. I asked the English radio-
amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
soon as MIR would come in range (at abt. 1934UTC). So he
did and these signals could be heard by John Blaha while
MIR was flying over France. He reported this to the
still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz

>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his
station together. He is a live aboard and blue water sailor. Last year
he was in the Bahamas and will be there again this year. He has been on
UO22 and has used his station very succesfully. AF4N Wes and I have both
put in a good bit of time getting his boat ready (all three of us are
sailors). George just went off internet and will be on the air for the
next six months. Wes and I will be on internet and can offer some
suggestions.

The first point is that it is not difficult and even underway the system
works just fine. However antenna placement is a problem. George uses one
J pole for up link and a small yagi for down link (3 elements). He
rotates it 180 degrees during the pass and has no difficulity going from
the radio to the cockpit to make the change. Since UO22 is basically
automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

2708. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612122323.PAA07256@UCSD.EDU>
Source record: 20634

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 18:19
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:11
Subject: Ham-Space Digest V96 #425

-------------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 425

Today's Topics:
Mail failure (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 12 Dec 96 23:47:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:47
SUBJECT: Mail failure
-------------------------------------------------------------------------------

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Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-10 04:30
Subject: Ham-Space Digest V96 #419

Ham-Space Digest Tue, 10 Dec 96 Volume 96 : Issue 419

Today's Topics:
NASA TV Links
NoNo?:TrakBox, Ft736R and 23cm(P3D)
SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT
Where is MIR? update (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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Date: Tue, 10 Dec 96 12:10:12 GMT
From: darwin@indy.net (Darwin Teague)
Subject: NASA TV Links

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot
would be about the minimum to get great video. you might be able to get by
with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots
of people have old ones they aren't using anymore. You'd need a few bags of
cement and a pole, some cable to run into the house. If you only want it for
the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc
sometime
fairly soon. The good news is the signal would be stronger. The bad news is

that the new satellite would have others sats nearby, meaning the smaller
your
dish the greater the crosstalk. If you live on the west coast, it may be kind
of low on the horizon in it's present location. Let me know where you live
and
I'll see if I can give you the particulars. Email me....

Date: 8 Dec 1996 19:25:51 GMT
From: Guenter.Stautz@t-online.de (gs)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Hi All
after long nights with my TrakBox version 3.3h , I came to the
conclusion, that TrakBox designers had never in mind to let it
work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and
I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this
failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the
following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,
12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

Date: Tue, 10 Dec 1996 05:36:58 GMT
From: orion@capital.net
Subject: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie
>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

Date: Mon, 9 Dec 1996 23:54:28 GMT
From: Charlie Rubenstein <rubenc@iglou.com>
Subject: Where is MIR? update

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >
> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

Date: Tue, 10 Dec 1996 00:10:54 -0800
From: steve <kd6fyk@wco.com>
Subject: Where is MIR? update

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >
>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

End of Ham-Space Digest V96 #419
****

Date: 13 Dec 96 00:05:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:01
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 03:34
Subject: Ham-Space Digest V96 #422

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 422

Today's Topics:
Best Ant for RS-10 Down Link
DXER.COM Website Update
FT290/790 9600 Bd mods?
Ham-Space Digest V96 #421
need info- 10 meter rec for mode A
WTB FT 736

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policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 04:34:17 GMT
From: "Erik Skovgaard" <Erik_Skovgaard@bc.sympatico.ca>

Subject: Best Ant for RS-10 Down Link

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to
reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

Date: Thu, 12 Dec 1996 06:03:37 GMT
From: kb7ub@dxer.com
Subject: DXER.COM Website Update

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the
amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)

Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)
Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

Date: 12 Dec 1996 08:39:05 +0300
From: karen@ra3apw.ampr.demos.su (Karen Tadewosyan)
Subject: FT290/790 9600 Bd mods?

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes
FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the
FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you
will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage.
FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a
shielded cable to connect this pin with your 9k6-modem input. The IF-
bandwidth of CF01 (CF01) CFW455F seems to be to small for very good
results, so I recommend to exchange it with a CFW455D. With good RF-
strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-
signal below the main unit where R30124, C30120 and C30126 (R30117, C30117

and C30124) come together (all SMD). Is it necessary to say, use a shielded cable? As long as no other AF from the tone unit or the microphon reaches this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org
Satellites: UO-22, KO-23, KO-25

Date: 12 Dec 96 11:29:57 GMT
From: r.PHelan@www.mac.ul.IE (Robbie Phelan)
Subject: Ham-Space Digest V96 #421

--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>

>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link
>
>To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link
>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO
>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com

>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people
>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,
>
>
>73's
>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO
> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200
> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it

> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it
> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:
>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which
> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST
> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>
> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .
>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS
> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>
> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
>
> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want

> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,
> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR
> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with
> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?
> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on
> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE

> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>
>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>
>Thanks and 73
>de Bob, N3FTU
>
>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>--
-
-
>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>--
-
-
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet

> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091
>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800
>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has

>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.
>
>Thanks very much for you advice in advance.
>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet
>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax
>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>

>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.
>
>------------------------------
>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>
>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>
>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>

>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:
>
>> Hi All
>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the
>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,
>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>
>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites

>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is
>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that
>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what
is
>available. Anyone want to try to update me??
>
>Thanks.
>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>
>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>

>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:
>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite
>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system
cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>
>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.
>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>
>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>

>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com
> *********
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102

>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21
>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2

>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.
>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>
>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>---
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before
> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency

> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to
> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss
> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to
> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact
> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>
>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>

>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >
>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>
>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.

>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>
>Good luck,
>
>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>
>73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:
>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>

>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>
>Rod Adkins wrote:
>>
>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************
>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316
E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

Date: Thu, 12 Dec 1996 05:16:19 GMT
From: dbarillo@texas.net (Dave)
Subject: need info- 10 meter rec for mode A

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB
to use on mode A-- thinking of the Uniden HR 2510 or the radio shack
HTX 100 does anyone have experiences/strong opinions on the pros and
cons of these radios, or other suggestions for a easy way to recieve
10 m SSB? Thanks Dave

Date: 12 Dec 1996 08:41:35 GMT
From: rkling@umich.edu (Rob Kling)
Subject: WTB FT 736

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am
looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing
to part with yours.

Rob Kling(N8YBV)

End of Ham-Space Digest V96 #422
****

End of Ham-Space Digest V96 #425
****

2709. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130003.QAA09952@UCSD.EDU>
Source record: 20635

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)

Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a
Ringo, but can honestly say that it didn't offer any better performance
than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true! You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200

newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each
sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
of paper that
you just wrote on, and fold each piece of paper so the bill will not be
seen in the envelope (otherwise, nosey people who like to steal envelopes
with money in it will get yours). Put one paper inside the envelope
and seal it. Do the same for all 5. You should now have 5 envelopes
sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
paper. Make sure those words that were stated above are stated on each
paper. What you are doing is creating a service by this, this is
PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the
other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
as number 5 on the list. You can slightly alter this article if you need
to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least
200 news groups (I think there are close to 18,000 of them). All you
need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which
is on the far left when you're in the newsgroups page. This will bring
up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or

"investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who did that and he only made $150 dollars, and that's AFTER seven or eight weeks! Then he sent the 5 $1 bills, people added him to their lists, and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)

Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de (gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency

> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..

, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.

> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17

```
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)
```

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening
hatch) and 2028UTC (closing hatch). So a duration of 6
hrs 36 mins. The EVA lasted longer for Korzun wished to
accomplish all what had to be done and there also was a
problem with something which bungled loose. Before
return they restored the connection of the radio-
amateurantenne for the 145 mc. Probably this antenne had
been disconnected by accident during the 1st EVA. They
connected the antenna again and while they were flying
over Chile and Brasil they asked John Blaha to listen
out on the 145.800 mc to check whether the antenne was
working or not. There was no traffic on that frequency
in that area and so they had to wait until they came in
range of European amateurs. I asked the English radio-
amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
soon as MIR would come in range (at abt. 1934UTC). So he
did and these signals could be heard by John Blaha while
MIR was flying over France. He reported this to the

still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local
cable companies, if enough of their subscribers request it. Having a few
school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all
the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
setup no contacts yet. Seems to be alot of fading in and out,
might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is
plenty for RS-10, but not good enough for RS-15 (steerable beam in
progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well
for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the "bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

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End of Ham-Space Digest V96 #424
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End of Ham-Space Digest V96 #426
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2710. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130223.SAA18551@UCSD.EDU>
Source record: 20636

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

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Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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Problems you can't solve otherwise to brian@ucsd.edu.

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Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

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Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys are having fun with RS-10. What I would like to do is to set up a nice beginners station. I currently have a IC-275A with a GP-3 for the Up link and two different HF xcvr's to set up the down link. My question is would an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V dipole. I am reading the ARRL satelite handbook but I'd like to hear from some people actually working the birds. Also should I get a pre-amp and if so does anyone have any recommendations ie buy,build?? Thanks for your help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people

we are in QSO with.

If you are interested in setting up a sched. and have Video
COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
(Save this file now...it will save you some time typing later if you
decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO
CATCH? Then keep reading....please take five minutes to read this
article it will change your life, just like it did mine. It's true!
You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
intrested, keep reading; if you're not, I apologize for wasting your
time.
Here we go. A little while back, I was browsing through these
newsgroups, just like you are now, and came across an article similar to
this that said you could make thousands of dollars in weeks with only
an initial investment of $5! So, I thought, "Yeah, right, must be a
scam", but I was curious, like most of us , so I kept reading. Anyway,
it
said that you send $1 to each of the 5 names and addresses stated in the
article. You then place your own name and address in the article at
the bottom of the list at #5, and post the article in at least 200
newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest

posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who did that and he only made $150 dollars, and that's AFTER seven or eight weeks! Then he sent the 5 $1 bills, people added him to their lists, and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these can be modified for 9600bd packet. If so can someone point me in the right direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

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Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

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Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first EVA and they did a second EVA today and did a makeshift repair which will work, but the signal will not be as strong or as steady as before.. but it will work for the time being, they will fix the coax and on the next planned EVA make the proper repair.. I have no idea when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites but I believe there are some in operation. As a sometimes off shore sailor and a radio amateur, I am asked by fellow sailors whether they should get a ham licence and how effective it would be. I tell them about 20m ssb, about hf packet and amtor but I also go on about how low earth store and forward packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham to prepare a packet message and the software would determine when a bird is overhead and send up the message and pick up any waiting mail. Are these birds ready to do this? Is there software that would do it? Am I right that these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost more than that feel free to tell me about it. I just wanted to get an idea of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,

> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430

```
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say ) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>
```

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening hatch) and 2028UTC (closing hatch). So a duration of 6 hrs 36 mins. The EVA lasted longer for Korzun wished to accomplish all what had to be done and there also was a problem with something which bungled loose. Before return they restored the connection of the radio-amateurantenne for the 145 mc. Probably this antenne had been disconnected by accident during the 1st EVA. They connected the antenna again and while they were flying over Chile and Brasil they asked John Blaha to listen out on the 145.800 mc to check whether the antenne was working or not. There was no traffic on that frequency in that area and so they had to wait until they came in range of European amateurs. I asked the English radio-amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as soon as MIR would come in range (at abt. 1934UTC). So he did and these signals could be heard by John Blaha while MIR was flying over France. He reported this to the still being on EVA Korzun and Kaleri and congratulated them with their success. Korzun urged John not to transmit, but to listen only. The cosmonauts fully accomplished their tasks: installing the truss construction Rapana at the truss Ferma-3 and the replacement of the Kurs-antenna on the outersurface of the P.Kh.O. (transitionsection). John Blaha who stayed inside the complex took care of the communications and executed commands given to him by TsUP. He gave the cosmonauts all possible moral and technical help. The cosmonauts and Blaha did an excellent job during this EVA, they gave an example of fruitful international cooperation and so they all deserve a loud: 'MOLODTSY' (very well done).
Of course the cosmonauts were very tired after the EVA and back in the airlock they had to do hard labour to put off their spacesuits.
Just before midnight Korzun could be heard in a contact

with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
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> >

> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of Houston (near Johnson Space Center) carries NASA TV (NASA Select is a non-term....). It's been years since I was a subscriber, but back then, they were just carrying it during missions. I have heard they are carrying it 24 hours a day, now. But, I don't know that firsthand. I believe a lot of people asked the cable company for it and TCI (then Storer Cable) accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1

>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii

"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.

6. I was trying to give this guy the confidence that with his TX set-up
he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in.
Thank your GOD for life and ask your GOD to let you live as your GOD would
want
you to. When we look closely at GOD we begin to realize that we all believe
in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There
can only be one GOD, and that one GOD loves us all, and wants nothing but the
best for us. If your in doubt, just remember GOD works in mysterious ways,
there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

End of Ham-Space Digest V96 #426
****

End of Ham-Space Digest V96 #428
****

2711. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130323.TAA20965@UCSD.EDU>
Source record: 20637

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 22:22
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 18:23
Subject: Ham-Space Digest V96 #429

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 429

Today's Topics:
How Do I Start Out Cheap?
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 9 Dec 1996 10:07:13 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: How Do I Start Out Cheap?

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht
```

I'm kind of on the same quest. At least to figure out where to spend the first $2K. Which I don't think is really cheap by most people's standards, but which is a little bit less than what it takes to walk into HRO and just do the whole thing brand new. My impression is that the guys who are pretty serious about this seem to have the 726 or 736 and the KLM/M2 antenna set. Personally, I put a lot of confidence in conventional wisdom. So, to go this way, the game seems to become, how to scrounge up this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages is to do the antenna side first. New. At least deal with the tracking, feedline and preamp issues. While finding a used 2M SSB radio. Maybe working RS-10 , Mir or something, and then trying to hear sats on 440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear what's going on, and either I'll be anxious to be rid of the whole thing or I'll be lusting after a, probably used, 726/736. By then, I figure we'll know whether P3d is going to be really cool, etc. Fingers crossed.

Date: 13 Dec 96 05:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)

Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a
Ringo, but can honestly say that it didn't offer any better performance
than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true! You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200

newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each
sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
of paper that
you just wrote on, and fold each piece of paper so the bill will not be
seen in the envelope (otherwise, nosey people who like to steal envelopes
with money in it will get yours). Put one paper inside the envelope
and seal it. Do the same for all 5. You should now have 5 envelopes
sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
paper. Make sure those words that were stated above are stated on each
paper. What you are doing is creating a service by this, this is
PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the
other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
as number 5 on the list. You can slightly alter this article if you need
to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least
200 news groups (I think there are close to 18,000 of them). All you
need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which
is on the far left when you're in the newsgroups page. This will bring
up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or

"investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who did that and he only made $150 dollars, and that's AFTER seven or eight weeks! Then he sent the 5 $1 bills, people added him to their lists, and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)

Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de (gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency

> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..

, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.

> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17

```
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)
```

Kurt, when I wrote my routines for FT736R CAT (published on this BBS) I discovered that Yaesu did a great job and introduced only 2 bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot change it to 70cm RX /2m TX! This is because you have to make the changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening hatch) and 2028UTC (closing hatch). So a duration of 6 hrs 36 mins. The EVA lasted longer for Korzun wished to accomplish all what had to be done and there also was a problem with something which bungled loose. Before return they restored the connection of the radio-amateurantenne for the 145 mc. Probably this antenne had been disconnected by accident during the 1st EVA. They connected the antenna again and while they were flying over Chile and Brasil they asked John Blaha to listen out on the 145.800 mc to check whether the antenne was working or not. There was no traffic on that frequency in that area and so they had to wait until they came in range of European amateurs. I asked the English radio-amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as soon as MIR would come in range (at abt. 1934UTC). So he did and these signals could be heard by John Blaha while MIR was flying over France. He reported this to the

still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local
cable companies, if enough of their subscribers request it. Having a few
school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all
the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
setup no contacts yet. Seems to be alot of fading in and out,
might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is
plenty for RS-10, but not good enough for RS-15 (steerable beam in
progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well
for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the "bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

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End of Ham-Space Digest V96 #424
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End of Ham-Space Digest V96 #426
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End of Ham-Space Digest V96 #428
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End of Ham-Space Digest V96 #429
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2712. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130403.UAA22421@UCSD.EDU>
Source record: 20638

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:01
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 19:24
Subject: Ham-Space Digest V96 #430

-------------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 430

Today's Topics:
Likelyhood for a sat to be hit by a metheor
Mail failure
Mirage Preamps - WEB Pages ??
NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: Wed, 4 Dec 1996 15:10:41 -0800
From: "Dan O'Connell" <oconneld@OIT.EDU>
Subject: Likelyhood for a sat to be hit by a metheor

> - I live in a condominium and fought *a lot* to put a three elements
> beam
> - The roof is not so good so I had a very bad time in planning
> everything and actually put everything up.
>
> Now, I absolutely can not put up also a satellite system without
```

> removing the existing HF beam because of the limited room up there so
> my great fear is to find myself in a nightmare situation in case of a

I have used indoor antennas for satellites since the RS5/6/7/8 days up
through AO-13. try it! Dan WA7TDZ

Date: 13 Dec 96 06:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 22:22
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 18:23
Subject: Ham-Space Digest V96 #429

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 429

Today's Topics:
How Do I Start Out Cheap?
Mail failure

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Date: 9 Dec 1996 10:07:13 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: How Do I Start Out Cheap?

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on

>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I'm kind of on the same quest. At least to figure out where to spend the
first $2K. Which I don't think is really cheap by most people's standards,
but which is a little bit less than what it takes to walk into HRO and
just do the whole thing brand new. My impression is that the guys who
are pretty serious about this seem to have the 726 or 736 and the KLM/M2
antenna set. Personally, I put a lot of confidence in conventional
wisdom. So, to go this way, the game seems to become, how to scrounge up
this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages
is to do the antenna side first. New. At least deal with
the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
Maybe working RS-10 , Mir or something, and then trying to hear sats on
440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear
what's going on, and either I'll be anxious to be rid of the whole thing
or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
know whether P3d is going to be really cool, etc. Fingers crossed.

Date: 13 Dec 96 05:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

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Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure

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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03

SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27

Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true! You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these

newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200 newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it. I figured what have I got to lose except for 5 stamps and $5, right? Well, guess what...within 7 days, I started getting money in the mail! I was shocked! I still figured it would end soon, and didn't give it another thought. But then money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made about 20 to 30 dollars. But by the end of the second week, I had made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 11) and I've made about $42,000 TOTAL, and the money is still coming in.....
Let me tell you how this works and most importantly, WHY it works...also, make sure you print a copy of the article NOW, so you get the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.

The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
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Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing

RS-10 /RS-15 what are you using? (2 msgs)
The big picture

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05

> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994

```
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
```

/EX

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening
hatch) and 2028UTC (closing hatch). So a duration of 6
hrs 36 mins. The EVA lasted longer for Korzun wished to
accomplish all what had to be done and there also was a
problem with something which bungled loose. Before
return they restored the connection of the radio-
amateurantenne for the 145 mc. Probably this antenne had
been disconnected by accident during the 1st EVA. They
connected the antenna again and while they were flying
over Chile and Brasil they asked John Blaha to listen
out on the 145.800 mc to check whether the antenne was

working or not. There was no traffic on that frequency
in that area and so they had to wait until they came in
range of European amateurs. I asked the English radio-
amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
soon as MIR would come in range (at abt. 1934UTC). So he
did and these signals could be heard by John Blaha while
MIR was flying over France. He reported this to the
still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>

Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local
cable companies, if enough of their subscribers request it. Having a few

school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
setup no contacts yet. Seems to be alot of fading in and out,
might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>

> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10

Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the "bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

End of Ham-Space Digest V96 #426
****

End of Ham-Space Digest V96 #428
****

End of Ham-Space Digest V96 #429
****

Date: 4 Dec 96 23:55:25 GMT
From: "Mike Tatum" <miket@cybatek.dungeon.com>
Subject: Mirage Preamps - WEB Pages ??

Hi All!

I've had the Mirage Preamps recommended to me for SAT usage as aparently
they have a gain of 25db and only 0.8db noise (??)

Can anyone tell me where I can get more details of these preamps, or even
if there is a WEB page from the manufacturer ???

Also, if you would recommend any other Preamp for the job!!

Thanks ...

Mike de G1SYT ...

miket@cybatek.dungeon.com

==========

Date: 4 Dec 1996 22:53:17 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software
are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****
*

STS 80
1 24660U 96065A 96338.91666667 .00000797 00000-0 29624-5 0 521
2 24660 28.4668 86.1084 0009660 68.9504 338.1506 15.72258869 2218
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

End of Ham-Space Digest V96 #430
****

2713. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130423.UAA23116@UCSD.EDU>
Source record: 20639

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:22
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 15:26
Subject: Ham-Space Digest V96 #427

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 427

Today's Topics:
Keplerian Elements
Mail failure
PacSat for Offshore Sailing

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 11 Dec 1996 23:39:00 +0100
From: Edgar@raudi.ms.sub.org (Edgar Neuhaeuser)
Subject: Keplerian Elements

Muenster, Mi 11.12.96, 23:36 Uhr

Hi,
I'm looking for some FTP- Sites where I can download the Keplerian
Elements for my PCT 3.1

TNX for help ;)))
```

Greetings

EDGAR

E-Mail: edgar@raudi.ms.sub.org | edgar@aigm.westfalen.de
FIDO: 2:2449/515.13 | GER: 21:487/537.13
FS-Fan: 81:300/1100.13
WWW : http://members.aol.com/eneuh/home/index.htm
>>Fileserver: fileserver@aigm.westfalen.de; Betreff:PSERVER:HELP<<

Date: 13 Dec 96 02:21:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 18:19
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:11
Subject: Ham-Space Digest V96 #425

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 425

Today's Topics:
Mail failure (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 23:47:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:47

SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-10 04:30
Subject: Ham-Space Digest V96 #419

Ham-Space Digest Tue, 10 Dec 96 Volume 96 : Issue 419

Today's Topics:
NASA TV Links
NoNo?:TrakBox, Ft736R and 23cm(P3D)
SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT
Where is MIR? update (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 10 Dec 96 12:10:12 GMT
From: darwin@indy.net (Darwin Teague)
Subject: NASA TV Links

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot
would be about the minimum to get great video. you might be able to get by
with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots of people have old ones they aren't using anymore. You'd need a few bags of cement and a pole, some cable to run into the house. If you only want it for the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc sometime
fairly soon. The good news is the signal would be stronger. The bad news is that the new satellite would have others sats nearby, meaning the smaller your
dish the greater the crosstalk. If you live on the west coast, it may be kind of low on the horizon in it's present location. Let me know where you live and
I'll see if I can give you the particulars. Email me....

Date: 8 Dec 1996 19:25:51 GMT
From: Guenter.Stautz@t-online.de (gs)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Hi All
after long nights with my TrakBox version 3.3h , I came to the conclusion, that TrakBox designers had never in mind to let it work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,
12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

Date: Tue, 10 Dec 1996 05:36:58 GMT
From: orion@capital.net
Subject: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie
>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

Date: Mon, 9 Dec 1996 23:54:28 GMT
From: Charlie Rubenstein <rubenc@iglou.com>
Subject: Where is MIR? update

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >
> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

Date: Tue, 10 Dec 1996 00:10:54 -0800
From: steve <kd6fyk@wco.com>
Subject: Where is MIR? update

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >

>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

End of Ham-Space Digest V96 #419
****

Date: 13 Dec 96 00:05:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:01
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 03:34
Subject: Ham-Space Digest V96 #422

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 422

Today's Topics:
Best Ant for RS-10 Down Link
DXER.COM Website Update
FT290/790 9600 Bd mods?
Ham-Space Digest V96 #421
need info- 10 meter rec for mode A
WTB FT 736

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 04:34:17 GMT
From: "Erik Skovgaard" <Erik_Skovgaard@bc.sympatico.ca>
Subject: Best Ant for RS-10 Down Link

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to
reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

Date: Thu, 12 Dec 1996 06:03:37 GMT
From: kb7ub@dxer.com
Subject: DXER.COM Website Update

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the

amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)
Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)
Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

Date: 12 Dec 1996 08:39:05 +0300
From: karen@ra3apw.ampr.demos.su (Karen Tadewosyan)
Subject: FT290/790 9600 Bd mods?

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes
FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the
FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you
will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage.
FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a
shielded cable to connect this pin with your 9k6-modem input. The IF-

bandwidth of CF01 (CF01) CFW455F seems to be to small for very good results, so I recommend to exchange it with a CFW455D. With good RF-strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-signal below the main unit where R30124, C30120 and C30126 (R30117, C30117 and C30124) come together (all SMD). Is it necessary to say, use a shielded cable? As long as no other AF from the tone unit or the microphon reaches this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org
Satellites: UO-22, KO-23, KO-25

Date: 12 Dec 96 11:29:57 GMT
From: r.PHelan@www.mac.ul.IE (Robbie Phelan)
Subject: Ham-Space Digest V96 #421

--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>

>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link
>
>To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link
>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO

>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com
>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people
>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,
>
>
>73's
>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO
> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200

> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it
> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it
> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:
>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which

> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!
>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST
> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>
> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .
>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS
> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>

> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
>
> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want
> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,
> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR
> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with
> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?
> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on

> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>
>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>
>Thanks and 73
>de Bob, N3FTU
>
>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>---
-
-
-
>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>---
-
-
-
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>

>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet
> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091
>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800

>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has
>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.
>
>Thanks very much for you advice in advance.
>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet
>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax
>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>

>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>
>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.
>
>------------------------------
>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>
>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>

>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:
>
>> Hi All
>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the
>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,
>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>

>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites
>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is
>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that
>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what
is
>available. Anyone want to try to update me??
>
>Thanks.
>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>

>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>
>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:
>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite
>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system
cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>
>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.
>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>

>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>
>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com
> *********
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948

```
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21
>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
```

>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2
>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.
>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>
>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>---
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before

> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency
> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to
> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss
> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to
> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact
> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>

>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>
>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >
>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>

>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.
>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>
>Good luck,
>
>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>
>73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:

>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>
>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>
>Rod Adkins wrote:
>>
>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************
>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316

E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

Date: Thu, 12 Dec 1996 05:16:19 GMT
From: dbarillo@texas.net (Dave)
Subject: need info- 10 meter rec for mode A

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB
to use on mode A-- thinking of the Uniden HR 2510 or the radio shack
HTX 100 does anyone have experiences/strong opinions on the pros and
cons of these radios, or other suggestions for a easy way to recieve
10 m SSB? Thanks Dave

Date: 12 Dec 1996 08:41:35 GMT
From: rkling@umich.edu (Rob Kling)
Subject: WTB FT 736

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am
looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing
to part with yours.

Rob Kling(N8YBV)

End of Ham-Space Digest V96 #422
****

End of Ham-Space Digest V96 #425
****

Date: 12 Dec 1996 22:45:31 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: PacSat for Offshore Sailing

What kind of radio does he use Herb?

Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
Ken,

73's
Herb WA2JRV

```
------------------------------

End of Ham-Space Digest V96 #427
******************************
```

2714. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130458.UAA24240@UCSD.EDU>
Source record: 20640

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:56
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 20:04
Subject: Ham-Space Digest V96 #431

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 431

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 07:02:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:01
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 19:24
Subject: Ham-Space Digest V96 #430

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 430

Today's Topics:
Likelyhood for a sat to be hit by a metheor
Mail failure
Mirage Preamps - WEB Pages ??
NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 4 Dec 1996 15:10:41 -0800
From: "Dan O'Connell" <oconneld@OIT.EDU>
Subject: Likelyhood for a sat to be hit by a metheor

> - I live in a condominium and fought *a lot* to put a three elements
> beam
> - The roof is not so good so I had a very bad time in planning
> everything and actually put everything up.
>
> Now, I absolutely can not put up also a satellite system without
> removing the existing HF beam because of the limited room up there so
> my great fear is to find myself in a nightmare situation in case of a

I have used indoor antennas for satellites since the RS5/6/7/8 days up
through AO-13. try it! Dan WA7TDZ

Date: 13 Dec 96 06:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 22:22
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 18:23
Subject: Ham-Space Digest V96 #429

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 429

Today's Topics:
How Do I Start Out Cheap?
Mail failure

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Date: 9 Dec 1996 10:07:13 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: How Do I Start Out Cheap?

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I'm kind of on the same quest. At least to figure out where to spend the
first $2K. Which I don't think is really cheap by most people's standards,
but which is a little bit less than what it takes to walk into HRO and
just do the whole thing brand new. My impression is that the guys who
are pretty serious about this seem to have the 726 or 736 and the KLM/M2
antenna set. Personally, I put a lot of confidence in conventional
wisdom. So, to go this way, the game seems to become, how to scrounge up
this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages
is to do the antenna side first. New. At least deal with
the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
Maybe working RS-10 , Mir or something, and then trying to hear sats on

440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear what's going on, and either I'll be anxious to be rid of the whole thing or I'll be lusting after a, probably used, 726/736. By then, I figure we'll know whether P3d is going to be really cool, etc. Fingers crossed.

Date: 13 Dec 96 05:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

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Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

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policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links

PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

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Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

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Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a
Ringo, but can honestly say that it didn't offer any better performance
than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry
about a pre-amp. I used a Radio Shack 10m rig to listen to my
downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on
computer/internet in conjunction with amateur redio? I have been in

contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true! You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200 newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it. I figured what have I got to lose except for 5 stamps and $5, right? Well, guess what...within 7 days, I started getting money in the mail! I was shocked! I still figured it would end soon, and didn't give it another thought. But then money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made about 20 to 30 dollars. But by the end of the second week, I had made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 11) and I've made about $42,000 TOTAL, and the money is still coming in.....

Let me tell you how this works and most importantly, WHY it works...also, make sure you print a copy of the article NOW, so you get the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME

DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest
posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
again. The thing to remember is, do you realize that THOUSANDS OF
PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there
are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
Internet and newsgroups everyday and are willing to give it a try?
Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
sure you print this article out RIGHT NOW, also, try to keep a list of
everyone that sends you money and always keep an eye on the mnewsgroups
to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)

Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

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policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW

Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first EVA and they did a second EVA today and did a makeshift repair which will work, but the signal will not be as strong or as steady as before.. but it will work for the time being, they will fix the coax and on the next planned EVA make the proper repair.. I have no idea when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)

Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------

> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)

Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22

```
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say ) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.
```

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening hatch) and 2028UTC (closing hatch). So a duration of 6 hrs 36 mins. The EVA lasted longer for Korzun wished to accomplish all what had to be done and there also was a problem with something which bungled loose. Before return they restored the connection of the radio-amateurantenne for the 145 mc. Probably this antenne had been disconnected by accident during the 1st EVA. They connected the antenna again and while they were flying over Chile and Brasil they asked John Blaha to listen out on the 145.800 mc to check whether the antenne was working or not. There was no traffic on that frequency in that area and so they had to wait until they came in range of European amateurs. I asked the English radio-amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as soon as MIR would come in range (at abt. 1934UTC). So he did and these signals could be heard by John Blaha while MIR was flying over France. He reported this to the still being on EVA Korzun and Kaleri and congratulated them with their success. Korzun urged John not to transmit, but to listen only. The cosmonauts fully accomplished their tasks: installing the truss construction Rapana at the truss Ferma-3 and the replacement of the Kurs-antenna on the outersurface of the P.Kh.O. (transitionsection). John Blaha who stayed inside the complex took care of the communications and executed commands given to him by TsUP. He gave the cosmonauts all possible moral and technical help. The cosmonauts and Blaha did an excellent job during this EVA, they gave an example of fruitful international cooperation and so they all deserve a loud: 'MOLODTSY' (very well done).
Of course the cosmonauts were very tired after the EVA

and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we

> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of Houston (near Johnson Space Center) carries NASA TV (NASA Select is a non-term....). It's been years since I was a subscriber, but back then, they were just carrying it during missions. I have heard they are carrying it 24 hours a day, now. But, I don't know that firsthand. I believe a lot of people asked the cable company for it and TCI (then Storer Cable) accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>

Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM

Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.

5. If you want to work passes other than overhead, then because of the
path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up
he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in.
Thank your GOD for life and ask your GOD to let you live as your GOD would
want
you to. When we look closely at GOD we begin to realize that we all believe
in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There
can only be one GOD, and that one GOD loves us all, and wants nothing but the
best for us. If your in doubt, just remember GOD works in mysterious ways,
there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

End of Ham-Space Digest V96 #426
****

End of Ham-Space Digest V96 #428
****

End of Ham-Space Digest V96 #429
****

Date: 4 Dec 96 23:55:25 GMT
From: "Mike Tatum" <miket@cybatek.dungeon.com>
Subject: Mirage Preamps - WEB Pages ??

Hi All!

I've had the Mirage Preamps recommended to me for SAT usage as aparently
they have a gain of 25db and only 0.8db noise (??)

Can anyone tell me where I can get more details of these preamps, or even
if there is a WEB page from the manufacturer ???

Also, if you would recommend any other Preamp for the job!!

Thanks ...

Mike de G1SYT ...

miket@cybatek.dungeon.com

==========

Date: 4 Dec 1996 22:53:17 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software
are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****
*
*

```
STS 80
1 24660U 96065A 96338.91666667 .00000797 00000-0 29624-5 0 521
2 24660 28.4668 86.1084 0009660 68.9504 338.1506 15.72258869 2218
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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End of Ham-Space Digest V96 #430
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End of Ham-Space Digest V96 #431
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2715. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130528.VAA25146@UCSD.EDU>
Source record: 20641

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 00:29
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 21:02
Subject: Ham-Space Digest V96 #433

-------------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 433

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 07:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:56
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 20:04
Subject: Ham-Space Digest V96 #431

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 431

Today's Topics:
Mail failure

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Date: 13 Dec 96 07:02:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:01
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 19:24
Subject: Ham-Space Digest V96 #430

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 430

Today's Topics:
Likelyhood for a sat to be hit by a metheor
Mail failure
Mirage Preamps - WEB Pages ??
NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>

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Date: Wed, 4 Dec 1996 15:10:41 -0800
From: "Dan O'Connell" <oconneld@OIT.EDU>
Subject: Likelyhood for a sat to be hit by a metheor

> - I live in a condominium and fought *a lot* to put a three elements
> beam
> - The roof is not so good so I had a very bad time in planning
> everything and actually put everything up.
>
> Now, I absolutely can not put up also a satellite system without
> removing the existing HF beam because of the limited room up there so
> my great fear is to find myself in a nightmare situation in case of a

I have used indoor antennas for satellites since the RS5/6/7/8 days up
through AO-13. try it! Dan WA7TDZ

Date: 13 Dec 96 06:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 22:22
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 18:23
Subject: Ham-Space Digest V96 #429

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 429

Today's Topics:
How Do I Start Out Cheap?
Mail failure

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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Date: 9 Dec 1996 10:07:13 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: How Do I Start Out Cheap?

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I'm kind of on the same quest. At least to figure out where to spend the
first $2K. Which I don't think is really cheap by most people's standards,
but which is a little bit less than what it takes to walk into HRO and
just do the whole thing brand new. My impression is that the guys who
are pretty serious about this seem to have the 726 or 736 and the KLM/M2
antenna set. Personally, I put a lot of confidence in conventional
wisdom. So, to go this way, the game seems to become, how to scrounge up
this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages
is to do the antenna side first. New. At least deal with
the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
Maybe working RS-10 , Mir or something, and then trying to hear sats on
440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear
what's going on, and either I'll be anxious to be rid of the whole thing
or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
know whether P3d is going to be really cool, etc. Fingers crossed.

Date: 13 Dec 96 05:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

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Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33
SUBJECT: Mail failure
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[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave homebrew groundplane up 30', which I feed with 25 watts from a Yaesu FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent transmitter. Much more than this would be overkill. Hope to work you on the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

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Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would

an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V dipole. I am reading the ARRL satelite handbook but I'd like to hear from some people actually working the birds. Also should I get a pre-amp and if so does anyone have any recommendations ie buy,build?? Thanks for your help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
(Save this file now...it will save you some time typing later if you
decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO
CATCH? Then keep reading....please take five minutes to read this
article it will change your life, just like it did mine. It's true!
You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
intrested, keep reading; if you're not, I apologize for wasting your
time.
Here we go. A little while back, I was browsing through these
newsgroups, just like you are now, and came across an article similar to
this that said you could make thousands of dollars in weeks with only
an initial investment of $5! So, I thought, "Yeah, right, must be a
scam", but I was curious, like most of us , so I kept reading. Anyway,
it
said that you send $1 to each of the 5 names and addresses stated in the
article. You then place your own name and address in the article at
the bottom of the list at #5, and post the article in at least 200
newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it.
I figured what have I got to lose except for 5 stamps and $5, right?
Well, guess what...within 7 days, I started getting money in the mail!
I was shocked! I still figured it would end soon, and didn't give it
another thought. But then money kept coming IN, tripling in size and
multiplying by 10-20 times the amount that I got the first week! In my
first week I made about 20 to 30 dollars. But by the end of the second
week, I had made a total of over $1,000!!!! In the third week, I had
over $10,000 dollars, and it's still growing. This is my fourth week
(Oct 11) and I've made about $42,000 TOTAL, and the money is still
coming in.....
Let me tell you how this works and most importantly, WHY it
works...also, make sure you print a copy of the article NOW, so you get
the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each
sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
of paper that
you just wrote on, and fold each piece of paper so the bill will not be
seen in the envelope (otherwise, nosey people who like to steal envelopes
with money in it will get yours). Put one paper inside the envelope
and seal it. Do the same for all 5. You should now have 5 envelopes
sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
paper. Make sure those words that were stated above are stated on each

paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM. The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the

Internet and newsgroups everyday and are willing to give it a try?
Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
sure you print this article out RIGHT NOW, also, try to keep a list of
everyone that sends you money and always keep an eye on the mnewsgroups
to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]

Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using? (2 msgs)
The big picture

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the historical favorite but there are new radios from Kenwood and Icom. Has anyone compared the features or performance? Do the Kenwood or Icom radios have the same special satellite oriented features that the Yaesu 736 has? If you were going to buy one which one would you choose and why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first EVA and they did a second EVA today and did a makeshift repair which will work, but the signal will not be as strong or as steady as before.. but it will work for the time being, they will fix the coax and on the next planned EVA make the proper repair.. I have no idea when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these

birds ready to do this? Is there software that would do it? Am I right that these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost more than that feel free to tell me about it. I just wanted to get an idea of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea of
> what everyone was using.

>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ

```
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
```

```
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX

------------------------------

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say ) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

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End of Ham-Space Digest V96 #420
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Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
```

Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening hatch) and 2028UTC (closing hatch). So a duration of 6 hrs 36 mins. The EVA lasted longer for Korzun wished to accomplish all what had to be done and there also was a problem with something which bungled loose. Before return they restored the connection of the radio-amateurantenne for the 145 mc. Probably this antenne had been disconnected by accident during the 1st EVA. They connected the antenna again and while they were flying over Chile and Brasil they asked John Blaha to listen out on the 145.800 mc to check whether the antenne was working or not. There was no traffic on that frequency in that area and so they had to wait until they came in range of European amateurs. I asked the English radio-amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as soon as MIR would come in range (at abt. 1934UTC). So he did and these signals could be heard by John Blaha while MIR was flying over France. He reported this to the still being on EVA Korzun and Kaleri and congratulated them with their success. Korzun urged John not to transmit, but to listen only. The cosmonauts fully accomplished their tasks: installing the truss construction Rapana at the truss Ferma-3 and the replacement of the Kurs-antenna on the outersurface of the P.Kh.O. (transitionsection). John Blaha who stayed inside the complex took care of the communications and executed commands given to him by TsUP. He gave the cosmonauts all possible moral and technical help. The cosmonauts and Blaha did an excellent job during this EVA, they gave an example of fruitful international cooperation and so they all deserve a loud: 'MOLODTSY' (very well done).
Of course the cosmonauts were very tired after the EVA and back in the airlock they had to do hard labour to put off their spacesuits.
Just before midnight Korzun could be heard in a contact with a Portugese radio-amateur via the repaired antenne for the 145 mc.

Thusfar there are no more EVA's on schedule for this crew.
I hope this fills in the gaps, it was working much better tonight, they must have found something else..

73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>
Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.

> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of Houston (near Johnson Space Center) carries NASA TV (NASA Select is a non-term....). It's been years since I was a subscriber, but back then, they were just carrying it during missions. I have heard they are carrying it 24 hours a day, now. But, I don't know that firsthand. I believe a lot of people asked the cable company for it and TCI (then Storer Cable) accomodated.

I suppose the same could happen with the DSS groups. Also, with local cable companies, if enough of their subscribers request it. Having a few school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same setup no contacts yet. Seems to be alot of fading in and out, might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>
> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.

>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital
guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
"bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

End of Ham-Space Digest V96 #426
****

End of Ham-Space Digest V96 #428
****

End of Ham-Space Digest V96 #429
****

Date: 4 Dec 96 23:55:25 GMT
From: "Mike Tatum" <miket@cybatek.dungeon.com>

Subject: Mirage Preamps - WEB Pages ??

Hi All!

I've had the Mirage Preamps recommended to me for SAT usage as aparently
they have a gain of 25db and only 0.8db noise (??)

Can anyone tell me where I can get more details of these preamps, or even
if there is a WEB page from the manufacturer ???

Also, if you would recommend any other Preamp for the job!!

Thanks ...

Mike de G1SYT ...

miket@cybatek.dungeon.com

==========

Date: 4 Dec 1996 22:53:17 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software
are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****
*
*
*

STS 80
1 24660U 96065A 96338.91666667 .00000797 00000-0 29624-5 0 521
2 24660 28.4668 86.1084 0009660 68.9504 338.1506 15.72258869 2218
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--

Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

End of Ham-Space Digest V96 #430
****

End of Ham-Space Digest V96 #431
****

End of Ham-Space Digest V96 #433
****

2716. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130633.WAA27105@UCSD.EDU>
Source record: 20642

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 01:30
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 20:24
Subject: Ham-Space Digest V96 #432

-------------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 432

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 07:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:22
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 15:26
Subject: Ham-Space Digest V96 #427

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 427

Today's Topics:
Keplerian Elements
Mail failure
PacSat for Offshore Sailing

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 23:39:00 +0100
From: Edgar@raudi.ms.sub.org (Edgar Neuhaeuser)
Subject: Keplerian Elements

Muenster, Mi 11.12.96, 23:36 Uhr

Hi,
I'm looking for some FTP- Sites where I can download the Keplerian
Elements for my PCT 3.1

TNX for help ;)))

Greetings

EDGAR

E-Mail: edgar@raudi.ms.sub.org | edgar@aigm.westfalen.de
FIDO: 2:2449/515.13 | GER: 21:487/537.13
FS-Fan: 81:300/1100.13
WWW : http://members.aol.com/eneuh/home/index.htm
>>Fileserver: fileserver@aigm.westfalen.de; Betreff:PSERVER:HELP<<

Date: 13 Dec 96 02:21:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 18:19
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:11
Subject: Ham-Space Digest V96 #425

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 425

Today's Topics:
Mail failure (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

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policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 96 23:47:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:47
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-10 04:30
Subject: Ham-Space Digest V96 #419

Ham-Space Digest Tue, 10 Dec 96 Volume 96 : Issue 419

Today's Topics:
NASA TV Links
NoNo?:TrakBox, Ft736R and 23cm(P3D)
SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT
Where is MIR? update (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 10 Dec 96 12:10:12 GMT
From: darwin@indy.net (Darwin Teague)
Subject: NASA TV Links

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot
would be about the minimum to get great video. you might be able to get by
with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots
of people have old ones they aren't using anymore. You'd need a few bags of
cement and a pole, some cable to run into the house. If you only want it for
the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc
sometime
fairly soon. The good news is the signal would be stronger. The bad news is
that the new satellite would have others sats nearby, meaning the smaller
your
dish the greater the crosstalk. If you live on the west coast, it may be kind
of low on the horizon in it's present location. Let me know where you live
and
I'll see if I can give you the particulars. Email me....

Date: 8 Dec 1996 19:25:51 GMT
From: Guenter.Stautz@t-online.de (gs)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Hi All
after long nights with my TrakBox version 3.3h , I came to the
conclusion, that TrakBox designers had never in mind to let it
work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and
I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this
failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the
following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,
12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

Date: Tue, 10 Dec 1996 05:36:58 GMT
From: orion@capital.net
Subject: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie

>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

Date: Mon, 9 Dec 1996 23:54:28 GMT
From: Charlie Rubenstein <rubenc@iglou.com>
Subject: Where is MIR? update

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >
> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

Date: Tue, 10 Dec 1996 00:10:54 -0800
From: steve <kd6fyk@wco.com>
Subject: Where is MIR? update

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >
>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

End of Ham-Space Digest V96 #419
****

Date: 13 Dec 96 00:05:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:01
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 03:34
Subject: Ham-Space Digest V96 #422

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 422

Today's Topics:
Best Ant for RS-10 Down Link
DXER.COM Website Update
FT290/790 9600 Bd mods?
Ham-Space Digest V96 #421
need info- 10 meter rec for mode A
WTB FT 736

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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 04:34:17 GMT
From: "Erik Skovgaard" <Erik_Skovgaard@bc.sympatico.ca>
Subject: Best Ant for RS-10 Down Link

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to
reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

Date: Thu, 12 Dec 1996 06:03:37 GMT
From: kb7ub@dxer.com
Subject: DXER.COM Website Update

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the
amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)
Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)
Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

Date: 12 Dec 1996 08:39:05 +0300
From: karen@ra3apw.ampr.demos.su (Karen Tadewosyan)
Subject: FT290/790 9600 Bd mods?

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes
FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the
FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you
will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage.
FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a
shielded cable to connect this pin with your 9k6-modem input. The IF-
bandwidth of CF01 (CF01) CFW455F seems to be to small for very good
results, so I recommend to exchange it with a CFW455D. With good RF-
strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-
signal below the main unit where R30124, C30120 and C30126 (R30117, C30117
and C30124) come together (all SMD). Is it necessary to say, use a shielded
cable? As long as no other AF from the tone unit or the microphon reaches
this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via
UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org
Satellites: UO-22, KO-23, KO-25

Date: 12 Dec 96 11:29:57 GMT
From: r.PHelan@www.mac.ul.IE (Robbie Phelan)
Subject: Ham-Space Digest V96 #421

--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the
ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link
>
>To The Group:
>
>

> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link
>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO
>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com
>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people
>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,

>
>
>73's
>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO
> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200
> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it
> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it
> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:

>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which
> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!
>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST
> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>

> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .
>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS
> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>
> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
>
> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want
> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,
> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR

> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with
> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?
> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on
> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>
>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>

>Thanks and 73
>de Bob, N3FTU
>
>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>---
-
-
-
-
>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>---
-
-
-
-
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet
> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>

>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091
>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800
>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has
>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.

>
>Thanks very much for you advice in advance.
>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet
>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax
>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>
>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

>
>------------------------------
>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>
>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>
>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:

>
>> Hi All
>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the
>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,
>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>
>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites
>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is

>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that
>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what
is
>available. Anyone want to try to update me??
>
>Thanks.
>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>
>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>
>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:

>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite
>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system
cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>
>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.
>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>
>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>
>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com

> *********
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427

>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21
>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2
>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.

>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>
>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>--
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before
> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency
> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to

> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss
> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to
> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact
> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>
>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>
>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov

>
>------------------------------
>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >
>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>
>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.
>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>

>Good luck,
>
>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>
>73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:
>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>
>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>

>Rod Adkins wrote:
>>
>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************
>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316
E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

Date: Thu, 12 Dec 1996 05:16:19 GMT
From: dbarillo@texas.net (Dave)
Subject: need info- 10 meter rec for mode A

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB
to use on mode A-- thinking of the Uniden HR 2510 or the radio shack

HTX 100 does anyone have experiences/strong opinions on the pros and
cons of these radios, or other suggestions for a easy way to recieve
10 m SSB? Thanks Dave

Date: 12 Dec 1996 08:41:35 GMT
From: rkling@umich.edu (Rob Kling)
Subject: WTB FT 736

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am
looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing
to part with yours.

Rob Kling(N8YBV)

End of Ham-Space Digest V96 #422
****

End of Ham-Space Digest V96 #425
****

Date: 12 Dec 1996 22:45:31 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: PacSat for Offshore Sailing

What kind of radio does he use Herb?

Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
Ken,

73's
Herb WA2JRV

End of Ham-Space Digest V96 #427
****

End of Ham-Space Digest V96 #432
****

2717. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: frisch@pu.informatik.th-darmstadt.de
Message-ID: <frisch-1312960931070001@lisa.pu.informatik.th-darmstadt.de>
Source record: 20643
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

In article <dschultz.4128.000F0428@ti.com>, dschultz@ti.com (Douglas A. Schultz II) wrote:

> In article <01bbdd80$7aee2380$c94d22cf@jaclen.connect.ab.ca> "Intrepid" <chrisb@connect.ab.ca> writes:
>
> > This is not a joke. Serious business, guys. Please read and take
> >some action.
>
> >>>>>A group of NEO-NAZIS are trying to form a newsgroup on Usenet called
> >>>>>"rec.music.white-power", so that they can get their message of hate out
> >>>>>to young people using the Internet.
>
> So I gather that censorship of individuals and groups is 'ok' if it suits YOUR
> agenda, "Intrepid"? Is that right? You wish to censor these individuals from
> the Internet and control their rights to access what is essentially a public
> forum????
>
> How very ironic, since one of the cornerstones of the Third Reich & Nazi
> Germany was censorship and control of individuals and information.
>
> Where does it end?
>
> Grab a clue,
>
>
> Douglas A. Schultz II <dschultz@ti.com>
>
> "Yeah, well, sometimes nuthin' can be a real cool hand."
> - C.H.L.
>

I know nothing about the mentioned usegroup, but it is in my opinion very dangerous to muddle up the human rights with 3rd Reich while not considering one of the preliminaries of it being the freedom in te Weimarer Republik that at last was not able to defend itself against the nazis.

We always have to trade freedom against control, if control means giving shelter to freedom.

--
Martin Frisch
http://www.pu.informatik.th-darmstadt.de

2718. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612130848.AAA01145@UCSD.EDU>
Source record: 20644

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 03:44
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 22:34
Subject: Ham-Space Digest V96 #435

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 435

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 09:32:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 01:30
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
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```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 20:24
Subject: Ham-Space Digest V96 #432

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 432

Today's Topics:
Mail failure

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policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 07:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:22
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 15:26
Subject: Ham-Space Digest V96 #427

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 427

Today's Topics:
Keplerian Elements
Mail failure
PacSat for Offshore Sailing

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 11 Dec 1996 23:39:00 +0100
From: Edgar@raudi.ms.sub.org (Edgar Neuhaeuser)
Subject: Keplerian Elements

Muenster, Mi 11.12.96, 23:36 Uhr

Hi,
I'm looking for some FTP- Sites where I can download the Keplerian
Elements for my PCT 3.1

TNX for help ;)))

Greetings

EDGAR

E-Mail: edgar@raudi.ms.sub.org | edgar@aigm.westfalen.de
FIDO: 2:2449/515.13 | GER: 21:487/537.13
FS-Fan: 81:300/1100.13
WWW : http://members.aol.com/eneuh/home/index.htm
>>Fileserver: fileserver@aigm.westfalen.de; Betreff:PSERVER:HELP<<

Date: 13 Dec 96 02:21:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 18:19
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:11
Subject: Ham-Space Digest V96 #425

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 425

Today's Topics:
Mail failure (2 msgs)

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Date: 12 Dec 96 23:47:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:47
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-10 04:30
Subject: Ham-Space Digest V96 #419

Ham-Space Digest Tue, 10 Dec 96 Volume 96 : Issue 419

Today's Topics:
NASA TV Links
NoNo?:TrakBox, Ft736R and 23cm(P3D)
SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT
Where is MIR? update (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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Date: Tue, 10 Dec 96 12:10:12 GMT
From: darwin@indy.net (Darwin Teague)
Subject: NASA TV Links

In article <32AC8067.3BBA@smarty.smart.net>,
"Charles M. Clark" <charlie@smarty.smart.net> wrote:
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

You would need a c band satellite dish and receiver. I would think a 7 foot
would be about the minimum to get great video. you might be able to get by
with a 6 foot if you live near the center of the U.S.

The satellite is over to the east - 69 degrees west or so.

The good news is that you can scrounge together a system pretty cheaply. Lots
of people have old ones they aren't using anymore. You'd need a few bags of
cement and a pole, some cable to run into the house. If you only want it for
the one channel, this would be really easy and cheap to do.

I think it's going to move to a stronger satellite in the central arc
sometime
fairly soon. The good news is the signal would be stronger. The bad news is
that the new satellite would have others sats nearby, meaning the smaller
your
dish the greater the crosstalk. If you live on the west coast, it may be kind
of low on the horizon in it's present location. Let me know where you live
and
I'll see if I can give you the particulars. Email me....

Date: 8 Dec 1996 19:25:51 GMT
From: Guenter.Stautz@t-online.de (gs)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

Hi All
after long nights with my TrakBox version 3.3h , I came to the
conclusion, that TrakBox designers had never in mind to let it
work on 23 cm with the Ft736R. ___Am I right ????___
The case: I'm a newcomer in the satellite operators community and
I'm trying to prepare my rig for Phase 3D in spring 1997.
So I tried to program satellites with 23cm RX or TX channels. But this
failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
The Ft736R is ok, because CAT programming directly via PC works.
I analysed the CAT commands from TrakBox to FT736R and found the
following hex command sequences for a 70cm/23cm satellite example:
0,0,0,0,0,
C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05

0,0,0,0,0,
43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
0,0,0,0,80,
0,0,0,0,0,
8,0,0,0,27, This is TX Mode
8,0,0,0,17, This is RX Mode
0,0,0,0,80,
0,0,0,0,0,
12,96,34,49,1E, And here is the problem: My assumed RX frequency
0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
C9,63,44,91 and not 12,96,....., and the dummy
above should be set to 144Mhz
Any help??
Thanks and sorry for this long message.
73, Guenter, DK7KV

Date: Tue, 10 Dec 1996 05:36:58 GMT
From: orion@capital.net
Subject: SbFFT1.2 SB16 spectrum & filtering - BETTER GRAPHICS SUPPORT

mbv@ti.com (Ken Durham) wrote:

>>
>>Just because *you* can't figure out an application that uses the
>>FREEWARE, does not mean it has no use to others interested in weak
>>signal satellite work.
>>
>~~~~~~
>Just because *you* can't understand what I'm talking about doesn't
>mean we need to see the ad every few lines in the newsgroup. I don't
>need another DSP thank you. (I sure don't need to hear about another
>ARRL lawyer either ;(
>and your horsie
>Ken K5MBV
>

Amen! I'm sick to death of seeing them both, too.
--
73,
Butch N2YMJ

Date: Mon, 9 Dec 1996 23:54:28 GMT
From: Charlie Rubenstein <rubenc@iglou.com>
Subject: Where is MIR? update

> >
> > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> >
> >

> > 73 steve
>

Could someone post the freqs in use VHF and UHF on Mir?

Date: Tue, 10 Dec 1996 00:10:54 -0800
From: steve <kd6fyk@wco.com>
Subject: Where is MIR? update

Charlie Rubenstein wrote:
>
> > >
> > > jeff,i am still working mir uhf but havent heard vhf for 8 days.
> > >
> > >
> > > 73 steve
> >
>
> Could someone post the freqs in use VHF and UHF on Mir?

charlie,437.950 down 435.750up 141.3 pl

145.200down 145.800up voice

145.800 packet simplex

73 steve

End of Ham-Space Digest V96 #419
****

Date: 13 Dec 96 00:05:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:01
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
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From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 03:34
Subject: Ham-Space Digest V96 #422

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 422

Today's Topics:
Best Ant for RS-10 Down Link
DXER.COM Website Update
FT290/790 9600 Bd mods?
Ham-Space Digest V96 #421
need info- 10 meter rec for mode A
WTB FT 736

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 04:34:17 GMT
From: "Erik Skovgaard" <Erik_Skovgaard@bc.sympatico.ca>
Subject: Best Ant for RS-10 Down Link

Brad,

I use a sloping dipole on 10 m to receive RS-10. It always has a very
strong signal here. I added a Hamtronics pre-amp recently and it does
boost the signal a few S units and also provides a bit of selectivity to
reject out-of-band signals.

For uplink I have used a 1/4 wave vertical and about 80 Watts. I only
tried CW since the amp was not linear, but I got very good reports.

RS-10 could use some activity, so go ahead. Hope to wrk u there.

73 de VE7MDL ....Erik.
(VE0MDL when operating maritime mobile)

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up link
> and two different HF xcvr's to set up the down link. My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear from
> some people actually working the birds. Also should I get a pre-amp and
if

> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>

Date: Thu, 12 Dec 1996 06:03:37 GMT
From: kb7ub@dxer.com
Subject: DXER.COM Website Update

Stop by and check out the additions to "dxer.com"
30 pages,over 400 links. Mew additions to 12 of the
indexes..Check out the BBS and leave your comments
or suggestions to improve the site to better serve the
amateur community..

CallBooks (4)
Contest Calendar (2)
DX Clubs (3)
Ham Radio Clubs (3)
Ham Radio Info (3)
Logging Software (3)
Manufacturers (4)
Packet Radio (5)
QRP (6)
Propagation (3)
Radio Mods (2)
Satellites (4)
SoCal Rptrs (New)

If you have a site you would like to see added or a
subject covered, send us the URL and we will create a
new index. Radio related sites only

"http://www.dxer.com"

Date: 12 Dec 1996 08:39:05 +0300
From: karen@ra3apw.ampr.demos.su (Karen Tadewosyan)
Subject: FT290/790 9600 Bd mods?

Bob,

this is info about 9600 bps mods for FT290/790 from my acrhive.
I used it some time ago and it run well.
I hope it will be usefull for you.

MODEM @WW de:DL6DBN 23.09.90 07:50 0 1568 Bytes

FT290/790RII mods. PSK/9k6
*** Bulletin-ID: 229008DB0SGL ***

900922/0911z DK0MWX, 900922/0714z DB0SGL
de DL6DBN @ DB0SGL

How to modify YAESU FT-290 RII and FT-790RII
for 1200 BpS PSK and 9600 BpS FSK

As you know, for 1200 BpS PSK/FM a direct injektion of the signal into the FM-varicap is recommended and for 9600 BpS FSK necessary. For 9600 BpS you will need the FM-discriminator output.

Due to SM-Technology the following modifications are not easy to manage. FT-790RII in ()

The FM-discriminator output is at pin 9 of Q4001 (Q402) MC3357P. Use a shielded cable to connect this pin with your 9k6-modem input. The IF-bandwidth of CF01 (CF01) CFW455F seems to be to small for very good results, so I recommend to exchange it with a CFW455D. With good RF-strength and proper tuning the CFW455F can fit as well.

The more complicate modification is the injection point. Inject your TX-signal below the main unit where R30124, C30120 and C30126 (R30117, C30117 and C30124) come together (all SMD). Is it necessary to say, use a shielded cable? As long as no other AF from the tone unit or the microphon reaches this point you must not cut any connections. But adjust your FM-deviation.

I made this changes in both radio sets and had already good contacts via UoSAT-OSCAR 14. So good luck and success.

73 Frank, DL6DBN @ DB0SGL

--

73 de Karen Packet: RA3APW @ RA3APW.MSK.RUS.EU
Moscow, Russia Internet: sysop@ampr.demos.su
Phone: 474-62-83 AMPRNet: ra3apw@gw.ra3apw.ampr.org
Satellites: UO-22, KO-23, KO-25

Date: 12 Dec 96 11:29:57 GMT
From: r.PHelan@www.mac.ul.IE (Robbie Phelan)
Subject: Ham-Space Digest V96 #421

--==========_850390197==_
Content-Type: text/plain; charset="us-ascii"

I attach a Bmp format drawing of Crossed Dipoles for 10Mtrs which is the ideal antenna for receiving the RS sats ...
I hope you receive it ok!

Regards Robbie EI8ESB

At 20:27 11/12/96 PST, you wrote:
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421
>
>Today's Topics:
> Best Ant for RS-10 Down Link (2 msgs)
> Cu-Seeme Video conferencing
> free money
> FT290/790 9600 Bd mods?
> Mail failure
> Mir's EVA
> NASA TV Links (2 msgs)
> RS-10 /RS-15 what are you using? (3 msgs)
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 11 Dec 1996 21:24:30 GMT
>From: ashleyb@ohsu.edu
>Subject: Best Ant for RS-10 Down Link
>
>To The Group:
>
>
> I'm in the process of setting up a satelite system. A few local guys
>are having fun with RS-10. What I would like to do is to set up a nice
>beginners station. I currently have a IC-275A with a GP-3 for the Up link
>and two different HF xcvr's to set up the down link. My question is would
>an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>dipole. I am reading the ARRL satelite handbook but I'd like to hear from
>some people actually working the birds. Also should I get a pre-amp and if
>so does anyone have any recommendations ie buy,build?? Thanks for your
>help.
>
> Brad WB7TSO
> ashleyb@ohsu.edu
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 21:55:45 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: Best Ant for RS-10 Down Link

>
>ashleyb@ohsu.edu wrote:
>>My question is would
>> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
>> dipole.
>
>RS-10 has a very strong downlink for an amatuer satellite. I put up a
>Ringo, but can honestly say that it didn't offer any better performance
>than a simple dipole.
>
>Try orienting the dipole for best north/south reception. Don't worry
>about a pre-amp. I used a Radio Shack 10m rig to listen to my
>downlinks.
>
>73....KA1RHO
>
>------------------------------
>
>Date: Fri, 06 Dec 1996 16:35:02 GMT
>From: wa4twa@versoft.com
>Subject: Cu-Seeme Video conferencing
>
>Does anyone know of anyone using Video Conferencing on
>computer/internet in conjunction with amateur redio? I have been in
>contact with hundreds of people from around the world on Cu-Seeme and
>have run into only one ham. Is there a freq. HF or VHF where hams may
>hang out that use both modes..computer and radio. I believe this would
>be a natural progression from Slow Scan. We now can SEE the people
>we are in QSO with.
>
>If you are interested in setting up a sched. and have Video
>COnferencing capabilities or are just interested drop me an e-mail,
>
>
>73's
>Charlie
>
>wa4twa@versoft.com
>
>------------------------------
>
>Date: Thu, 12 Dec 1996 04:13:16 GMT
>From: river@venus.net (Jonathan Rhodes)
>Subject: free money
>
>Oh! My? $$$$
> THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello!
>(Save this file now...it will save you some time typing later if you
>decide to try this)
> Would you like to make thousands of dollars, quick, legally, with NO

> CATCH? Then keep reading....please take five minutes to read this
> article it will change your life, just like it did mine. It's true!
> You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner!
> I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're
> intrested, keep reading; if you're not, I apologize for wasting your
> time.
> Here we go. A little while back, I was browsing through these
> newsgroups, just like you are now, and came across an article similar to
> this that said you could make thousands of dollars in weeks with only
> an initial investment of $5! So, I thought, "Yeah, right, must be a
> scam", but I was curious, like most of us , so I kept reading. Anyway,
>it
>said that you send $1 to each of the 5 names and addresses stated in the
> article. You then place your own name and address in the article at
>the bottom of the list at #5, and post the article in at least 200
> newsgroups (there are thousands). No catch, that was it!
> So after thinking it over, talking to a few people first, I tried it.
> I figured what have I got to lose except for 5 stamps and $5, right?
> Well, guess what...within 7 days, I started getting money in the mail!
> I was shocked! I still figured it would end soon, and didn't give it
> another thought. But then money kept coming IN, tripling in size and
> multiplying by 10-20 times the amount that I got the first week! In my
> first week I made about 20 to 30 dollars. But by the end of the second
> week, I had made a total of over $1,000!!!! In the third week, I had
> over $10,000 dollars, and it's still growing. This is my fourth week
> (Oct 11) and I've made about $42,000 TOTAL, and the money is still
> coming in.....
> Let me tell you how this works and most importantly, WHY it
> works...also, make sure you print a copy of the article NOW, so you get
> the information off of it, and begin making money.
>
> The process is very simple, and it consists of 3 EASY steps:
>
> STEP 1: Get 5 seperate pieces of paper and write the following on each
> sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER
> 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece
>of paper that
>you just wrote on, and fold each piece of paper so the bill will not be
>seen in the envelope (otherwise, nosey people who like to steal envelopes
> with money in it will get yours). Put one paper inside the envelope
>and seal it. Do the same for all 5. You should now have 5 envelopes
> sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the
> paper. Make sure those words that were stated above are stated on each
> paper. What you are doing is creating a service by this, this is
> PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1
> in each to the following 5 addresses:
>
>
>1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
>2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.

>3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
>4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
>5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111
>
>STEP 2: Now take the #1 name off the list that you see above, move the
>other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME
>as number 5 on the list. You can slightly alter this article if you need
>to, editing what you need to edit.
>
> STEP 3: Post your amended article (with your name at #5) to at least
> 200 news groups (I think there are close to 18,000 of them). All you
> need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0
>do EXACTLY the following:
>
> 1) Click on any news group like normal, THEN click on 'TO NEWS', which
> is on the far left when you're in the newsgroups page. This will bring
> up a box to type a message in.
>
> 2) Leave the newsgroup box like it is, CHANGE the subject box to
> something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!
>
> 3) Tab once and you should be ready to type. Now, retype (only once)
> THIS whole article WORD FOR WORD, except to insert your name at #5, and
> to remove #1 off the list, plus any other small changes you think you
> need to make. Keep almost all of it the SAME!
>
> 4) When you're done typing the WHOLE article, click on FILE in THIS
> BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST
> BOX. Click on SAVE AS when you're under FILE. Save you artcle as a
> text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE
> UNTIL YOU DO THIS. Once saved, move on to number 5 below.
>
> 5) If you still have all of your text, send or post to this newsgroup
> now by just clicking send, which is right below FILE, and right above
> Cc: .
>
> 6)Here's where you're going to post all 200. OK, click on any news
> group then click on 'TO NEWS', again in the top left corner. Leave the
> NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT
> BOX, hit TAB once you're in the body of the message, and then click on
> ATTACHMENTS, which is below the SUBJECT BOX. You will get another box
> to come up. Click on ATTACH FILE, then find YOUR file that you saved;
> click once on the file, and then click OPEN' now click on OK; if you did
> this right, you should see your file name in the attachments box, and
>it will be shaded green.
>
> IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE
> BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C"
> KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR
> YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS

> TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW
> WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN
> THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL
> BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND
> THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE
>
>IN
> A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.
>
> 7)That's it. Each time you do this, all you have to do is type in a
> different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups,
> you see? Now you just have 199 to go!! (Don't worry, each one takes
> about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.
> The more you post the more money you will make.
>
> AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!
>
> You are now in the mail order business and will start recieving your $1
> envelopes from various people all over the world within days. HINT THE
> MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want
> to rent a PO Box eventually because of all the mail. If you wish to
> stay anonymous, you can come up with a name, such as "manager" or
> "investor". Just make sure all the addresses are CORRECT, please.
>
> LET ME TELL YOU WHY THIS SYSTEM WORK!!!!
>
> Out of every 200 postings, let's say I ONLY recieve 5 replies, which is
> actually VERY LOW. So I made 5 dollars with my name at #5. Now then,
> each person who just sent me $1 makes, say only 200 postings, now with
> your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including
> yours too. 50 people send you $1 now; thats $50 you just made! Now,
> then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR
> 10,000 POSTING (50x200). Average return is 500 at $1 each is $500.
> They make 200 postings, which is 5,000 returns at $1 each, which is
> $5000 dollars! And finally, 5000 people make 200 postings wach with
> YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME
> DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY,
>AND IF ONLY 5 PERSONS RESPOND!!!!!
> When your name is no longer on the list, you just take the latest
> posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO
> THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting
> again. The thing to remember is, do you realize that THOUSANDS OF
> PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE
> ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5
> dollars and see if it really works? I think so.....
> People have said, "What if the plan is played out and no one
>sends you
> the money?" So what! What are the chances of that happening when there
> are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the
> Internet and newsgroups everyday and are willing to give it a try?

> Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS
> of those joing the actual Internet. Remember, play FAIRLY and HONESTLY
> and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make
> sure you print this article out RIGHT NOW, also, try to keep a list of
> everyone that sends you money and always keep an eye on the mnewsgroups
> to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST
> POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD
> LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS
> FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
> **By the way, if you try to decieve people by posting the
>
>messages with
> your name on the list and not sending the money to the people already
>
>on
> the list, you will not get much. Someone I talKed to knew someone who
> did that and he only made $150 dollars, and that's AFTER seven or eight
> weeks! Then he sent the 5 $1 bills, people added him to their lists,
> and in 4-5 weeks, he had over $10K.
> THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
> WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!
>
>------------------------------
>
>Date: 11 Dec 1996 15:49:35 GMT
>From: "Bob Smith" <rsmith@internetmci.com>
>Subject: FT290/790 9600 Bd mods?
>
>Investigating getting a FT290 or 790 and was wondering if either of these
>can be modified for 9600bd packet. If so can someone point me in the right
>direction...
>
>Thanks and 73
>de Bob, N3FTU
>
>------------------------------
>
>Date: 11 Dec 96 15:57:00 GMT
>From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
>Subject: Mail failure
>
>TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
> TIME: 07:57
>SUBJECT: Mail failure
>---
-
-
-
-
-

>
>[002] Mail was received that was addressed to unknown addresses.
>Mail item was not delivered to:
> bross
>
>--
-
-
-
-
-
> From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
> To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
> Date: 1996-12-11 04:30
>Subject: Ham-Space Digest V96 #420
>
>--
>
>
>Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420
>
>Today's Topics:
> ARLK091 Keplerian data
> HELLO
>Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
> Mir back on packet
> Mir Message #1
> NASA TV Links (3 msgs)
> NoNo?:TrakBox, Ft736R and 23cm(P3D)
> PacSat for Offshore Sailing
> RS-10 /RS-15 what are you using? (2 msgs)
> The big picture
>
>Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
>Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
>Problems you can't solve otherwise to brian@ucsd.edu.
>
>Archives of past issues of the Ham-Space Digest are available
>(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".
>
>We trust that readers are intelligent enough to realize that all text
>herein consists of personal comments and does not represent the official
>policies or positions of any party. Your mileage may vary. So there.
>--
>
>Date: 10 Dec 1996 17:52:26 -0500
>From: w1aw@arrl.org
>Subject: ARLK091 Keplerian data
>
>SB KEP @ ARL $ARLK091

>ARLK091 Keplerian data
>
>ZCZC SK91
>QST de W1AW
>Keplerian Bulletin 91 ARLK091
>
>------------------------------
>
>Date: (null)
>From: (null)
>Subject: HELLO
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 16:01:23 -0800
>From: George Zafiropoulos <georgez@quickturn.com>
>Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
>satellite
>
>Hi,
>I am interested in getting a new radio for P3D. The 736 seems to be the
>historical favorite but there are new radios from Kenwood and Icom. Has
>anyone compared the features or performance? Do the Kenwood or Icom
>radios have the same special satellite oriented features that the Yaesu
>736 has? If you were going to buy one which one would you choose and
>why?
>
>I am planning to operate on 1.2 GHz in addition to 2 and 440.
>
>I would also be interested to know what you would recommend for 2.3 GHz.
>
>Thanks very much for you advice in advance.
>
>George Zafiropoulos KJ6VU
>georgez@quickturn.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:08:59 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir back on packet
>
>Hi just a quick note-- the Two meter antenna was broken on the first
>EVA and they did a second EVA today and did a makeshift repair which
>will work, but the signal will not be as strong or as steady as
>before.. but it will work for the time being, they will fix the coax

>and on the next planned EVA make the proper repair.. I have no idea
>when that will be.. 73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 21:46:36 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir Message #1
>
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>
>------------------------------
>
>Date: Mon, 09 Dec 1996 21:11:03 +0000
>From: "Charles M. Clark" <charlie@smarty.smart.net>
>Subject: NASA TV Links
>
>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.
>
>------------------------------
>
>Date: 11 Dec 1996 01:32:12 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>I receive live NASA video and have rebroadcast the audio in the past.
>All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>it at satellite S-2, transponder 09.
>
>
>
>----------
>Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>

>------------------------------
>
>Date: Tue, 10 Dec 1996 23:17:31 -0500
>From: wkrantz@voicenet.com (William E. Krantz, Jr.)
>Subject: NASA TV Links
>
>In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
>David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:
>
>> I receive live NASA video and have rebroadcast the audio in the past.
>> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
>> it at satellite S-2, transponder 09.
>>
>>
>>
>> ----------
>> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov
>
>
>What's the chance of getting DirecTV or USSB to carry NASA Select if we
>all wrote or called? Anyone have any inside info on these DSS providers?
>
>Bill Krantz
>
>wkrantz@voicenet.com
>
>------------------------------
>
>Date: Tue, 10 Dec 1996 15:56:36 -0500
>From: rlong@magnus.acs.ohio-state.edu (Ron Long)
>Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)
>
>In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
>(gs) wrote:
>
>> Hi All
>> after long nights with my TrakBox version 3.3h , I came to the
>> conclusion, that TrakBox designers had never in mind to let it
>> work on 23 cm with the Ft736R. ___Am I right ????___
>> The case: I'm a newcomer in the satellite operators community and
>> I'm trying to prepare my rig for Phase 3D in spring 1997.
>> So I tried to program satellites with 23cm RX or TX channels. But this
>> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
>> The Ft736R is ok, because CAT programming directly via PC works.
>> I analysed the CAT commands from TrakBox to FT736R and found the
>> following hex command sequences for a 70cm/23cm satellite example:
>> 0,0,0,0,0,
>> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
>> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05
>> 0,0,0,0,0,

>> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 8,0,0,0,27, This is TX Mode
>> 8,0,0,0,17, This is RX Mode
>> 0,0,0,0,80,
>> 0,0,0,0,0,
>> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
>> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
>> C9,63,44,91 and not 12,96,....., and the dummy
>> above should be set to 144Mhz
>> Any help??
>> Thanks and sorry for this long message.
>> 73, Guenter, DK7KV
>
>This old message from G3RUH may help some.
>ron w8gus.
>-----------------------
>
>------------------------------
>
>Date: Wed, 11 Dec 96 03:54:47 GMT
>From: kwalker@qb.island.net (Ken Walker)
>Subject: PacSat for Offshore Sailing
>
>I have not followed the development of the packet capable amateur satellites
>but I believe there are some in operation. As a sometimes off shore sailor
>and a radio amateur, I am asked by fellow sailors whether they should get a
>ham licence and how effective it would be. I tell them about 20m ssb, about
>hf packet and amtor but I also go on about how low earth store and forward
>packet satellites will be available one day. But maybe they are now?
>
>The ideal packet system for offshore use would allow the offshore sailing ham
>to prepare a packet message and the software would determine when a bird is
>overhead and send up the message and pick up any waiting mail. Are these
>birds ready to do this? Is there software that would do it? Am I right that
>these can be worked with small omni antennas?
>
>I think they require dual band operation? Which bands? Hopefully they are
>bands that can be worked with readily available dual band mobile rigs?
>
>I have thought about this from time to time but I am not up to date on what
is
>available. Anyone want to try to update me??
>
>Thanks.
>
>
>73 de Ken 10-Dec-96 19:21
>VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM

>kwalker@qb.island.net
>
>------------------------------
>
>Date: Tue, 10 Dec 96 13:22:35 GMT
>From: baack@maine.edu (Jason Baack)
>Subject: RS-10 /RS-15 what are you using?
>
>Greetings all,
>this post is a call for information. I am trying to setup a satellite
>station
>for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>help me.
>What equipment are you all using for up / downlink radios..
>, antennas? The operating budget is around $600.00 but if your system cost
>more than that feel free to tell me about it. I just wanted to get an idea
>of
>what everyone was using.
>
>73's Jason N1RWY
>
>UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
>DN: Realistic HTX-100 dipole @ 17 feet
>
>
>
>------------------------------
>
>Date: 10 Dec 1996 18:25:23 GMT
>From: ae517@FreeNet.Carleton.CA (Russ Renaud)
>Subject: RS-10 /RS-15 what are you using?
>
>Jason Baack (baack@maine.edu) writes:
>> Greetings all,
>> this post is a call for information. I am trying to setup a satellite
>station
>> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
>> help me.
>> What equipment are you all using for up / downlink radios..
>> , antennas? The operating budget is around $600.00 but if your system
cost
>> more than that feel free to tell me about it. I just wanted to get an idea
>of
>> what everyone was using.
>>
>> 73's Jason N1RWY
>>
>> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
>feet.

>> DN: Realistic HTX-100 dipole @ 17
>feet
>>
>
>I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
>fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
>CW only on RS15.
>
>When I added a Hamtronics downconverter for 70cm, I could work FO-20
>quite often as well.
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 01:43:46 -0500
>From: Robert Bissett <rbissett@monmouth.com>
>Subject: The big picture
>
>Tim Shaw wrote:
>>
>> Tim Shaw
>> Sydney.
>> Australia.
>> TIMSHAW@msn.com
>>
>> Hi,
>>
>
>>>> big snip>>>>>>>>
>
>Dribble. Get out and do something useful.
>
>--
> *********
>Bob Bissett rbissett@monmouth.com
> *********
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>SB KEP ARL ARLK091
>ARLK091 Keplerian data
>
>Thanks to Con, W5BWF, for the following Keplerian data.
>
>Decode 2-line elsets with the following key:
>1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
>2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
>KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN

```
>G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM
>
>AO-10
>1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
>2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
>RS-10/11
>1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
>2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
>UO-11
>1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
>2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
>RS-12/13
>1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
>2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
>UO-14
>1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
>2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994
>RS-15
>1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
>2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
>AO-16
>1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
>2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
>DO-17
>1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
>2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
>WO-18
>1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
>2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
>LO-19
>1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
>2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
>FO-20
>1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
>2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
>AO-21
>1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
>2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
>UO-22
>1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
>2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
>KO-23
>1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
>2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
>KO-25
>1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
>2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
>IO-26
>1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
>2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
```

>AO-27
>1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
>2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
>FO-29
>1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
>2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
>MO-30
>1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
>2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
>Mir
>1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
>2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539
>
>Keplerian bulletins are transmitted twice weekly from W1AW.
>The next scheduled transmission of these data will be Saturday,
>December 14, 1996, at 2330z on Baudot and AMTOR.
>NNNN
>/EX
>
>------------------------------
>
>Date: (null)
>From: (null)
>
>Kurt, when I wrote my routines for FT736R CAT (published on this
>BBS) I discovered that Yaesu did a great job and introduced only 2
>bugs.
>
>One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
>change it to 70cm RX /2m TX! This is because you have to make the
>changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.
>
>Obviously the middle step is inadmissable. If your radio has a third
>module (e.g.
>23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.
>
>The other bug concerns reading the s-meter and squelch. This
>sometimes misses the last byte.
>
>So your problem is not a fault of the tracker-box code.
>
>73 de James G3RUH @ GB7DDX
><EOF>
>
>------------------------------
>
>End of Ham-Space Digest V96 #420
>******************************
>
>------------------------------

>
>Date: Thu, 12 Dec 1996 01:20:56 GMT
>From: dhend@cyberportal.net (Dave Hendrick)
>Subject: Mir's EVA
>
>from Chris Van deBerg
>MIRNEWS 10 DECEMBER 1996 (338)
>
>
>--
>2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:
>
>
>
> This EVA took place on 9.12.1996 between 1352UTC (opening
> hatch) and 2028UTC (closing hatch). So a duration of 6
> hrs 36 mins. The EVA lasted longer for Korzun wished to
> accomplish all what had to be done and there also was a
> problem with something which bungled loose. Before
> return they restored the connection of the radio-
> amateurantenne for the 145 mc. Probably this antenne had
> been disconnected by accident during the 1st EVA. They
> connected the antenna again and while they were flying
> over Chile and Brasil they asked John Blaha to listen
> out on the 145.800 mc to check whether the antenne was
> working or not. There was no traffic on that frequency
> in that area and so they had to wait until they came in
> range of European amateurs. I asked the English radio-
> amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
> soon as MIR would come in range (at abt. 1934UTC). So he
> did and these signals could be heard by John Blaha while
> MIR was flying over France. He reported this to the
> still being on EVA Korzun and Kaleri and congratulated
> them with their success. Korzun urged John not to
> transmit, but to listen only. The cosmonauts fully
> accomplished their tasks: installing the truss
> construction Rapana at the truss Ferma-3 and the
> replacement of the Kurs-antenna on the outersurface of
> the P.Kh.O. (transitionsection). John Blaha who stayed
> inside the complex took care of the communications and
> executed commands given to him by TsUP. He gave the
> cosmonauts all possible moral and technical help. The
> cosmonauts and Blaha did an excellent job during this
> EVA, they gave an example of fruitful international
> cooperation and so they all deserve a loud: 'MOLODTSY'
> (very well done).
> Of course the cosmonauts were very tired after the EVA
> and back in the airlock they had to do hard labour to
> put off their spacesuits.
> Just before midnight Korzun could be heard in a contact

> with a Portugese radio-amateur via the repaired antenne
> for the 145 mc.
>
> Thusfar there are no more EVA's on schedule for this
> crew.
>I hope this fills in the gaps, it was working much better tonight,
>they must have found something else..
>73 DAVE
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html
>
>------------------------------
>
>Date: 11 Dec 1996 22:12:41 GMT
>From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
>Subject: NASA TV Links
>
>On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>>
>> What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> all wrote or called? Anyone have any inside info on these DSS providers?
>>
>> Bill Krantz
>>
>> wkrantz@voicenet.com
>>
>Bill: I do know of several schools where, during a particular
>spaceflight, cable providers have added NASA Select to the choices,
>but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
>---------- Richard David Glueck
>Email:glue9600@spacelink.msfc.nasa.gov
>
>------------------------------
>
>Date: 12 Dec 1996 01:45:26 GMT
>From: "Dale Martin" <kg5u@hal-pc.org>
>Subject: NASA TV Links
>
>--
>Dale Martin
>kg5u@hal-pc.org
>http://www.hal-pc.org
>
>Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
><Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
>> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>> >

>> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
>> > all wrote or called? Anyone have any inside info on these DSS
>providers?
>> >
>> > Bill Krantz
>> >
>> > wkrantz@voicenet.com
>> >
>> Bill: I do know of several schools where, during a particular
>> spaceflight, cable providers have added NASA Select to the choices,
>> but only temporarily. Give it a shot, but don't expect miracles.
>> -Dick
>>
>>
>> ---------- Richard David Glueck
>> Email:glue9600@spacelink.msfc.nasa.gov
>>
>>
>>
>I believe the local cable company (TCI) here in the Clear Lake area of
>Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
>non-term....). It's been years since I was a subscriber, but back then,
>they were just carrying it during missions. I have heard they are carrying
>it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
>of people asked the cable company for it and TCI (then Storer Cable)
>accomodated.
>
>I suppose the same could happen with the DSS groups. Also, with local
>cable companies, if enough of their subscribers request it. Having a few
>school administrations backing the request might help, too.
>
>Press for mission and non-mission airing of NASA TV. Might as well go all
>the way. Maybe it can be compromised down to mission coverage.
>
>Good luck,
>
>------------------------------
>
>Date: 11 Dec 1996 14:37:27 GMT
>From: Jeff Griffin <griffinj@admin.tc.faa.gov>
>Subject: RS-10 /RS-15 what are you using?
>
>For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>setup no contacts yet. Seems to be alot of fading in and out,
>might need a cicular polarized antenna system ?
>
>73 Jeff kb2wqm@juno.com
>

>------------------------------
>
>Date: Wed, 11 Dec 1996 17:12:22 -0500
>From: Rod Adkins <rod@mail.border.com>
>Subject: RS-10 /RS-15 what are you using?
>
>I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>plenty for RS-10, but not good enough for RS-15 (steerable beam in
>progress).
>
>I use a horizontal loop at about 25ft for 10m receive, & this works well
>for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical
>antennas too noisy.
>
>Rod, VE3INE
>
>
>
>Jeff Griffin wrote:
>>
>> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
>> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
>> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
>> setup no contacts yet. Seems to be alot of fading in and out,
>> might need a cicular polarized antenna system ?
>>
>> 73 Jeff kb2wqm@juno.com
>
>------------------------------
>
>Date: Wed, 11 Dec 1996 22:00:35 -0500
>From: Keith Erskine <kerskine@fetchsoft.com>
>Subject: RS-10 /RS-15 what are you using?
>
>Rod Adkins wrote:
>>
>> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
>> plenty for RS-10, but not good enough for RS-15 (steerable beam in
>> progress).
>
>100 Watts??!!! Yikes - Have you tried 10 Watts?
>
>73....KA1RHO
>
>------------------------------
>
>End of Ham-Space Digest V96 #421
>******************************
>
>

--=====================_850390197==_
Content-Type: application/octet-stream; name="Sat.bmp";
x-mac-type="424D5070"; x-mac-creator="4A565752"
Content-Transfer-Encoding: base64
Content-Disposition: attachment; filename="Sat.bmp"

<encoded_portion_removed>
--=====================_850390197==_
Content-Type: text/plain; charset="us-ascii"

****
Robbie Phelan,
The National MicroElectronics Applications Centre,
UL Buildings,
The National Technological Park,
Limerick,
Ireland.
Tel 353 (61) 334699
Fax 353 (61) 330316
E-mail r.phelan@mac.ul.ie
http://www.mac.ul.ie
****
Give me a few weeks and EI8ESB will be qrv on 6mtrs,
Icom IC-706,5-Element Yagi,450ASL,IO52RQ.....

--=====================_850390197==_--

Date: Thu, 12 Dec 1996 05:16:19 GMT
From: dbarillo@texas.net (Dave)
Subject: need info- 10 meter rec for mode A

Im looking for an inexpensive reciever (or tranciever) for 10 M SSB
to use on mode A-- thinking of the Uniden HR 2510 or the radio shack
HTX 100 does anyone have experiences/strong opinions on the pros and
cons of these radios, or other suggestions for a easy way to recieve
10 m SSB? Thanks Dave

Date: 12 Dec 1996 08:41:35 GMT
From: rkling@umich.edu (Rob Kling)
Subject: WTB FT 736

Turn that underutilized FT-736 Satellite radio into cold hard cash! I am
looking to purchase a good used FT726R
with modules(6M and/or 22Mhz and/or 1.2Ghz). Please reply if you are willing
to part with yours.

Rob Kling(N8YBV)

End of Ham-Space Digest V96 #422
****

End of Ham-Space Digest V96 #425
****

Date: 12 Dec 1996 22:45:31 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: PacSat for Offshore Sailing

What kind of radio does he use Herb?

Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
Ken,

73's
Herb WA2JRV

End of Ham-Space Digest V96 #427
****

End of Ham-Space Digest V96 #432
****

End of Ham-Space Digest V96 #435
****

2719. Mail failure

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: POSTMASTER@kyw.GRoupw.wec.COM
Message-ID: <199612131008.CAA02919@UCSD.EDU>
Source record: 20645

```
TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 05:07
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

-------------------------------------------------------------------------------
From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 21:28
Subject: Ham-Space Digest V96 #434

------------------------------------------------------------------------

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 434

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
------------------------------------------------------------------------

Date: 13 Dec 96 08:29:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-13-96
TIME: 00:29
SUBJECT: Mail failure
-------------------------------------------------------------------------------

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross
```

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 21:02
Subject: Ham-Space Digest V96 #433

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 433

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 07:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:56
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 20:04
Subject: Ham-Space Digest V96 #431

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 431

Today's Topics:
Mail failure

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 13 Dec 96 07:02:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 23:01
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 19:24
Subject: Ham-Space Digest V96 #430

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 430

Today's Topics:
Likelyhood for a sat to be hit by a metheor
Mail failure
Mirage Preamps - WEB Pages ??
NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 4 Dec 1996 15:10:41 -0800
From: "Dan O'Connell" <oconneld@OIT.EDU>
Subject: Likelyhood for a sat to be hit by a metheor

> - I live in a condominium and fought *a lot* to put a three elements
> beam

> - The roof is not so good so I had a very bad time in planning
> everything and actually put everything up.
>
> Now, I absolutely can not put up also a satellite system without
> removing the existing HF beam because of the limited room up there so
> my great fear is to find myself in a nightmare situation in case of a

I have used indoor antennas for satellites since the RS5/6/7/8 days up
through AO-13. try it! Dan WA7TDZ

Date: 13 Dec 96 06:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 22:22
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 18:23
Subject: Ham-Space Digest V96 #429

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 429

Today's Topics:
How Do I Start Out Cheap?
Mail failure

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Date: 9 Dec 1996 10:07:13 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: How Do I Start Out Cheap?

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I'm kind of on the same quest. At least to figure out where to spend the
first $2K. Which I don't think is really cheap by most people's standards,
but which is a little bit less than what it takes to walk into HRO and
just do the whole thing brand new. My impression is that the guys who
are pretty serious about this seem to have the 726 or 736 and the KLM/M2
antenna set. Personally, I put a lot of confidence in conventional
wisdom. So, to go this way, the game seems to become, how to scrounge up
this kind of system. (Of course with preaamps, amplifiers and all that.)

Personally, my thinking now on how to do this in gradual, stages
is to do the antenna side first. New. At least deal with
the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
Maybe working RS-10 , Mir or something, and then trying to hear sats on
440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)

By then, I figure a few months will have passed, I'll be able to hear
what's going on, and either I'll be anxious to be rid of the whole thing
or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
know whether P3d is going to be really cool, etc. Fingers crossed.

Date: 13 Dec 96 05:24:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 21:24
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
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bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 16:04
Subject: Ham-Space Digest V96 #428

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 428

Today's Topics:
Mail failure

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Date: 13 Dec 96 03:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 19:04
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 13:34
Subject: Ham-Space Digest V96 #426

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 426

Today's Topics:
Mail failure

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Date: 13 Dec 96 00:34:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 16:33

SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@ucsd.edu]
Date: 1996-12-12 12:12
Subject: Ham-Space Digest V96 #424

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 424

Today's Topics:
Best Ant for RS-10 Down Link
Mail failure
Wisp Power Saver

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Dec 1996 16:47:52 GMT
From: "Roger E. Koss" <kossr@edl1.ksc.nasa.gov>
Subject: Best Ant for RS-10 Down Link

Brad:
I'm using a dipole cut for 10 meters, up only about 15 feet, and it
works just fine into a Uniden HR2600. For my uplink, I have a 5/8 wave
homebrew groundplane up 30', which I feed with 25 watts from a Yaesu
FT-290R Mk II. RS-10 has a very sensitive receiver and an excellent
transmitter. Much more than this would be overkill. Hope to work you on
the birds someday.

73 de Roger, KD4ITU

Date: 12 Dec 96 23:04:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 15:03
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-12 08:24
Subject: Ham-Space Digest V96 #423

Ham-Space Digest Thu, 12 Dec 96 Volume 96 : Issue 423

Today's Topics:
Mail failure
Mir Message #1
NASA TV Links
PacSat for Offshore Sailing
RS-10 /RS-15 what are you using?
Your GOD Loves You - YES YOU!

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Date: 12 Dec 96 19:23:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-12-96
TIME: 11:23
SUBJECT: Mail failure
---

[002] Mail was received that was addressed to unknown addresses.
Mail item was not delivered to:
bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]

Date: 1996-12-11 20:27
Subject: Ham-Space Digest V96 #421

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 421

Today's Topics:
Best Ant for RS-10 Down Link (2 msgs)
Cu-Seeme Video conferencing
free money
FT290/790 9600 Bd mods?
Mail failure
Mir's EVA
NASA TV Links (2 msgs)
RS-10 /RS-15 what are you using? (3 msgs)

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Date: 11 Dec 1996 21:24:30 GMT
From: ashleyb@ohsu.edu
Subject: Best Ant for RS-10 Down Link

To The Group:

I'm in the process of setting up a satelite system. A few local guys
are having fun with RS-10. What I would like to do is to set up a nice
beginners station. I currently have a IC-275A with a GP-3 for the Up link
and two different HF xcvr's to set up the down link. My question is would
an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
dipole. I am reading the ARRL satelite handbook but I'd like to hear from
some people actually working the birds. Also should I get a pre-amp and if
so does anyone have any recommendations ie buy,build?? Thanks for your
help.

Brad WB7TSO
ashleyb@ohsu.edu

Date: Wed, 11 Dec 1996 21:55:45 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: Best Ant for RS-10 Down Link

ashleyb@ohsu.edu wrote:
>My question is would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole.

RS-10 has a very strong downlink for an amatuer satellite. I put up a Ringo, but can honestly say that it didn't offer any better performance than a simple dipole.

Try orienting the dipole for best north/south reception. Don't worry about a pre-amp. I used a Radio Shack 10m rig to listen to my downlinks.

73....KA1RHO

Date: Fri, 06 Dec 1996 16:35:02 GMT
From: wa4twa@versoft.com
Subject: Cu-Seeme Video conferencing

Does anyone know of anyone using Video Conferencing on computer/internet in conjunction with amateur redio? I have been in contact with hundreds of people from around the world on Cu-Seeme and have run into only one ham. Is there a freq. HF or VHF where hams may hang out that use both modes..computer and radio. I believe this would be a natural progression from Slow Scan. We now can SEE the people we are in QSO with.

If you are interested in setting up a sched. and have Video COnferencing capabilities or are just interested drop me an e-mail,

73's
Charlie

wa4twa@versoft.com

Date: Thu, 12 Dec 1996 04:13:16 GMT
From: river@venus.net (Jonathan Rhodes)
Subject: free money

Oh! My? $$$$
THIS IS THE FAIREST MOST HONEST WAY I KNOW TO SHARE THE WEALTH! Hello! (Save this file now...it will save you some time typing later if you decide to try this)
Would you like to make thousands of dollars, quick, legally, with NO CATCH? Then keep reading....please take five minutes to read this article it will change your life, just like it did mine. It's true! You can make up to or over $50,000 dollars in 4-6 weeks, maybe sooner! I SWEAR I'M NOT LYING TO YOU, AND THIS IS NOT A SCAM! If you're intrested, keep reading; if you're not, I apologize for wasting your time.
Here we go. A little while back, I was browsing through these

newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars in weeks with only an initial investment of $5! So, I thought, "Yeah, right, must be a scam", but I was curious, like most of us , so I kept reading. Anyway, it
said that you send $1 to each of the 5 names and addresses stated in the article. You then place your own name and address in the article at the bottom of the list at #5, and post the article in at least 200 newsgroups (there are thousands). No catch, that was it!
So after thinking it over, talking to a few people first, I tried it. I figured what have I got to lose except for 5 stamps and $5, right? Well, guess what...within 7 days, I started getting money in the mail! I was shocked! I still figured it would end soon, and didn't give it another thought. But then money kept coming IN, tripling in size and multiplying by 10-20 times the amount that I got the first week! In my first week I made about 20 to 30 dollars. But by the end of the second week, I had made a total of over $1,000!!!! In the third week, I had over $10,000 dollars, and it's still growing. This is my fourth week (Oct 11) and I've made about $42,000 TOTAL, and the money is still coming in.....
Let me tell you how this works and most importantly, WHY it works...also, make sure you print a copy of the article NOW, so you get the information off of it, and begin making money.

The process is very simple, and it consists of 3 EASY steps:

STEP 1: Get 5 seperate pieces of paper and write the following on each sheet of paper..."PLEASE PUT ME ON YOUR MAILING LIST. YOU ARE NUMBER 5." (etc. to number 1) Get five $1 bills and place ONE inside each piece of paper that
you just wrote on, and fold each piece of paper so the bill will not be seen in the envelope (otherwise, nosey people who like to steal envelopes with money in it will get yours). Put one paper inside the envelope and seal it. Do the same for all 5. You should now have 5 envelopes sealed, EACH have a piece of paper AND a $1 bill stuffed inside of the paper. Make sure those words that were stated above are stated on each paper. What you are doing is creating a service by this, this is PERFECTLY LEGAL. Now then, mail the 5 envelopes with the paper and $1 in each to the following 5 addresses:

1. P.DEBOUZY, 9 rue des Lavandieres, 78530 BUC, FRANCE.
2. J. MAHON, 750 Highland Dr. Apt. #210, Ojai, Calif. 930234.
3. P. Rae, 209 Oak Butte CT., Folsom. California. 95630. USA5.
4. M. Rapp, 801 Mockingbird Ct., Hinesville, GA 31313 USA
5. J. Rhodes, 5011 Stoneview Dr., Charlestown, IN 47111

STEP 2: Now take the #1 name off the list that you see above, move the other 4 names up (5 becoming 4, 4 becoming 3, ect.) and put YOUR NAME as number 5 on the list. You can slightly alter this article if you need to, editing what you need to edit.

STEP 3: Post your amended article (with your name at #5) to at least 200 news groups (I think there are close to 18,000 of them). All you need is say, at least 200. HOW TO DO THIS: If you have Netscape 3.0 do EXACTLY the following:

1) Click on any news group like normal, THEN click on 'TO NEWS', which is on the far left when you're in the newsgroups page. This will bring up a box to type a message in.

2) Leave the newsgroup box like it is, CHANGE the subject box to something flashy, like, "NEED CASH $$$ READ HERE $$$" or "FAST CASH"!!!

3) Tab once and you should be ready to type. Now, retype (only once) THIS whole article WORD FOR WORD, except to insert your name at #5, and to remove #1 off the list, plus any other small changes you think you need to make. Keep almost all of it the SAME!

4) When you're done typing the WHOLE article, click on FILE in THIS BOX, RIGHT ABOUVE SEND, NOT WHERE IT SAYS NETSCAPE NEWS ON THE FIRST BOX. Click on SAVE AS when you're under FILE. Save you artcle as a text file to your C: or A: drive. DO NOT SEND OR POST YOUR ARTICLE UNTIL YOU DO THIS. Once saved, move on to number 5 below.

5) If you still have all of your text, send or post to this newsgroup now by just clicking send, which is right below FILE, and right above Cc: .

6)Here's where you're going to post all 200. OK, click on any news group then click on 'TO NEWS', again in the top left corner. Leave the NEWSGROUPS BOX alone again, put a flashy subject title in the SUBJECT BOX, hit TAB once you're in the body of the message, and then click on ATTACHMENTS, which is below the SUBJECT BOX. You will get another box to come up. Click on ATTACH FILE, then find YOUR file that you saved; click once on the file, and then click OPEN' now click on OK; if you did this right, you should see your file name in the attachments box, and it will be shaded green.

IF YOU USE IE EXPLORER IT'S JUST AS EASY...HOLDING DOWN THE LEFT MOUSE BUTTON, HIGHLIGHT THIS ARTICLE. THEN PRESS THE "CRTL" KEY AND THE "C" KEY AT THE SAME TIME TO COPY THIS ARTICLE. THEN PRINT THIS ARTICLE FOR YOUR RECORDS TO HAVE THE NAMES OF THOSE YOU WILL BE SENDING $1 BILLS TO. NEXT GO TO THE NEWS GROUPS AND PRESS "POST AN ARTICLE" A WINDOW WILL OPEN. TYPE IN YOUR HEADLINE IN THE SUBJECT AREA AND THEN CLICK IN THE LARGE WINDOW BELOW. PRESS "CRTL" AND THEN "V" AND THE ARTICLE WILL BE PLACED IN THE WINDOW. IF YOU WANT TO EDIT THE ARTICLE, DO SO AND THEN HIGHLIGHT AND COPY IT AGAIN. NOW EVERYTIME YOU POST THE ARTICLE

IN
A NEW NEWSGROUP ALL YOU HAVE TO REPEAT "CTRL" AND "V" AND PRESS POST.

7)That's it. Each time you do this, all you have to do is type in a different newsgroup, so that way, it posts to 200 DIFFERENT newsgroups, you see? Now you just have 199 to go!! (Don't worry, each one takes about 30 seconds, once you get used to it) REMEMBER 200 IS THE MINIMUM.

The more you post the more money you will make.

AND THAT'S IT!!! THAT'S THE ONLY 3 STEPS THERE IS!!!

You are now in the mail order business and will start recieving your $1 envelopes from various people all over the world within days. HINT THE MORE NEWSGROUPS YOU POST TO, THE MORE MONEY YOU WILL MAKE. You may want to rent a PO Box eventually because of all the mail. If you wish to stay anonymous, you can come up with a name, such as "manager" or "investor". Just make sure all the addresses are CORRECT, please.

LET ME TELL YOU WHY THIS SYSTEM WORK!!!!

Out of every 200 postings, let's say I ONLY recieve 5 replies, which is actually VERY LOW. So I made 5 dollars with my name at #5. Now then, each person who just sent me $1 makes, say only 200 postings, now with your name at number 4, WHICH IS A TOTAL OF 1000 POSTINGS, not including yours too. 50 people send you $1 now; thats $50 you just made! Now, then your new 50 agents post 200 each with YOUR NAME AT NUMBER 3, OR 10,000 POSTING (50x200). Average return is 500 at $1 each is $500. They make 200 postings, which is 5,000 returns at $1 each, which is $5000 dollars! And finally, 5000 people make 200 postings wach with YOUR NAME AT NUMBER 1. YOU NOW GET A RETURN OF $50,000 BEFORE YOUR NAME DROPS OFF THE LIST. AND THAT'S IF EVERYONE MAKES 200 POSTINGS ONLY, AND IF ONLY 5 PERSONS RESPOND!!!!!
When your name is no longer on the list, you just take the latest posting that is appearing in the newsgroups, and SEND OUT ANOTHER $5 TO THE NAMES ON THE LIST, PUTTING YOUR NAME AT 5 AGAIN. And start posting again. The thing to remember is, do you realize that THOUSANDS OF PEOPLE ALL OVER THE WORLD ARE JOINING THE INTERNET AND READING THESE ARTICLES EVERY DAY, JUST LIKE YOU ARE RIGHT NOW!!! So can afford $5 dollars and see if it really works? I think so.....
People have said, "What if the plan is played out and no one
sends you
the money?" So what! What are the chances of that happening when there are TONS OF NEW HONEST USERS AND NEW HONEST PEOPLE who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with THOUSANDS of those joing the actual Internet. Remember, play FAIRLY and HONESTLY and this WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW, also, try to keep a list of everyone that sends you money and always keep an eye on the mnewsgroups to make sure everyone is playing fairly. REMEMBER, HONESTY IS THE BEST POLICY. YOU DON'T NEED TO CHEAT THE BASIC IDEA TO MAKE MONEY!! GOOD LUCK TO ALL AND PLEASE PLAY FAIRLY AND YOU WILL REAP THE HUGE REWARDS FROM THIS, WHICH IS TONS OF EXTRA CASH!!!
**By the way, if you try to decieve people by posting the

messages with
your name on the list and not sending the money to the people already

on
the list, you will not get much. Someone I talKed to knew someone who
did that and he only made $150 dollars, and that's AFTER seven or eight
weeks! Then he sent the 5 $1 bills, people added him to their lists,
and in 4-5 weeks, he had over $10K.
THIS IS THE FAIREST AND MOST HONEST WAY I HAVE EVER SEEN TO SHARE THE
WEALTH OF THE WORLD WITHOUT COSTING ANYTHING BUT OUR TIME!!!

Date: 11 Dec 1996 15:49:35 GMT
From: "Bob Smith" <rsmith@internetmci.com>
Subject: FT290/790 9600 Bd mods?

Investigating getting a FT290 or 790 and was wondering if either of these
can be modified for 9600bd packet. If so can someone point me in the right
direction...

Thanks and 73
de Bob, N3FTU

Date: 11 Dec 96 15:57:00 GMT
From: POSTMASTER@kyw.GRoupw.wec.COM (Msg Recipient)
Subject: Mail failure

TO: Ham-Space Mailing List and Newsgroup DATE: 12-11-96
TIME: 07:57
SUBJECT: Mail failure
----

[002] Mail was received that was addressed to unknown addresses.
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bross

From: Ham-Space Mailing List and Newsgroup [SMTP:Ham-Space@UCSD.EDU]
To: Ham-Space [SMTP:Ham-Space@UCSD.EDU]
Date: 1996-12-11 04:30
Subject: Ham-Space Digest V96 #420

Ham-Space Digest Wed, 11 Dec 96 Volume 96 : Issue 420

Today's Topics:
ARLK091 Keplerian data
HELLO
Looking for equipment selection advice Yaesu vs Icom vs Kenwood for satellite
Mir back on packet
Mir Message #1
NASA TV Links (3 msgs)
NoNo?:TrakBox, Ft736R and 23cm(P3D)
PacSat for Offshore Sailing

RS-10 /RS-15 what are you using? (2 msgs)
The big picture

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Date: 10 Dec 1996 17:52:26 -0500
From: w1aw@arrl.org
Subject: ARLK091 Keplerian data

SB KEP @ ARL $ARLK091
ARLK091 Keplerian data

ZCZC SK91
QST de W1AW
Keplerian Bulletin 91 ARLK091

Date: (null)
From: (null)
Subject: HELLO

73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 16:01:23 -0800
From: George Zafiropoulos <georgez@quickturn.com>
Subject: Looking for equipment selection advice Yaesu vs Icom vs Kenwood for
satellite

Hi,
I am interested in getting a new radio for P3D. The 736 seems to be the
historical favorite but there are new radios from Kenwood and Icom. Has
anyone compared the features or performance? Do the Kenwood or Icom
radios have the same special satellite oriented features that the Yaesu
736 has? If you were going to buy one which one would you choose and
why?

I am planning to operate on 1.2 GHz in addition to 2 and 440.

I would also be interested to know what you would recommend for 2.3 GHz.

Thanks very much for you advice in advance.

George Zafiropoulos KJ6VU
georgez@quickturn.com

Date: Tue, 10 Dec 1996 21:08:59 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir back on packet

Hi just a quick note-- the Two meter antenna was broken on the first
EVA and they did a second EVA today and did a makeshift repair which
will work, but the signal will not be as strong or as steady as
before.. but it will work for the time being, they will fix the coax
and on the next planned EVA make the proper repair.. I have no idea
when that will be.. 73 DAVE N1PPP
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: Tue, 10 Dec 1996 21:46:36 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir Message #1

Here is something I just downloaded from the PMS

Logged on to R0MIR's Personal Message System
CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>

r 1
Stat : PR

Posted : 12/09/96 22:41
To : ALL

Date: Mon, 09 Dec 1996 21:11:03 +0000
From: "Charles M. Clark" <charlie@smarty.smart.net>
Subject: NASA TV Links

Can anyone give me the low down on what is required in order to receive
live NASA TV. I don't know much about this, but would like to learn. I
would like to be able to receive NASA live TV during the shuttle
flights. What would I need in order to do this?
Reply: charlie@smarty.smart.net
Thanks in advance for any help.

Date: 11 Dec 1996 01:32:12 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

I receive live NASA video and have rebroadcast the audio in the past.
All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
it at satellite S-2, transponder 09.

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

Date: Tue, 10 Dec 1996 23:17:31 -0500
From: wkrantz@voicenet.com (William E. Krantz, Jr.)
Subject: NASA TV Links

In article <Pine.SOL.3.91.961210193117.21646B-100000@spacelink>, Richard
David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote:

> I receive live NASA video and have rebroadcast the audio in the past.
> All that is required is a BUD (Big Ugly Dish) for C-band tvro, and point
> it at satellite S-2, transponder 09.
>
>
>
> ----------
> Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

What's the chance of getting DirecTV or USSB to carry NASA Select if we
all wrote or called? Anyone have any inside info on these DSS providers?

Bill Krantz

wkrantz@voicenet.com

Date: Tue, 10 Dec 1996 15:56:36 -0500
From: rlong@magnus.acs.ohio-state.edu (Ron Long)
Subject: NoNo?:TrakBox, Ft736R and 23cm(P3D)

In article <58f4nv$udl@news00.btx.dtag.de>, Guenter.Stautz@t-online.de
(gs) wrote:

> Hi All
> after long nights with my TrakBox version 3.3h , I came to the
> conclusion, that TrakBox designers had never in mind to let it
> work on 23 cm with the Ft736R. ___Am I right ????___
> The case: I'm a newcomer in the satellite operators community and
> I'm trying to prepare my rig for Phase 3D in spring 1997.
> So I tried to program satellites with 23cm RX or TX channels. But this
> failed. My FT736R did not switch to 1296. Mhz, neither on RX nor TX.
> The Ft736R is ok, because CAT programming directly via PC works.
> I analysed the CAT commands from TrakBox to FT736R and found the
> following hex command sequences for a 70cm/23cm satellite example:
> 0,0,0,0,0,
> C9,60,0,0,1E, This is a dummy switching to 1296Mhz done in the
> 0,0,0,0,80, Oct. 18 '92 update for TrakBox version 2.05

> 0,0,0,0,0,
> 43,21,0,0,2E, This is the Sat. TX Frequency __is ok__.
> 0,0,0,0,80,
> 0,0,0,0,0,
> 8,0,0,0,27, This is TX Mode
> 8,0,0,0,17, This is RX Mode
> 0,0,0,0,80,
> 0,0,0,0,0,
> 12,96,34,49,1E, And here is the problem: My assumed RX frequency
> 0,0,0,0,80, 1296.34491 Mhz is not properly set. It should be:
> C9,63,44,91 and not 12,96,....., and the dummy
> above should be set to 144Mhz
> Any help??
> Thanks and sorry for this long message.
> 73, Guenter, DK7KV

This old message from G3RUH may help some.
ron w8gus.

Date: Wed, 11 Dec 96 03:54:47 GMT
From: kwalker@qb.island.net (Ken Walker)
Subject: PacSat for Offshore Sailing

I have not followed the development of the packet capable amateur satellites
but I believe there are some in operation. As a sometimes off shore sailor
and a radio amateur, I am asked by fellow sailors whether they should get a
ham licence and how effective it would be. I tell them about 20m ssb, about
hf packet and amtor but I also go on about how low earth store and forward
packet satellites will be available one day. But maybe they are now?

The ideal packet system for offshore use would allow the offshore sailing ham
to prepare a packet message and the software would determine when a bird is
overhead and send up the message and pick up any waiting mail. Are these
birds ready to do this? Is there software that would do it? Am I right that
these can be worked with small omni antennas?

I think they require dual band operation? Which bands? Hopefully they are
bands that can be worked with readily available dual band mobile rigs?

I have thought about this from time to time but I am not up to date on what is
available. Anyone want to try to update me??

Thanks.

73 de Ken 10-Dec-96 19:21
VE7KGW@VE7KGW.#NVI.BC.CAN.NOAM
kwalker@qb.island.net

Date: Tue, 10 Dec 96 13:22:35 GMT
From: baack@maine.edu (Jason Baack)
Subject: RS-10 /RS-15 what are you using?

Greetings all,
this post is a call for information. I am trying to setup a satellite
station
for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
help me.
What equipment are you all using for up / downlink radios..
, antennas? The operating budget is around $600.00 but if your system cost
more than that feel free to tell me about it. I just wanted to get an idea
of
what everyone was using.

73's Jason N1RWY

UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15 feet.
DN: Realistic HTX-100 dipole @ 17 feet

Date: 10 Dec 1996 18:25:23 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: RS-10 /RS-15 what are you using?

Jason Baack (baack@maine.edu) writes:
> Greetings all,
> this post is a call for information. I am trying to setup a satellite
station
> for my grandfather, (a 78 YO ham..kb2wfn) and I figured that you all could
> help me.
> What equipment are you all using for up / downlink radios..
> , antennas? The operating budget is around $600.00 but if your system cost
> more than that feel free to tell me about it. I just wanted to get an idea
of
> what everyone was using.
>
> 73's Jason N1RWY
>
> UP: Kenwood TR9130 8 watts 5/8 colinear // 3ele beam both @ 15
feet.
> DN: Realistic HTX-100 dipole @ 17
feet
>

I've used a IC251A with 10 watts into a Jpole, and a beat-up Undien 2510
fed with a 100 foot long dipole. No problem working ssb or CW on RS-10,
CW only on RS15.

When I added a Hamtronics downconverter for 70cm, I could work FO-20
quite often as well.

Date: Wed, 11 Dec 1996 01:43:46 -0500
From: Robert Bissett <rbissett@monmouth.com>
Subject: The big picture

Tim Shaw wrote:
>
> Tim Shaw
> Sydney.
> Australia.
> TIMSHAW@msn.com
>
> Hi,
>

>>> big snip>>>>>>>>

Dribble. Get out and do something useful.

--
****
Bob Bissett rbissett@monmouth.com
****

Date: (null)
From: (null)

SB KEP ARL ARLK091
ARLK091 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96344.17490209 .00000040 00000-0 27009-4 0 02947
2 18129 82.9271 19.1939 0012947 34.0597 326.1382 13.72372337474171
UO-11
1 14781U 84021B 96344.06232207 .00000103 00000-0 25166-4 0 09464
2 14781 97.8139 327.1498 0010696 252.1926 107.8103 14.69505769683338
RS-12/13
1 21089U 91007A 96344.16630608 .00000042 00000-0 28175-4 0 09525
2 21089 82.9217 59.5796 0030597 104.8866 255.5685 13.74075181293062
UO-14
1 20437U 90005B 96343.70356319 -.00000005 00000-0 14724-4 0 02350
2 20437 98.5346 63.3658 0011992 49.7991 310.4241 14.29941208358994

```
RS-15
1 23439U 94085A 96343.82516983 -.00000039 00000-0 10000-3 0 01948
2 23439 64.8109 100.6622 0155825 168.0302 192.4391 11.27529304080476
AO-16
1 20439U 90005D 96344.14467737 .00000052 00000-0 36747-4 0 00389
2 20439 98.5512 66.3391 0012061 49.2629 310.9647 14.29992861359075
DO-17
1 20440U 90005E 96344.14954946 -.00000007 00000-0 14111-4 0 00409
2 20440 98.5544 67.0818 0012302 49.1455 311.0794 14.30134604359102
WO-18
1 20441U 90005F 96344.14316595 .00000010 00000-0 20510-4 0 00438
2 20441 98.5534 66.9947 0012735 49.9468 310.2836 14.30103298359108
LO-19
1 20442U 90005G 96343.84568634 .00000029 00000-0 27881-4 0 00357
2 20442 98.5563 67.2766 0013180 49.0927 311.1392 14.30215023359084
FO-20
1 20480U 90013C 96344.03006671 .00000012 00000-0 89775-4 0 09427
2 20480 99.0221 335.6129 0541039 88.1817 278.1135 12.83235949320315
AO-21
1 21087U 91006A 96344.07135119 .00000094 00000-0 82657-4 0 07967
2 21087 82.9422 192.2765 0037095 77.9257 282.6051 13.74575093294036
UO-22
1 21575U 91050B 96344.16468641 .00000022 00000-0 21564-4 0 07430
2 21575 98.3316 45.1586 0008317 99.0216 261.1907 14.37047924283197
KO-23
1 22077U 92052B 96344.03434124 -.00000037 00000-0 10000-3 0 06401
2 22077 66.0784 183.3751 0015165 257.2909 102.6414 12.86299040203296
KO-25
1 22828U 93061F 96344.13514461 .00000008 00000-0 20598-4 0 05073
2 22828 98.5630 56.6651 0011165 61.3303 298.8999 14.28161762135083
IO-26
1 22826U 93061D 96344.12546181 -.00000011 00000-0 13125-4 0 05268
2 22826 98.5678 56.5862 0009981 75.6505 284.5784 14.27820595166961
AO-27
1 22825U 93061C 96344.14248063 -.00000015 00000-0 11284-4 0 05287
2 22825 98.5669 56.4001 0009503 76.0316 284.1924 14.27711448166956
FO-29
1 24278U 96046B 96344.18678766 -.00000039 00000-0 -55296-6 0 00575
2 24278 98.5687 45.0851 0351367 318.5262 38.9687 13.52627319015436
MO-30
1 24305U 96052B 96343.95862514 .00000204 00000-0 20364-3 0 00626
2 24305 82.9227 135.1459 0031347 17.0445 343.1753 13.73088653012950
Mir
1 16609U 86017A 96345.31845887 .00002050 00000-0 28429-4 0 8620
2 16609 51.6525 316.0698 0013417 124.0920 236.1310 15.62583222617539

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 14, 1996, at 2330z on Baudot and AMTOR.
NNNN
```

/EX

Date: (null)
From: (null)

Kurt, when I wrote my routines for FT736R CAT (published on this
BBS) I discovered that Yaesu did a great job and introduced only 2
bugs.

One was that if the radio is in (say) 2m RX /70cm TX, then the CAT cannot
change it to 70cm RX /2m TX! This is because you have to make the
changes in two stages, e.g. 2/70 -> 2/2 -> 70/2.

Obviously the middle step is inadmissable. If your radio has a third
module (e.g.
23cm), then you can go 2/70 -> 23/70 -> 23/2 -> 70/2.

The other bug concerns reading the s-meter and squelch. This
sometimes misses the last byte.

So your problem is not a fault of the tracker-box code.

73 de James G3RUH @ GB7DDX
<EOF>

End of Ham-Space Digest V96 #420
****

Date: Thu, 12 Dec 1996 01:20:56 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: Mir's EVA

from Chris Van deBerg
MIRNEWS 10 DECEMBER 1996 (338)

2d Spacewalk (EVA) 22d Mainexpedition (ME) MIR:

This EVA took place on 9.12.1996 between 1352UTC (opening
hatch) and 2028UTC (closing hatch). So a duration of 6
hrs 36 mins. The EVA lasted longer for Korzun wished to
accomplish all what had to be done and there also was a
problem with something which bungled loose. Before
return they restored the connection of the radio-
amateurantenne for the 145 mc. Probably this antenne had
been disconnected by accident during the 1st EVA. They
connected the antenna again and while they were flying
over Chile and Brasil they asked John Blaha to listen
out on the 145.800 mc to check whether the antenne was

working or not. There was no traffic on that frequency
in that area and so they had to wait until they came in
range of European amateurs. I asked the English radio-
amateur Pat Gowen (G3IOR) to give calls on 145.800 mc as
soon as MIR would come in range (at abt. 1934UTC). So he
did and these signals could be heard by John Blaha while
MIR was flying over France. He reported this to the
still being on EVA Korzun and Kaleri and congratulated
them with their success. Korzun urged John not to
transmit, but to listen only. The cosmonauts fully
accomplished their tasks: installing the truss
construction Rapana at the truss Ferma-3 and the
replacement of the Kurs-antenna on the outersurface of
the P.Kh.O. (transitionsection). John Blaha who stayed
inside the complex took care of the communications and
executed commands given to him by TsUP. He gave the
cosmonauts all possible moral and technical help. The
cosmonauts and Blaha did an excellent job during this
EVA, they gave an example of fruitful international
cooperation and so they all deserve a loud: 'MOLODTSY'
(very well done).
Of course the cosmonauts were very tired after the EVA
and back in the airlock they had to do hard labour to
put off their spacesuits.
Just before midnight Korzun could be heard in a contact
with a Portugese radio-amateur via the repaired antenne
for the 145 mc.

Thusfar there are no more EVA's on schedule for this
crew.
I hope this fills in the gaps, it was working much better tonight,
they must have found something else..
73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 11 Dec 1996 22:12:41 GMT
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Subject: NASA TV Links

On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
>
> What's the chance of getting DirecTV or USSB to carry NASA Select if we
> all wrote or called? Anyone have any inside info on these DSS providers?
>
> Bill Krantz
>
> wkrantz@voicenet.com
>

Bill: I do know of several schools where, during a particular
spaceflight, cable providers have added NASA Select to the choices,
but only temporarily. Give it a shot, but don't expect miracles.
-Dick

---------- Richard David Glueck
Email:glue9600@spacelink.msfc.nasa.gov

Date: 12 Dec 1996 01:45:26 GMT
From: "Dale Martin" <kg5u@hal-pc.org>
Subject: NASA TV Links

--
Dale Martin
kg5u@hal-pc.org
http://www.hal-pc.org

Richard David Glueck <glue9600@spacelink.msfc.nasa.gov> wrote in article
<Pine.SOL.3.91.961211161124.29968B-100000@spacelink>...
> On Tue, 10 Dec 1996 wkrantz@voicenet.com wrote:
> >
> > What's the chance of getting DirecTV or USSB to carry NASA Select if we
> > all wrote or called? Anyone have any inside info on these DSS
providers?
> >
> > Bill Krantz
> >
> > wkrantz@voicenet.com
> >
> Bill: I do know of several schools where, during a particular
> spaceflight, cable providers have added NASA Select to the choices,
> but only temporarily. Give it a shot, but don't expect miracles.
> -Dick
>
>
> ---------- Richard David Glueck
> Email:glue9600@spacelink.msfc.nasa.gov
>
>
>
I believe the local cable company (TCI) here in the Clear Lake area of
Houston (near Johnson Space Center) carries NASA TV (NASA Select is a
non-term....). It's been years since I was a subscriber, but back then,
they were just carrying it during missions. I have heard they are carrying
it 24 hours a day, now. But, I don't know that firsthand. I believe a lot
of people asked the cable company for it and TCI (then Storer Cable)
accomodated.

I suppose the same could happen with the DSS groups. Also, with local
cable companies, if enough of their subscribers request it. Having a few

school administrations backing the request might help, too.

Press for mission and non-mission airing of NASA TV. Might as well go all the way. Maybe it can be compromised down to mission coverage.

Good luck,

Date: 11 Dec 1996 14:37:27 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: RS-10 /RS-15 what are you using?

For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
setup no contacts yet. Seems to be alot of fading in and out,
might need a cicular polarized antenna system ?

73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 17:12:22 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

I am using up to 100w SSB with a J-pole ant for the uplink, & this is plenty for RS-10, but not good enough for RS-15 (steerable beam in progress).

I use a horizontal loop at about 25ft for 10m receive, & this works well for on RS-10, only ok for RS-15 on near-overhead passes. I find vertical antennas too noisy.

Rod, VE3INE

Jeff Griffin wrote:
>
> For RS-10/11 ssb I,m using a Yaesu ft726r up with 15 to
> 160watts with a 7db gain 2m vertical. Dowm I'm using an Icom
> 706 with a homebrew 1/4 wave 10m wire vertical. RS-15 same
> setup no contacts yet. Seems to be alot of fading in and out,
> might need a cicular polarized antenna system ?
>
> 73 Jeff kb2wqm@juno.com

Date: Wed, 11 Dec 1996 22:00:35 -0500
From: Keith Erskine <kerskine@fetchsoft.com>
Subject: RS-10 /RS-15 what are you using?

Rod Adkins wrote:
>

> I am using up to 100w SSB with a J-pole ant for the uplink, & this is
> plenty for RS-10, but not good enough for RS-15 (steerable beam in
> progress).

100 Watts??!!! Yikes - Have you tried 10 Watts?

73....KA1RHO

End of Ham-Space Digest V96 #421
****

Date: Wed, 11 Dec 96 21:39:26 GMT
From: trandall@mhv.net
Subject: Mir Message #1

In article <32add9f0.4430609@news.cyberportal.net>, dhend@cyberportal.net
wrote:
>Here is something I just downloaded from the PMS
>
>Logged on to R0MIR's Personal Message System
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>r 1
>Stat : PR
>
>Posted : 12/09/96 22:41
>To : ALL
>From : R0MIR
>@ BBS :
>xID :
>Subject: HELLO
>We finished our second space walk.
>After the first one we had a problem with our antenna.
>Tonight we repaired it and now it's Ok.
>We back your pardon for such an occasion.
>73 de Mir crew
>CMD(B/H/J/K/KM/L/M/R/S/SR/V/?)>
>
>
>73 DAVE N1PPP
>dhend@cyberportal.net
>http://www.cyberportal.net/dhend/dave1.html

Great news, thanks Dave and "nice job" to the crew!

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10

Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

Date: Wed, 11 Dec 1996 01:57:37 GMT
From: robert@kd3bj.ampr.org (Robert E. Garland)
Subject: NASA TV Links

"Charles M. Clark" <charlie@smarty.smart.net> writes:

>Can anyone give me the low down on what is required in order to receive
>live NASA TV. I don't know much about this, but would like to learn. I
>would like to be able to receive NASA live TV during the shuttle
>flights. What would I need in order to do this?
>Reply: charlie@smarty.smart.net
>Thanks in advance for any help.

Methinks a "C" band dish setup is required. I don't think the digital guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the "bird" and transponder, check a copy of Satellite Times.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

Date: Thu, 12 Dec 1996 09:17:04 -0400
From: Herb Perkins <wa2jrv@amsat.org>
Subject: PacSat for Offshore Sailing

Ken,

I may not be of much help but I have assisted W4AVO (George) put his station together. He is a live aboard and blue water sailor. Last year he was in the Bahamas and will be there again this year. He has been on UO22 and has used his station very succesfully. AF4N Wes and I have both put in a good bit of time getting his boat ready (all three of us are sailors). George just went off internet and will be on the air for the next six months. Wes and I will be on internet and can offer some suggestions.

The first point is that it is not difficult and even underway the system works just fine. However antenna placement is a problem. George uses one J pole for up link and a small yagi for down link (3 elements). He rotates it 180 degrees during the pass and has no difficulity going from the radio to the cockpit to make the change. Since UO22 is basically automated his computer does all the work.

He uses a 386 that is not fast and is just a work horse.

If I can be of help please contact me.

73's
Herb WA2JRV

Date: Thu, 12 Dec 1996 06:58:04 -0500
From: Rod Adkins <rod@mail.border.com>
Subject: RS-10 /RS-15 what are you using?

Keith Erskine wrote:

> 100 Watts??!!! Yikes - Have you tried 10 Watts?
>
> 73....KA1RHO

1. I have about 100ft of feedline
2. I know the J-pole is not properly tuned yet (it's igloo-time up here)
3. I am surrounded by apartment buildings
4. In my experience, & in my situation, low power & omni-antennas work only when the satellite is on a near-overhead pass, and the satellite is not busy. I have almost given up working weekends, due to being stomped on.
5. If you want to work passes other than overhead, then because of the path loss, there is no choice but to increase power &/or antenna gain.
6. I was trying to give this guy the confidence that with his TX set-up he darn well ought to be able to make contacts.

Rod, VE3INE

Date: Thu, 12 Dec 1996 09:11:03 PST
From: Someone <Someone@home.thinking.about.you.com>
Subject: Your GOD Loves You - YES YOU!

I hope that you know your GOD loves you, no matter what GOD you believe in. Thank your GOD for life and ask your GOD to let you live as your GOD would want
you to. When we look closely at GOD we begin to realize that we all believe in the
same GOD, we may see GOD in different ways, but GOD will always be GOD. There can only be one GOD, and that one GOD loves us all, and wants nothing but the best for us. If your in doubt, just remember GOD works in mysterious ways, there is
a reason for everything...

God thank you.

Someone

End of Ham-Space Digest V96 #423
****

Date: Thu, 12 Dec 1996 18:29:57 +0200
From: VTM Lijnencentrum <lijnencentrum@qmserver.vtm.be>
Subject: Wisp Power Saver

The Wisp Power Saver will be available soon
Check my home page:

www.dma.be/p/bewoner/ON4BCB/wps.htm

73 ON4BCB

End of Ham-Space Digest V96 #424
****

End of Ham-Space Digest V96 #426
****

End of Ham-Space Digest V96 #428
****

End of Ham-Space Digest V96 #429
****

Date: 4 Dec 96 23:55:25 GMT
From: "Mike Tatum" <miket@cybatek.dungeon.com>
Subject: Mirage Preamps - WEB Pages ??

Hi All!

I've had the Mirage Preamps recommended to me for SAT usage as aparently
they have a gain of 25db and only 0.8db noise (??)

Can anyone tell me where I can get more details of these preamps, or even
if there is a WEB page from the manufacturer ???

Also, if you would recommend any other Preamp for the job!!

Thanks ...

Mike de G1SYT ...

miket@cybatek.dungeon.com

==========

Date: 4 Dec 1996 22:53:17 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Set: Space Shuttle (96338.91666667)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software
are
also available on this system. As a service to the satellite user community,
the most current elements for the current shuttle mission are provided below.

Element sets (also updated daily), shuttle elements, and some documentation
and software are also available via anonymous ftp from archive.afit.af.mil
(129.92.1.66) in the directory pub/space.

****
*
*
*
*

STS 80
1 24660U 96065A 96338.91666667 .00000797 00000-0 29624-5 0 521
2 24660 28.4668 86.1084 0009660 68.9504 338.1506 15.72258869 2218
ORFEUS-SPAS II
1 24661U 96065B 96338.91666667 .00000799 00000-0 29684-5 0 261
2 24661 28.4667 86.1090 0009458 70.9689 335.7851 15.72286112 2215
WSF
1 24662U 96065C 96329.37500000 .00000942 00000-0 40526-5 0 33
2 24662 28.4694 155.5303 0008299 312.1539 335.4340 15.72084958 718
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

End of Ham-Space Digest V96 #430
****

End of Ham-Space Digest V96 #431
****

End of Ham-Space Digest V96 #433
****

End of Ham-Space Digest V96 #434
****

2720. Re: EVERYONE READ THIS, VERY IMPORTANT, PLEASE READ THIS!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: Mickey <mickey5a@ziplink.net>
Message-ID: <32B17AFB.3889@ziplink.net>
Source record: 20646
Cross-posted to: alt.games.descent,comp.lang.java.programmer,comp.lang.javascript,comp.software.year-2000,gac.physics.astronomy,rec.aviation.aerobatics,rec.radio.amateur.space,sci.biology,sci.physics

Sorry, censorship is censorship. Take away someone else's rights and
there's no protection left for yours. There is a difference between
speech and action.

Meanwhile, driving the creeps underground makes it more difficult to
know who and where they are, and what they're planning to do.
Identifying your enemy is necessary for defending yourself against them.

Anyway, this has nothing to do with descent.

2721. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: miksuora@sara.utu.fi
Message-ID: <58s2aj$iql@ankka.csc.fi>
Source record: 20647

I've done fine with just a G5RV or groundplane for 28MHz downlonk. 1/4 vertical and 5 watts of power is plenty for RS-10 ;) However, as far as I know, RS-10 has no stabilization system, and polarization QSB is a problem with linear polarization antennas. I would recommend a cross dipole for both up- and downlink.

73 Mike OH1NZQ

2722. Logging Programs

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <32B1A7C6.ADD@amsat.org>
Source record: 20648

Hello:

I'm looking for a good Windows based logging program that has provisions for Satellite operations.

My intention is to automate some of the logging and QSL tasks that I'm doing. I would like to have QSL stickers printed (inkjet printer), address labels so that I can eliminate some of the handwork.

Rig control, packet operations are really secondary at this time since I don't have access to the PacketCluster here in North Dakota. My current Satellite rig is not computer interfaced.

Has anyone got any good suggestions for me?

Mark Fossum N0NSV
n0nsv@amsat.org

2723. Re: How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: sbabb@lpub.com
Message-ID: <58safb$8gi@news-central.tiac.net>
Source record: 20649

In article <slrn5amsi8.3am.cathryn@junglevision.junglevision.com>,
cathryn@junglevision.junglevision.com (cathryn) wrote:
>In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>>I'm looking for advice.
>>
>>How do I start out cheap in satellite/EME communication? I'll take advice on
>>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>>
>>Thanks de wa1vht
>
>I'm kind of on the same quest. At least to figure out where to spend the
>first $2K. Which I don't think is really cheap by most people's standards,
>but which is a little bit less than what it takes to walk into HRO and
>just do the whole thing brand new. My impression is that the guys who
>are pretty serious about this seem to have the 726 or 736 and the KLM/M2
>antenna set. Personally, I put a lot of confidence in conventional
>wisdom. So, to go this way, the game seems to become, how to scrounge up
>this kind of system. (Of course with preaamps, amplifiers and all that.)
>
>Personally, my thinking now on how to do this in gradual, stages
>is to do the antenna side first. New. At least deal with
>the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
>Maybe working RS-10 , Mir or something, and then trying to hear sats on
>440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)
>
>By then, I figure a few months will have passed, I'll be able to hear
>what's going on, and either I'll be anxious to be rid of the whole thing
>or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
>know whether P3d is going to be really cool, etc. Fingers crossed.

I haven't received much of a response from this group. What I'm trying to do
is counter people who tell me that Amateur Radio is too expensive in general
and also the hams who think that space communication is very expensive.

What I've been able to find out so far is that Hamtronics has xmit and recv
converters available in kit form. They also have LNA kits. Down East
Microwave has transverters, LNA's, antennas, etc. These are more expensive,
but still much less than an FT-736 (even without the extra band modules).
Once you get above 70cm with the DEM transverters, you need a 2m all-mode rig.
Their 6/2/70 transverters all work with HF rigs, but the 900Mhz-an-up ones
convert to 2 meters.

For gain-per-buck, it looks hard to beat a quad. They're also hard to beat
for ice loading and cumbersomeness (at lower freq's, anyway.) Lightning Bolt
has 2m and 70cm quads that are good for about 12 dBd and not too expensive.

Of course, you can work CW through RS-10 with your FM HT (no PL or audio) and a 10 meter receiver. MIR and the Shuttle are also workable with relatively little investment, other than a good antenna and an amplifier for your HT.

Anyone else have any suggestions?

2724. Re: Ham-Space Digest V96 #421

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: c.shaw@midnet.com
Message-ID: <927072255.106046602@midnet.com>
Source record: 20650

A 400k message in a newsgroup? Then loads of non delivery messages?
This group is getting expensive!!

Colin G8FRA

2725. HAM SITE

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: John Fleenor <johnf@mailhost.cyberramp.net>
Message-ID: <32B22616.D58@mailhost.cyberramp.net>
Source record: 20651

http:///www.cyberramp.net/~johnf

2726. 821H vs. Ft-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: Murray Harris <mth2@nwark.com>
Message-ID: <32B21917.70D3@nwark.com>
Source record: 20652

If you were going to buy one of these rigs, which one would it be?
I would appreciate your comments and thoughts.
73, Murray
W5XH

2727. Re: How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: Steven Jepsen <jepsen_st@continet.com>
Message-ID: <32B16C26.37ED@continet.com>
Source record: 20653

In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
>I'm looking for advice.
>
>How do I start out cheap in satellite/EME communication? I'll take advice on
>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
>
>Thanks de wa1vht

I put together a cheap satellite station several years ago (I've since improved it).
It consisted of the following:

AZ-EL rotor system made of two Gemini TV antenna rotators purchased at
Home Depot.

435Mhz Uplink antenna (22 element cross yagi) made from the parts of Two
fringe area TV antennas.
2m Downlink antenna (11 element cross yagi) made from old cushcraft 11
element beams.
I designed them both using the YagiMax program.

Uplink radio (435mhz) made from a Ranger 3500 all mode 10 meter radio
driving a DownEast Microwave 435Mhz transverter Kit.

Downlink radio was an old Kenwood TS700A with a Pre-Amp.

I don't remember the cost of all this and I already had some of the
equipment. but I'd guess the value whole thing including feed line was
under a $1000. With careful scrounging, you could probably do even
better.

I was able to work all the analog birds with this equipment and I'm
still using the antenna system.

2728. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: ghunt@palmnet.net
Message-ID: <32B13C63.41DA@palmnet.net>
Source record: 20654

```
See http://www5.palmnet.net/~ghunt for a full system
description incl photos. Transceiver is IC 820h modified.
73 george w4avo
```

2729. radio help on Aconcagua

Newsgroup: rec.radio.amateur.space
Date: 1996-12-13 00:00:00 UTC
From: jms@scorpius.inesc.pt
Message-ID: <58rcilmie1@archie.inesc.pt>
Source record: 20655

Hello everyone,

A group of portuguese climbers are going to climb the Aconcagua in Argentina, between 18 Dez - 3 Jan, they have a radio (VHF 140-146MHz) they want to know if there is anyone in the area that they could contact, to forward their messages to my email address.

thank's in advance
joao schiappa
email: jms@scorpius.inesc.pt

2730. Re: Keplerian Elements

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: jrespler@injersey.com
Message-ID: <58tkh2$cc7@news.injersey.com>
Source record: 20656

Edgar Neuhaeuser (Edgar@raudi.ms.sub.org) wrote:
> I'm looking for some FTP- Sites where I can download the Keplerian
> Elements for my PCT 3.1

Links to elements are at vsohp, below.

--

Jay Respler
--
Details of how to get on the Satellite Observer Mail List, satellite elements,
prediction programs and other satellite information, at the Visual Satellite
Observers Home Page: http://www.physics.ox.ac.uk/sat/vsohp/satintro.html
--
JRespler@InJersey.com
Satellite Tracker * Early Typewriter Collector
Freehold, New Jersey

2731. Re: 821H vs. Ft-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: oddjob@cix.compulink.co.uk
Message-ID: <E2EJ65.A3w@cix.compulink.co.uk>
Source record: 20657

Go for the 821h, more power, better RX, smaller...I have a 736 and
would/am happily sell it to buy a 821h. Mine has a 6m module.. :)

The 820 and 821 have dual RX so you can rx on 70cm and tx on 2m or vica
versa...

I just wish the 821h had 23 cms too.

PS Tel 0956-544202

Steve G7VFY

2732. Re: 821H vs. Ft-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: Bob Houghton <houghton@cyberg8t.com>
Message-ID: <58uil4$54$1@nntp.cyberg8t.com>
Source record: 20658

I have the same question. I am specifically interested in seeing any reviews of the 821H. A few years ago, I almost bought an 820H then I read James Miller's review that pointed out all the design problems with that radio (for satellite use). The 821H is supposed to have addressed those problems but I'd be hesitant until I've heard otherwise.

I've been waiting for Yaesu to come out with a next generation 736R (with ports for 9600 baud and maybe discriminator output for doppler correction while using FM) but I think I'll have to wait some more.

Bob

2733. ! MASS POST Was Here (kaloic)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: Ones-And-Zeros@Prodigy.net
Message-ID: <58uq7i$7a1m@usenet1w.prodigy.net>
Source record: 20659

MASS POST, by Ones And Zeros, will let you post to as many newsgroups as you want!

To find out more about this exciting new program, visit a business newsgroup.

(This ad was sent to thousands of newsgroups!)

(epkifj)

2734. Re: 821H vs. Ft-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <58upvq$2r7@sjx-ixn4.ix.netcom.com>
Source record: 20660

In <32B21917.70D3@nwark.com> Murray Harris <mth2@nwark.com> writes:
>
>If you were going to buy one of these rigs, which one would it be?
>I would appreciate your comments and thoughts.
>73, Murray
>W5XH

The FT-736 is the work horse of the satellite world. It is a bit dated and needs a mod to do 9600 baud. The support both software and hardware are the most extensive for availabe radio. The 736 will accept two additional bands modules so when P3D goes up you can use the 1296 uplink without a transverter. Yaesu modified my 736 for 9600 without charge. It is a larger rig than the 821 but for a base station offers more. Drop me an email if I can help more.

73 Jerry

2735. ARLK092 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk092.1996@arrl.org>
Source record: 20661
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK092
ARLK092 Keplerian data

ZCZC SK92
QST de W1AW
Keplerian Bulletin 92 ARLK092
From ARRL Headquarters
Newington, CT December 14, 1996
To all radio amateurs

SB KEP ARL ARLK092
ARLK092 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96347.16410688 .00000015 00000-0 34961-6 0 2918
2 18129 82.9267 16.9841 0012857 26.2998 333.8807 13.72372039474582
UO-11
1 14781U 84021B 96346.99024598 .00000140 00000-0 31510-4 0 09405
2 14781 97.8141 329.9527 0010624 241.8427 118.1704 14.69507043683762
RS-12/13
1 21089U 91007A 96347.22463108 .00000039 00000-0 25079-4 0 09463
2 21089 82.9219 57.3122 0030602 96.3425 264.1231 13.74075232293482
UO-14
1 20437U 90005B 96347.20220662 -.00000005 00000-0 14875-4 0 2324
2 20437 98.5347 66.7954 0011910 40.1294 320.0773 14.29941463359498
RS-15
1 23439U 94085A 96346.84075219 -.00000039 00000-0 10000-3 0 1833
2 23439 64.8153 95.7869 0155559 167.5257 192.9570 11.27529321 80810
AO-16
1 20439U 90005D 96347.22337277 -.00000012 00000-0 12301-4 0 00350
2 20439 98.5506 69.3612 0012036 41.4351 318.7739 14.29992601359514
DO-17
1 20440U 90005E 96347.22793816 -.00000002 00000-0 15929-4 0 00333
2 20440 98.5544 70.1075 0012277 40.7806 319.4290 14.30134925359547
```

```
WO-18
1 20441U 90005F 96347.22162250 .00000017 00000-0 23269-4 0 00405
2 20441 98.5526 70.0178 0012743 41.0011 319.2127 14.30103687359549
LO-19
1 20442U 90005G 96347.20374124 .00000002 00000-0 17658-4 0 00330
2 20442 98.5548 70.5738 0013165 39.8760 320.3391 14.30215226359567
FO-20
1 20480U 90013C 96346.99276460 -.00000027 00000-0 42303-5 0 9276
2 20480 99.0219 338.0105 0541112 81.4774 284.7235 12.83235659320696
AO-21
1 21087U 91006A 96347.12856155 .00000094 00000-0 82657-4 0 7685
2 21087 82.9420 190.0148 0037113 69.9624 290.5532 13.74575190294451
UO-22
1 21575U 91050B 96347.22829242 .00000007 00000-0 16493-4 0 07403
2 21575 98.3308 48.1220 0008472 91.5881 268.6275 14.37048148283631
KO-23
1 22077U 92052B 96346.98884857 -.00000037 00000-0 10000-3 0 06308
2 22077 66.0787 177.1891 0015122 256.6543 103.2790 12.86299282203679
KO-25
1 22828U 93061F 96347.21778396 -.00000014 00000-0 11686-4 0 5003
2 22828 98.5630 59.6883 0011199 52.9501 307.2692 14.28161774135523
IO-26
1 22826U 93061D 96347.20883789 -.00000021 00000-0 90460-5 0 5201
2 22826 98.5677 59.6097 0010053 68.4097 291.8150 14.27820597167402
AO-27
1 22825U 93061C 96347.22609161 -.00000010 00000-0 13553-4 0 5229
2 22825 98.5667 59.4224 0009541 67.4006 292.8174 14.27711712167392
FO-29
1 24278U 96046B 96347.21945879 -.00000055 00000-0 -17111-4 0 00462
2 24278 98.5686 47.7135 0351411 310.6794 46.4285 13.52627128015843
Mir
1 16609U 86017A 96348.83586713 .00003913 00000-0 48701-4 0 8736
2 16609 51.6550 298.3131 0013403 138.0507 222.1480 15.62621377618080

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Tuesday,
December 17, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2736. DOVE for Windows?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: Richard David Glueck <glue9600@spacelink.msfc.nasa.gov>
Message-ID: <Pine.SOL.3.91.961214132719.5400E-100000@spacelink>
Source record: 20662

Would anyone be inclined to send me a copy of the DOVE telemetry
interpretation program for Windows?
Thanks.

Dick

Richard David Glueck Email:glue9600@spacelink.msfc.nasa.gov

2737. AG25 and AG35 preamps and linear amplifiers???

Newsgroup: rec.radio.amateur.space
Date: 1996-12-14 00:00:00 UTC
From: Joe Leikhim <Jleikhim@nettally.com>
Message-ID: <32B2479D.5970@nettally.com>
Source record: 20663

I have an ICOM IC970 with the AG25 and AG35 TR switched preamplifiers that I am using for terrestrial and satellite work. I will need to add some amplifiers in the near future in order to compensate for cable loss to my new tower.

The AG series preamplifiers are spec'd at a maximum of 100W. Has anyone had any experience running higher power through them without damage?

The TR switch uses a DC voltage via coax from the transceiver in the receive mode to activate the bypass relay and to power the Gasfet. Which commercially available 2m and 70cm amplifiers in the range of 10w-25w input 100w-160w output, can be easily modified to allow DC to pass through the amplifier in the receive mode? I prefer not to modify the preamplifiers for external control.

Thanks
--
Joe Leikhim
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

2738. Re: Logging Programs

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: dj1km@aol.com
Message-ID: <19961215191000.OAA09312@ladder01.news.aol.com>
Source record: 20522

Hi,
it seems to me that Alex KB4LBC is the author of the mentioned WIN4DX
logging program? Question where and how to get it?
Reinhard, DJ1KM

2739. TRAKSAT 4.00 Released

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: "Paul E. Traufler" <wintrak@traveller.com>
Message-ID: <01bbead1$f4a2e040$51ae1ace@traveller.com.traveller.com>
Source record: 20523

TRAKSAT Version 4.00 Has Been Released

TRAKSAT is a general purpose satellite tracking program, by that
I mean any satellite that has a NORAD, NASA 2-Line element set
can be used. The solution to the satellite motion which is used
by TRAKSAT is completely analytic and therefore requires no
numerical integration. This makes the program fast, even faster
when a coprocessor is used, since the solutions can be evaluated
at arbitrarily large, or small, time intervals.

The purpose of this program is to provide the user with a means
of propagating NORAD element sets in time to obtain tracking
information of the space object.

What is new?

New with this version is two fully rendered 3D earth views with full
color Sun/Shadow. These views are breath taking! TRAKSAT is now a
fully protected mode program with no DOS 640K limits! The program
uses Extended or Expanded memory and requires only 250K of free
RAM. This is the FOURTH major re-write of the program and is
considered the best by all the trial users.

The program has expaned on-line help along with better and additional
error checking. Speed and features are what is it all about.

Take a look at the Home Page
http://www.hsv.tis.net/~wintrak

Paul E. Traufler
15 Dec. 1996

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

2740. New Concept! Cybersched your next satellite/DX contact

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: wb6siv@telis.org
Message-ID: <wb6siv-1512962118150001@s21-pm05-ontro-t.telis.org>
Source record: 20524

By combining the benefits of the World Wide Web and E-mail, you can use the internet to set up schedules to contact hard to find hams all over the world.

How can Cyberscheds help me?

Are you in need of a single state to qualify for the WAS Award? Do you need one more country to qualify for DXCC? Are a county hunter, looking for a few allusive counties? Are you into QRP, and trying to reach a DXCC? Then Cybersched can be a great benefit to your ham radio operations.

DX stations will also find that by establishing prearranged schedules, they can avoid the pile-up mania that makes working the states anything but enjoyable.
Using the same procedure one would use to work the Space Shuttle, you can now (thanks to the World Wide Web) work DX and stateside stations in an orderly and productive way.

Visit http://www.sarrio.com and estabish your own cybersched

*********BELOW IS AN EXAMPLE OF A CYBERSCHED POST FROM MY WEB PAGE**********

Station: EI8ESB

Name: Robbie
QTH: Ireland
Mode: Satellite Comments: I would like any skeds on either RS10/11 or RS15 on SSB up on
2 down on 10Mtrs.I am available most evenings and e-mail me for details.
Regards Robbie...
Post Date: November 10,1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2741. FS: CB Service Manuals (Tram)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: Reddbox@cris.com
Message-ID: <58vs54$603@herald.concentric.net>
Source record: 20664
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc, rec.radio.amateur.policy,rec.radio.amateur.space

Organization: Concentric Internet Services
Summary:
Keywords:

For Sale:
RARE Tram Factory Service Manuals (Gone out of business now) for Tram
Citizen Band Radios (CB SSB/AM)
These manuals include:
o Tune Up Procedures
o Schematics
o Photos of the PC Boards
o Alignment procedures
o Testing
The manuals are 10 to 20 pages long. In SUPERB condition!
No soiled, roughed, or dogeared pages. The booklet is stapled.
Model Price
XL $25
XL5 $30
DIAMOND 40 $40
DIAMOND 60 $50
D201 (Base unit) $10
Please respond via email to Punisher@m-net.arbornet.org or call my machine
at (203)458-9962 and leave a message or fax (since these groups tend to
get cluttered) Thank you.

2742. Repeater on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: orion@capital.net
Message-ID: <32b3831c.44778402@news.capital.net>
Source record: 20665

Can someone tell me the frequency of the 70 centimeter repeater aboard
Mir? I saw it somewhere, but can't remember what it was. I need the
uplink and downlink or offset.
Thanks
--
73,
Butch N2YMJ

2743. Re: 821H vs. Ft-736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: alexevon@abraxis.com
Message-ID: <32b37732.10531339@news.abraxis.com>
Source record: 20666

Murray Harris <mth2@nwark.com> wrote:

>If you were going to buy one of these rigs, which one would it be?
>I would appreciate your comments and thoughts.
>73, Murray
>W5XH

I used to have ICOM, but the Yaesu seems to be a little
better....(opinion, of course). I see the full duplex is much more
ease of use than the Icom, and has spots for 50mhz,1296mhz also!

Best 73,
de KB4LBX/Alex

Alex F. Evonosky, KB4LBX OSCAR 10 Mode B,J,L
Alpharetta, Ga / EM74 Packet LAN 145.07MHz
WAS WAC ARRL AMSAT ATV 1.2GHz/421.25MHz
kb4lbx@amsat.org 160m-1.2GHz SSB/CW/Digital/SSTV
GRAPES 56kB Packet WAN
Active HF/VHF contester
DX4WIN Computer Logging System
W95SSTV SSTV software

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Supporting:
Yaesu rigs, Timewave DSP units, FORCE12 antennas

2744. Re: Logging Programs

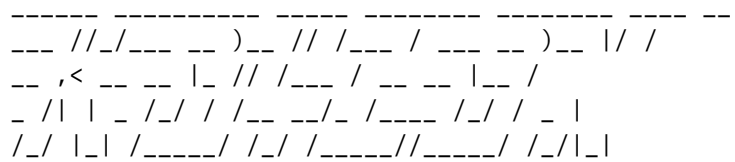
Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: alexevon@abraxis.com
Message-ID: <32b37691.10371128@news.abraxis.com>
Source record: 20667

Mark Fossum <n0nsv@amsat.org> wrote:

>Hello:
>
>I'm looking for a good Windows based logging program that has provisions
>for Satellite operations.
>
>My intention is to automate some of the logging and QSL tasks that I'm
>doing. I would like to have QSL stickers printed (inkjet printer),
>address labels so that I can eliminate some of the handwork.
>
>Rig control, packet operations are really secondary at this time since I
>don't have access to the PacketCluster here in North Dakota. My current
>Satellite rig is not computer interfaced.
>
>Has anyone got any good suggestions for me?
>
>
>Mark Fossum N0NSV
>n0nsv@amsat.org
>
Mark,
Try the program called DX4WIN. This logger is win95 based and has all
the bells & Whistles! Excellent and ease of use! Full printer
control of lables, QSL's.
Auto tracking of DXCC,WAS, WAC....etc.....

Best 73,
de KB4LBX/Alex

Alex F. Evonosky, KB4LBX OSCAR 10 Mode B,J,L
Alpharetta, Ga / EM74 Packet LAN 145.07MHz
WAS WAC ARRL AMSAT ATV 1.2GHz/421.25MHz
kb4lbx@amsat.org 160m-1.2GHz SSB/CW/Digital/SSTV
GRAPES 56kB Packet WAN
Active HF/VHF contester
DX4WIN Computer Logging System
W95SSTV SSTV software



Supporting:
Yaesu rigs, Timewave DSP units, FORCE12 antennas

2745. Decoding

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: TAZ <Taz@bigfoot.com>
Message-ID: <32B41FA2.6168@bigfoot.com>
Source record: 20668

I am interested in learning about signal decoding and possibly building
a decoder for cable TV. Is anyone aware of a good resource to learn
more about this subject?

2746. Re: NASA TV Links

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: bret Johnson <bret@baj.com>
Message-ID: <32B43A73.4A64@baj.com>
Source record: 20669

Check out CU-SEE-ME.

I use it to see the same feeds that they show on the Sat.

It is only 28.8 but, you can get it..

Robert E. Garland wrote:
> "Charles M. Clark" <charlie@smarty.smart.net> writes:
>
> >Can anyone give me the low down on what is required in order to receive
> >live NASA TV. I don't know much about this, but would like to learn. I
> >would like to be able to receive NASA live TV during the shuttle
> >flights. What would I need in order to do this?
> >Reply: charlie@smarty.smart.net
> >Thanks in advance for any help.
>
> Methinks a "C" band dish setup is required. I don't think the digital
> guys like Dish, USSB, Primestar, etc. are carrying NASA TV. For the
> "bird" and transponder, check a copy of Satellite Times.
>

2747. Re: Ham-Space Digest V96 #421

Newsgroup: rec.radio.amateur.space
Date: 1996-12-15 00:00:00 UTC
From: bret Johnson <bret@baj.com>
Message-ID: <32B43964.6DDE@baj.com>
Source record: 20670

Where and how can I receive Ham-Space Digest?

Thanks

2748. wanted wx receiver

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: knowsleyhotel@enterprise.net
Message-ID: <59245u$dha@news.enterprise.net>
Source record: 20525

hello,I am looking for a second hand wx reciver for polar orbiting satss,any help can email 73 all the very best for Christmas....DE graham GD0WKX..

2749. Re: How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: phavorite@aol.com
Message-ID: <19961216030400.WAA23842@ladder01.news.aol.com>
Source record: 20526

buy used eqipment.

2750. Re: Repeater on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: Klaus Lutsch <lrt20892@rpool5.rus.uni-stuttgart.de>
Message-ID: <Pine.A32.3.94.961216092941.32434A-100000@rpool5.rus.uni-stuttgart.de>
Source record: 20527

On Sun, 15 Dec 1996 orion@capital.net wrote:

> Can someone tell me the frequency of the 70 centimeter repeater aboard
> Mir? I saw it somewhere, but can't remember what it was. I need the
> uplink and downlink or offset.
> Thanks
> --
> 73,
> Butch N2YMJ
>
>
just try 435.75 up and 437.95 at CTCSS 141.3 but don't forget to
compensate the dopplershift of +-10kHz (reverse on uplink)

2751. WTB: 6m Module for FT-726r

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <32B5A563.6099@amsat.org>
Source record: 20528

Hello!

I would like to find a 6m module for my Yaesu FT-726r. If you have one
for sale, please send me Email or give me a call.

73 Mark

701-776-5703
n0nsv@amsat.org

2752. NORAD Two-Line Orbital Element Sets (TLE916)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <594llv$kne@blackbird.afit.af.mil>
Source record: 20529

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #916 -
Alouette 1
1 00424U 62049A 96347.25522173 .00000066 00000-0 67354-4 0 2520
2 00424 80.4632 108.0479 0022668 296.8989 62.9836 13.67882844706681
ATS 1
1 02608U 66110A 96344.32353062 -.00000156 00000-0 10000-3 0 9931
2 02608 14.5763 350.9421 0007513 102.7943 257.2938 1.00291909 26623
ATS 3
1 03029U 67111A 96351.19387854 -.00000121 00000-0 10000-3 0 5938
2 03029 14.9172 357.8374 0010455 269.9461 141.8874 1.00273206106594
Starlette
1 07646U 75010A 96346.90353360 -.00000135 00000-0 81261-5 0 199
2 07646 49.8299 167.4101 0206207 97.4534 264.9849 13.82192225103545
LAGEOS
1 08820U 76039A 96347.90118574 .00000008 00000-0 00000+0 0 2492
2 08820 109.8520 87.2463 0043097 89.3164 271.2410 6.38664452225245
ETS-2
1 09852U 77014A 96343.27079014 .00000111 00000-0 10000-3 0 907
2 09852 13.4400 30.9317 0006386 146.9783 213.0419 1.00006436 19383
GOES 2
1 10061U 77048A 96346.54548751 .00000052 00000-0 10000-3 0 7765
2 10061 12.6016 35.0717 0012379 131.2765 293.3311 1.00275674 16221
IUE
1 10637U 78012A 96350.25999944 -.00000027 00000-0 10000-3 0 3290
2 10637 35.7510 80.6641 1339678 62.5418 277.3574 1.00057422 21748
GOES 3
1 10953U 78062A 96346.24792791 -.00000109 00000-0 10000-3 0 7533
2 10953 11.6045 38.0174 0002843 200.1378 187.5181 1.00265062 20834

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SeaSat 1
1 10967U 78064A 96350.56421603 -.00000019 00000-0 38322-4 0 5380
2 10967 107.9999 190.0530 0001701 256.8615 103.2338 14.38139023967522
Nimbus 7
1 11080U 78098A 96350.63063770 -.00000050 00000-0 -76670-5 0 6352
2 11080 98.9205 203.8082 0008473 195.8284 164.2608 13.83689336916268
GOES 5
1 12472U 81049A 96350.29106950 .00000090 00000-0 10000-3 0 9738
2 12472 8.4800 48.3662 0005327 89.1419 270.8669 1.00289267 14914
Cosmos 1383
1 13301U 82066A 96350.55768630 .00000056 00000-0 48128-4 0 5515
2 13301 82.9304 0.8153 0028733 98.2948 262.1464 13.68080002722178
LandSat 4
1 13367U 82072A 96350.71994807 .00000036 00000-0 17663-4 0 297
2 13367 98.0517 35.8916 0006368 303.6251 56.4338 14.57196667766973
DMSP B5D2-1
1 13736U 82118A 96350.56062553 -.00000002 00000-0 17642-4 0 1400
2 13736 98.6204 176.0222 0007913 218.4277 141.6340 14.25814811726911
IRAS
1 13777U 83004A 96351.12821499 -.00000245 00000-0 -13887-3 0 5214
2 13777 98.9679 172.7910 0012977 314.8175 45.1932 13.99259946378815
Cosmos 1447
1 13916U 83021A 96350.28017004 .00000041 00000-0 27533-4 0 6434
2 13916 82.9478 57.1075 0038814 9.3741 350.8130 13.74349756688611
TDRS 1
1 13969U 83026B 96349.09408205 -.00000296 00000-0 00000+0 0 6811
2 13969 9.2459 41.9911 0003532 215.7374 169.6196 1.00258529 23191
GOES 6
1 14050U 83041A 96351.21053942 -.00000098 00000-0 10000-3 0 5916
2 14050 7.3376 51.9578 0003057 54.9349 309.2427 1.00217294108026
AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
LandSat 5
1 14780U 84021A 96348.59128561 .00000027 00000-0 16258-4 0 5757
2 14780 98.3110 46.1962 0003426 86.6922 273.4668 14.57061947680082
UO-11
1 14781U 84021B 96350.53098959 .00000118 00000-0 27819-4 0 9369
2 14781 97.8146 333.3430 0010730 229.7950 130.2291 14.69507894684281
Cosmos 1574
1 15055U 84062A 96351.20704811 .00000016 00000-0 40413-6 0 8436
2 15055 82.9554 111.7073 0026921 192.3770 167.6719 13.73642133625979
Cosmos 1602
1 15331U 84105A 96350.40190393 .00000204 00000-0 21060-4 0 5257
2 15331 82.5313 303.2348 0022150 68.7623 291.5956 14.84816947659865
ERBS
1 15354U 84108B 96350.54332363 -.00000136 00000-0 93286-5 0 2426
2 15354 56.9955 13.4797 0007767 144.6676 215.4871 14.95002941663964
NOAA 9
1 15427U 84123A 96350.87678261 .00000079 00000-0 65510-4 0 9587
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2 15427 98.9281 55.7128 0015099 155.6953 204.4936 14.13824151619301
Mir
1 16609U 86017A 96351.13813213 .00004193 00000-0 51709-4 0 8790
2 16609 51.6525 286.6910 0013163 146.9833 213.1984 15.62643805618449
SPOT 1
1 16613U 86019A 96349.81307370 -.00000045 00000-0 00000+0 0 148
2 16613 98.8171 57.3411 0001953 89.8148 270.3250 14.19992196245944
Cosmos 1766
1 16881U 86055A 96347.09215500 .00000202 00000-0 21392-4 0 4393
2 16881 82.5191 4.0078 0020830 106.2818 254.0693 14.83786684560229
EGP
1 16908U 86061A 96350.84176560 -.00000083 00000-0 10000-3 0 1397
2 16908 50.0091 158.5202 0011549 114.6062 245.5977 12.44415827139026
NOAA 10
1 16969U 86073A 96350.84704975 .00000006 00000-0 20827-4 0 8899
2 16969 98.5312 342.7937 0012593 179.3391 180.7807 14.25013431532475
MOS-1
1 17527U 87018A 96350.69885257 -.00000043 00000-0 00000+0 0 4935
2 17527 98.9187 48.5483 0017829 180.2733 179.8420 14.00450216500390
GOES 7
1 17561U 87022A 96351.24024946 -.00000165 00000-0 10000-3 0 1904
2 17561 3.4215 68.1379 0002546 301.7410 67.2705 1.00278712 19133
Kvant-1
1 17845U 87030A 96350.62652028 .00017068 00000-0 19171-3 0 8439
2 17845 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838552477
DMSP B5D2-3
1 18123U 87053A 96350.69307411 .00000025 00000-0 35267-4 0 7231
2 18123 98.7632 177.9859 0015039 95.4784 264.8104 14.15461432490170
RS-10/11
1 18129U 87054A 96350.51784597 .00000030 00000-0 15988-4 0 2928
2 18129 82.9258 14.5048 0012802 17.8961 342.2647 13.72372433475047
Meteor 2-16
1 18312U 87068A 96351.13135512 .00000055 00000-0 35532-4 0 5302
2 18312 82.5541 207.7613 0013817 68.9091 291.3546 13.84089188471340
Meteor 2-17
1 18820U 88005A 96350.83568848 .00000068 00000-0 47407-4 0 1243
2 18820 82.5403 262.5877 0016924 131.3659 228.8959 13.84766203448661
DMSP B5D2-4
1 18822U 88006A 96350.85156872 .00000036 00000-0 33980-4 0 4157
2 18822 98.3798 174.2388 0005841 189.1029 171.0048 14.23210451460417
Glonass 34
1 19163U 88043A 96347.37612515 -.00000001 00000-0 10000-3 0 1406
2 19163 65.3427 79.8361 0009179 134.0401 226.0592 2.13102495 66030
Glonass 36
1 19165U 88043C 96347.90248834 -.00000001 00000-0 10000-3 0 5499
2 19165 65.3059 79.7712 0003760 2.8166 357.2118 2.13102233 66662
METEOSAT 3
1 19215U 88051A 96341.81525328 -.00000034 00000-0 10000-3 0 2969
2 19215 3.6100 66.8050 0006013 130.5628 229.1530 0.96946923 18852
OKEAN 1
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1 19274U 88056A 96351.01799754 .00000224 00000-0 24911-4 0 1403
2 19274 82.5135 101.3943 0018273 245.6045 114.3280 14.82550629456317
Meteor 3-2
1 19336U 88064A 96349.67150072 .00000051 00000-0 10000-3 0 5353
2 19336 82.5388 38.7119 0016953 140.5258 219.7103 13.16979969403231
Glonass 39
1 19503U 88085C 96340.89426952 -.00000016 00000-0 10000-3 0 4317
2 19503 65.5212 318.9279 0006330 137.0269 223.0446 2.13101621 64008
NOAA 11
1 19531U 88089A 96350.84864952 .00000000 00000-0 25164-4 0 7801
2 19531 99.1717 13.5839 0012626 90.9937 269.2681 14.13114334424108
TDRS 3
1 19548U 88091B 96344.24256366 -.00000170 00000-0 10000-3 0 2595
2 19548 2.8425 70.9053 0006372 191.1728 348.0769 1.00262066 17289
Glonass 40
1 19749U 89001A 96349.37826751 -.00000005 00000-0 10000-3 0 6456
2 19749 65.2894 79.2799 0006523 255.9248 104.0328 2.13101483 61693
Glonass 41
1 19750U 89001B 96349.43307360 -.00000006 00000-0 10000-3 0 5501
2 19750 65.2958 79.3528 0008251 234.9640 124.9874 2.13101749 61715
GPS BII-01
1 19802U 89013A 96348.63466394 .00000014 00000-0 00000+0 0 3316
2 19802 55.4177 103.4908 0019702 180.2135 179.7735 2.00559050 57316
Akebono
1 19822U 89016A 96351.10598272 .00014450 00000-0 73304-3 0 8302
2 19822 75.0946 18.0165 3731927 328.6465 13.6959 7.95063677181128
Meteor 2-18
1 19851U 89018A 96350.90280847 .00000034 00000-0 16707-4 0 5292
2 19851 82.5193 136.1936 0013688 181.8989 178.2123 13.84421939393972
MOP-1
1 19876U 89020B 96347.62844567 -.00000114 00000-0 10000-3 0 2366
2 19876 2.3507 71.2747 0016943 279.7611 79.3721 0.97110057 8359
TDRS 4
1 19883U 89021B 96346.69137153 -.00000258 00000-0 00000+0 0 2866
2 19883 0.2319 88.1711 0005702 154.7325 45.6713 1.00267856200882
GPS BII-02
1 20061U 89044A 96349.47268776 -.00000030 00000-0 10000-3 0 3264
2 20061 54.0823 278.9498 0165635 223.3862 135.3259 2.00562923 55076
Nadezhda 1
1 20103U 89050A 96350.48055480 .00000039 00000-0 25623-4 0 46
2 20103 82.9546 334.9690 0036301 270.3354 89.3642 13.73871834373575
GPS BII-03
1 20185U 89064A 96351.17608866 .00000007 00000-0 10000-3 0 3747
2 20185 55.0423 103.6682 0184840 305.3237 52.9418 2.00807855 53687
GMS 4
1 20217U 89070A 96346.64649285 .00000000 00000-0 10000-3 0 5033
2 20217 2.1244 73.2857 0003182 253.9951 105.9739 1.00278561 27202
INTERCOSMOS 24
1 20261U 89080A 96350.84099706 .00000067 00000-0 17027-4 0 5510
2 20261 82.5894 154.7075 1242062 348.6378 8.8855 12.47369702328552
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GPS BII-04
1 20302U 89085A 96348.84247331 .00000041 00000-0 10000-3 0 3532
2 20302 53.1964 218.7171 0024992 186.4741 173.5715 2.00571007 52436
Meteor 3-3
1 20305U 89086A 96350.52842210 .00000044 00000-0 10000-3 0 7099
2 20305 82.5440 359.2080 0006020 234.5798 125.4702 13.04433602341845
COBE
1 20322U 89089A 96349.53241718 .00000275 00000-0 20372-3 0 2674
2 20322 98.9339 1.6922 0008306 257.4801 102.5447 14.03463182362226
Kvant-2
1 20335U 89093A 96350.62652028 .00017068 00000-0 19171-3 0 7695
2 20335 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838401489
GPS BII-05
1 20361U 89097A 96349.35930078 -.00000051 00000-0 10000-3 0 1545
2 20361 56.0968 46.1582 0094564 140.3190 220.4333 2.00565583 41927
COSMOS 2054 (Altair-1)
1 20391U 89101A 96350.06202323 -.00000138 00000-0 00000+0 0 4778
2 20391 4.1913 62.2947 0003131 174.6961 212.9550 1.00275199 25811
SPOT 2
1 20436U 90005A 96348.25095746 -.00000044 00000-0 00000+0 0 1627
2 20436 98.7486 59.3554 0001206 113.0076 247.1228 14.20015868357250
UO-14
1 20437U 90005B 96347.20220662 -.00000005 00000-0 14875-4 0 2324
2 20437 98.5347 66.7954 0011910 40.1294 320.0773 14.29941463359498
AO-16
1 20439U 90005D 96350.72189000 -.00000019 00000-0 96143-5 0 318
2 20439 98.5505 72.7974 0011993 31.6633 328.5276 14.29992661360015
DO-17
1 20440U 90005E 96350.79607098 -.00000042 00000-0 34611-6 0 329
2 20440 98.5536 73.6113 0012440 30.9765 329.2152 14.30134919360053
WO-18
1 20441U 90005F 96350.78983261 -.00000011 00000-0 12375-4 0 358
2 20441 98.5527 73.5238 0012698 30.8668 329.3262 14.30103763360053
LO-19
1 20442U 90005G 96350.84163179 .00000019 00000-0 24054-4 0 314
2 20442 98.5540 74.1495 0013567 28.6466 331.5453 14.30215744360081
GPS BII-06
1 20452U 90008A 96349.75467193 .00000075 00000-0 10000-3 0 2510
2 20452 54.0437 159.4117 0074838 91.2196 269.7773 2.00550983 50439
MOS-1B
1 20478U 90013A 96350.22346220 .00000168 00000-0 15999-3 0 79
2 20478 99.1110 57.3381 0006124 109.1227 251.0597 13.93970858269779
DEBUT
1 20479U 90013B 96347.01933182 .00000069 00000-0 21911-3 0 310
2 20479 99.0229 338.2659 0541003 80.7668 285.4182 12.83347717320715
FO-20
1 20480U 90013C 96351.04695389 -.00000067 00000-0 -85699-4 0 9283
2 20480 99.0224 341.2927 0541166 72.2650 293.6741 12.83235388321219
MOS-1B R/B
1 20491U 90013D 96344.74729878 -.00000359 00000-0 -60761-3 0 3016
```

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2 20491 99.0623 46.9253 0469451 243.3691 111.8608 13.02995539324722
LACE
1 20496U 90015A 96350.86259537 .00001373 00000-0 46221-4 0 7120
2 20496 43.1027 245.9301 0010122 162.8239 197.2961 15.36184947381769
Nadezhda 2
1 20508U 90017A 96350.87864766 -.00000002 00000-0 -18477-4 0 38
2 20508 82.9486 109.1531 0042864 220.3821 139.4151 13.73515131340838
OKEAN 2
1 20510U 90018A 96350.80819998 .00000114 00000-0 12361-4 0 5484
2 20510 82.5251 57.0711 0020772 83.5632 276.7949 14.78649959366516
GPS BII-07
1 20533U 90025A 96343.15602082 -.00000039 00000-0 00000+0 0 2926
2 20533 54.4477 280.0123 0048409 77.9996 282.5546 2.00569707 49072
PegSat
1 20546U 90028A 96350.80289739 .00007314 00000-0 12482-3 0 69
2 20546 94.1261 96.0305 0058229 23.3821 337.0071 15.49444675373104
HST
1 20580U 90037B 96348.50270340 .00000310 00000-0 15410-4 0 8993
2 20580 28.4675 145.8391 0006003 248.1184 111.8765 14.91140653165372
MACSAT 2
1 20608U 90043B 96351.04977556 .00000131 00000-0 19439-4 0 2335
2 20608 89.9255 171.8340 0106675 138.8192 222.1136 14.64962521352914
Glonass 44
1 20619U 90045A 96348.80684217 -.00000022 00000-0 10000-3 0 3490
2 20619 65.1135 317.8152 0025621 209.5914 150.2856 2.13102513 51139
Glonass 45
1 20620U 90045B 96350.80256749 -.00000024 00000-0 10000-3 0 3379
2 20620 65.1052 317.7186 0008520 45.9336 314.1242 2.13102528 51219
Glonass 46
1 20621U 90045C 96339.13861834 -.00000016 00000-0 10000-3 0 9456
2 20621 65.1238 318.1772 0012921 196.8449 163.1199 2.13102528 50967
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2 20635 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838372311
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1 20638U 90049A 96350.03808917 .00000108 00000-0 25820-4 0 6188
2 20638 52.9926 204.5676 0011402 322.5514 37.4683 15.07515394359596
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2 20670 82.5469 203.8099 0016698 102.3020 258.0010 13.84131311326834
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2 20724 55.0570 101.4937 0131616 186.7825 173.0716 2.00565299 45034
Feng Yun1-2
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Meteor 2-20
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2 20830 56.0392 44.0447 0065165 94.4254 266.3778 2.00568181 45711
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2 20959 55.2431 103.4608 0111144 235.7962 123.1307 2.00556820 44323
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2 20978 98.5796 60.2991 0079307 354.9307 5.1062 14.32703436315721
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2 21006 65.2726 78.8203 0057188 186.0433 173.9000 2.13102799 46724
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2 21007 65.2842 78.8002 0033200 178.0277 182.0021 2.13101165 46772
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RS-12/13
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Glonass 57
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GPS BIIA-17
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TDRS 6
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Glonass 59
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Glonass 61
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ASTRO-D
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NOAA 13
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Meteor 2-21
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UFO F2
1 22787U 93056A 96349.94925596 -.00000065 00000-0 00000+0 0 6986
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SPOT 3
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AO-27
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IO-26
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MSTI 2
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Nadezhda 4
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Glonass 67
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OKEAN 1-7
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OSC 2
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ERS-2
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Helios 1A
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1 23606U 95033B 96349.82687697 .00000198 00000-0 43681-4 0 2370
2 23606 98.1194 284.7120 0007880 344.5114 15.5849 14.67324780 77200
CERISE
1 23607U 95033C 96350.88601880 .00000067 00000-0 20681-4 0 1402
2 23607 98.1182 285.5575 0006423 340.6440 19.4484 14.66984301 77378
TDRS 7
1 23613U 95035B 96350.19978894 .00000097 00000-0 00000+0 0 2690
2 23613 1.0555 81.8348 0002922 166.5482 96.6770 1.00281412 5191
Glonass 74
1 23620U 95037A 96348.70281004 .00000078 00000-0 00000+0 0 2200
2 23620 64.8212 197.9670 0018467 163.0382 197.0993 2.13103121 10830
Glonass 75
1 23621U 95037B 96349.34987556 .00000074 00000-0 00000+0 0 2315
2 23621 64.8260 197.9474 0018049 173.8606 186.2303 2.13102262 10841
Glonass 76
1 23622U 95037C 96348.46939882 .00000080 00000-0 00000+0 0 2369
2 23622 64.8185 197.9814 0036776 163.3425 196.8564 2.13102631 10820
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Prognoz-M2
1 23632U 95039A 96347.64998010 -.00000676 00000-0 00000+0 0 976
2 23632 71.6610 247.8830 7805094 326.3990 21.2160 0.26373900 1324
SICH-1
1 23657U 95046A 96350.24044025 .00000122 00000-0 15213-4 0 1310
2 23657 82.5331 33.9118 0027632 178.3164 181.8111 14.73516188 69495
RADARSAT
1 23710U 95059A 96349.58459891 .00000142 00000-0 72025-4 0 2171
2 23710 98.5785 353.7053 0001165 60.7370 299.3926 14.29983067 58023
Glonass 79
1 23734U 95068A 96349.05667434 .00000076 00000-0 00000+0 0 2101
2 23734 64.8250 197.8775 0017392 328.0759 31.8912 2.13102230 7809
Glonass 78
1 23735U 95068B 96349.71922623 .00000073 00000-0 00000+0 0 2038
2 23735 64.8223 197.8406 0006154 202.4111 157.6300 2.13125049 7814
Glonass 77
1 23736U 95068C 96348.82185059 .00000077 00000-0 00000+0 0 1813
2 23736 64.8080 197.8870 0007271 186.9924 173.0712 2.13102245 7799
XTE
1 23757U 95074A 96347.19654324 .00000538 00000-0 15980-4 0 1076
2 23757 22.9819 280.0053 0013389 31.7531 328.3775 14.97740068 52186
Polar
1 23802U 96013A 96349.94576061 .00000081 00000-0 00000+0 0 880
2 23802 86.3241 24.1170 6535055 277.2347 17.9242 1.36265221 4026
1996010E
1 23824U 96010E 96347.14656182 .00332021 00000-0 35946-1 0 1482
2 23824 47.5190 203.8640 7220150 72.3883 349.6559 2.37871914 6614
GPS BIIA-25
1 23833U 96019A 96349.38420735 -.00000056 00000-0 00000+0 0 1226
2 23833 54.6515 340.6800 0028792 143.2141 216.9918 2.00564983 5291
Priroda
1 23848U 96023A 96350.62652028 .00017068 00000-0 19171-3 0 2109
2 23848 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838 36889
MSX
1 23851U 96024A 96351.08803933 -.00000047 00000-0 00000+0 0 1508
2 23851 99.3985 334.3225 0006206 20.0727 340.0424 13.97495612 32906
SAX
1 23857U 96027A 96343.48681186 .00001179 00000-0 41425-4 0 456
2 23857 3.9494 284.3100 0012499 354.1731 6.1064 14.91674524 33212
MSTI 3
1 23868U 96031A 96348.55488986 .00000856 00000-0 18859-4 0 938
2 23868 97.1184 175.9092 0009139 240.8706 119.1630 15.46665222 32534
TOMS-EP
1 23940U 96037A 96351.22984095 .00002648 00000-0 11985-3 0 679
2 23940 97.4321 254.4205 0014698 65.9209 294.3565 15.21681835 25312
GPS BIIA-26
1 23953U 96041A 96350.29638589 .00000008 00000-0 00000+0 0 926
2 23953 55.0693 100.9867 0026932 329.7448 30.0882 2.00563445 3106
ADEOS
1 24277U 96046A 96350.20890328 -.00000044 00000-0 00000+0 0 1217
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2 24277 98.6165 64.5482 0000907 23.0213 337.1013 14.27646116 17111
FO-29
1 24278U 96046B 96351.21372502 -.00000028 00000-0 11102-4 0 445
2 24278 98.5687 51.1757 0351173 300.3231 56.3607 13.52627269 16384
Soyuz TM-24
1 24280U 96047A 96350.62652028 .00017068 00000-0 19171-3 0 1149
2 24280 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838 18789
FAST
1 24285U 96049A 96349.90690717 .00000729 00000-0 73928-4 0 441
2 24285 82.9904 124.7153 2207263 318.2546 26.9143 10.81640111 12493
Microsat
1 24291U 96050A 96351.15811187 .00040804 62802-5 27160-3 0 915
2 24291 62.7917 18.5483 0610344 123.2998 242.8104 14.67437090 15933
MO-30
1 24305U 96052B 96350.44401218 .00000204 00000-0 20364-3 0 527
2 24305 82.9296 130.3701 0029972 359.5463 0.5657 13.73086171 13847
GPS BIIA-27
1 24320U 96056A 96349.16351918 -.00000028 00000-0 00000+0 0 500
2 24320 54.7056 281.1474 0051225 99.5124 261.0868 2.00568286 1742
SAC-B/HETE
1 24645U 96061A 96351.09610558 .00000425 00000-0 28291-4 0 304
2 24645 37.9778 236.2886 0048908 272.3951 87.1214 15.14795512 6286
Progress M-33
1 24663U 96066A 96350.62652028 .00017068 00000-0 19171-3 0 278
2 24663 51.6533 289.2813 0013160 143.0508 217.1293 15.62650838 4026
1996066B
1 24664U 96066B 96327.41277526 .58399191 12743-4 19260-3 0 190
2 24664 51.6425 45.7297 0017318 127.1554 233.1175 16.57786928 401
Hot Bird 2
1 24665U 96067A 96327.75000000 .00002618 73664-6 10000-3 0 62
2 24665 23.8873 196.7180 7311335 179.2354 352.6087 2.28438038 23
1996067B
1 24666U 96067B 96348.16957079 .00068365 -79526-6 11577-2 0 264
2 24666 23.8616 187.4398 7277915 194.3610 120.7071 2.33452473 498
1996068B
1 24668U 96068B 96351.19289612 .00260499 23528-5 66742-3 0 283
2 24668 36.3851 291.1676 1787325 84.1622 295.8942 12.16299467 1447
1996069A
1 24670U 96069A 96350.22912502 -.00008345 00000-0 -13253-3 0 119
2 24670 65.0421 282.8624 0010525 266.0583 93.9339 15.52044402 579
1996069B
1 24671U 96069B 96347.11039533 .49714734 85636-5 28432-3 0 89
2 24671 65.0090 293.1401 0084681 53.5910 308.4744 16.43706240 94
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
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2753. Decoding Hubble Images

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: Not Setup <Not.Setup@conoco.dupont.com>
Message-ID: <32B61D05.4E65@conoco.dupont.com>
Source record: 20530

Is there a cheap method for decoding Hubble Telescope images?
Is there a kit to build?
What frequency and mode of transmission (WFM, NFM, Spread Spectrum)does
Hubble use?
Please reply to me in this group.
Thanks,
Hawkeye

2754. Re: Repeater on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-16 00:00:00 UTC
From: Bob Snyder <rsnyder@pcisys.net>
Message-ID: <32B60240.68B0@pcisys.net>
Source record: 20531

orion@capital.net wrote:
> Can someone tell me the frequency of the 70 centimeter repeater aboard
> Mir? I saw it somewhere, but can't remember what it was. I need the
> uplink and downlink or offset.

FM repeater with CTCSS subtone 141.3 Hz.
Downlink 437.950 MHz
Uplink 435.750 MHz

Hope this helps,
Bob
KB0YGD

2755. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: Ken Harris <kjh@shoreline-studios.com>
Message-ID: <01bbebe2$4cb3ab00$22e10ece@vantive->
Source record: 20532

Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
> Ken,
>
> I may not be of much help but I have assisted W4AVO (George) put his
> station together. He is a live aboard and blue water sailor. Last year
> he was in the Bahamas and will be there again this year. He has been on
> UO22 and has used his station very succesfully. AF4N Wes and I have both

Very interesting. What kind of gear? Radio? TNC? Software?
Was the radio modified for 9600? How much power do you transmit?

2756. Wanted - TV Sat Antenna

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: Antonio D Robinson <adr76@ix.netcom.com>
Message-ID: <5959ls$k71@dfw-ixnews7.ix.netcom.com>
Source record: 20533

Looking for 12-15' alum TV Sat Antenna, just the antenna, do not need Mwave horn....
Thanks!

2757. My Hat's Off to Mir-EVA

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: gsteve490@aol.com
Message-ID: <19961217054700.AAA29913@ladder01.news.aol.com>
Source record: 20534

tough enuff to run up the tower in the middle of winters night to fix a broken 2m antenna, at least the wind was nominal for such an adventure.

fly on, peace.

george n2lzh

2758. Re: How Do I Start Out Cheap?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: Philip Peake <philip@vogon.rain.com>
Message-ID: <32B6C91A.66EC@vogon.rain.com>
Source record: 20535

Scott Babb wrote:
>
> In article <slrn5amsi8.3am.cathryn@junglevision.junglevision.com>,
cathryn@junglevision.junglevision.com (cathryn) wrote:
> >In article <58aocb$n8g@news-central.tiac.net>, Scott Babb wrote:
> >>I'm looking for advice.
> >>
> >>How do I start out cheap in satellite/EME communication? I'll take advice on
> >>anything: antennas, transverters, converters, LNA's, all-mode rigs, whatever.
> >>
> >>Thanks de wa1vht
> >
> >I'm kind of on the same quest. At least to figure out where to spend the
> >first $2K. Which I don't think is really cheap by most people's standards,
> >but which is a little bit less than what it takes to walk into HRO and
> >just do the whole thing brand new. My impression is that the guys who
> >are pretty serious about this seem to have the 726 or 736 and the KLM/M2
> >antenna set. Personally, I put a lot of confidence in conventional
> >wisdom. So, to go this way, the game seems to become, how to scrounge up
> >this kind of system. (Of course with preaamps, amplifiers and all that.)
> >
> >Personally, my thinking now on how to do this in gradual, stages
> >is to do the antenna side first. New. At least deal with
> >the tracking, feedline and preamp issues. While finding a used 2M SSB radio.
> >Maybe working RS-10 , Mir or something, and then trying to hear sats on
> >440 Mhz with converters. (Not sure if 440->28mHZ or 440->144Mhz is better?)
> >
> >By then, I figure a few months will have passed, I'll be able to hear
> >what's going on, and either I'll be anxious to be rid of the whole thing
> >or I'll be lusting after a, probably used, 726/736. By then, I figure we'll
> >know whether P3d is going to be really cool, etc. Fingers crossed.
>
> I haven't received much of a response from this group. What I'm trying to do
> is counter people who tell me that Amateur Radio is too expensive in general
> and also the hams who think that space communication is very expensive.
>
> What I've been able to find out so far is that Hamtronics has xmit and recv
> converters available in kit form. They also have LNA kits. Down East
> Microwave has transverters, LNA's, antennas, etc. These are more expensive,
> but still much less than an FT-736 (even without the extra band modules).
> Once you get above 70cm with the DEM transverters, you need a 2m all-mode rig.
> Their 6/2/70 transverters all work with HF rigs, but the 900Mhz-an-up ones
> convert to 2 meters.
>

> For gain-per-buck, it looks hard to beat a quad. They're also hard to beat
> for ice loading and cumbersomeness (at lower freq's, anyway.) Lightning Bolt
> has 2m and 70cm quads that are good for about 12 dBd and not too expensive.
>
> Of course, you can work CW through RS-10 with your FM HT (no PL or audio) and
> a 10 meter receiver. MIR and the Shuttle are also workable with relatively
> little investment, other than a good antenna and an amplifier for your HT.
>
> Anyone else have any suggestions?

Suggestions based upon a little practical experience, and some guesses based upon that.

I started out with not too much money to spend, but I hade been promising myself a decent multi-band VHF/UHF rig for a long time, so I blew most of the budget on an FT-736R. Its a nice rig even if you don't work satellite with it.

I bought a GP-9 antenna to go with it, just so that I could use it. A GP-9 is a 2M/70cm vertical antenna. It is fed through a diplexer arrangement.

I was relatively happy with this setup for local FM and SSB work.

I had read the same books and articles that you probably have, detailing the exotic and expensive antenna/rotator/amplifier/feed-line needed to work satellite.

So I was a little surprised when I tried listening for various satellites and could actually hear stuff. The high orbit satellites (AO-13, AO-10) were pretty much useless, but the low orbit satellites could be copied!

Encouraged by this, I tried transmitting a few "bips", and was pleasantly surprised that occasionaly I could hear them coming back. HRO had a "special" on Mirage amplifiers about that time, so I bought a 25w in/160w out 2M amp, and hooked that in. With this setup I have had several QSOs through FO-20 and FO-29.

It is far from ideal, but it can be done. If you want the ease and convenience of a repeater contact - forget it, but if you are prepared to work for your contact, go ahead.

With the same setup I had a conversation with Mir, and have even managed to raise the 70cm repeater on Mir, and initiate, but not complete, a contact.

(25W to a GP-9 just isn't good enough for that).

The biggest problems that I have are the doppler shift, which can be a real problem
when the satellite gets close, and the radiation pattern of the GP-9 isn't
designed to cover the sky, so there are big nulls.

So, what do you need (minimally) to work (say) FO-20 ?

- A 70cm receiver
- A 2M SSB transmitter running 100+ watts
- Simple antennas (I suspect a couple of 1/4 wave groundplanes might work)

To work Mir and/or the shuttle a 2M FM tranceiver, with maybe 10/20 watts
and almost any outdoor antenna should do.

That should get you a contact.

If you don't mind building antennas, Lindenblads might be a good idea
(see AMSAT web site for details).

What I am going to do next is:

- Build a TrakBox kit ($250 from TAPR)
This will initially be used for doppler correction, later
to control an antenna system.

- Build a couple of helix antennas for 70cm.
The antenna design used by AF9Y (http://www.webcom.com/af9y/)
to listen to the Mars probe is the basis. A couple of these
cut down to 5' will give a 70CM antenna system which is
much shorter, and easy to manipulate than an 18' crossed Yagi.
Adding another two helix in the opposite sense will allow
RHC/LHC switching with a simple antenna relay.
Buy a Yaesu H/V rotator (about $500) to direct this setup.

- Use an omni-directional antenna for the 2M uplink. Possibly a Lindenblad,
or maybe an M2 "eggbeater".

- Add a LNA to the 70cm antenna (if needed).

My main piece of advice is to invest firstly in the TX/RX system.
The FT-736 is less than $2000, and if you can afford it, it is worth the money,
if only for the "satellite mode", which allows you to tune the RX, and the TX is
tuned in the opposite direction, and it is full (cross-band) duplex, which you need
to be able to find your own signal. The CAT interface is useful too when you later

add something like a TrakBox to control the doppler shift.

Remember that most of the books/articles were written by people trying
to use
high orbit satellites, where extreme losses occur, so extensive antennas
etc are needed - they won't do you any harm with LEO satellites - but
are not
essential.

You don't need to spend thousands on a large crossed yagi antenna array.
Rx is the main part to concentrate on, and for 70cm a home brew helix
is easy to build, and gives good gain in a short length - short means
you don't
have to have a big tower to mount it on.

For Tx, particularly on 2M, you can compensate for lack of antenna gain
with more power.
Concentrate on getting even coverage of the sky. Of course, once you
have your 70cm
helix array working, tacking a two or three element 2M beam onto the
same positioning
system shouldn't be a big deal - then you can reduce the Tx power.

Use good co-ax, but don't go out an get a second mortgage to buy
hardline, until
and unless you *really* need it. A mast mounted LNA will overcome losses
in the Rx feeder,
ans turning the Tx power up a bit will overcome losses in that
direction.

(Purists will have stopped reading this some time ago, so I feel safe
that the
last paragraph won't cause any heart attacks or strokes :-)

Philip

2759. Re: Decoding

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: Tom Kreyche <tomkr@microsoft.com>
Message-ID: <01bbec68$57a8e120$769e389d@DISCUS>
Source record: 20536

Get a copy of Nuts and Volts Magazine, there's tons of stuff there.

TAZ <Taz@bigfoot.com> wrote in article <32B41FA2.6168@bigfoot.com>...
> I am interested in learning about signal decoding and possibly building
> a decoder for cable TV. Is anyone aware of a good resource to learn
> more about this subject?
>

2760. ARLK093 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk093.1996@arrl.org>
Source record: 20537
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK093
ARLK093 Keplerian data

ZCZC SK93
QST de W1AW
Keplerian Bulletin 93 ARLK093
From ARRL Headquarters
Newington, CT December 17, 1996
To all radio amateurs

SB KEP ARL ARLK093
ARLK093 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96285.03170314 -.00000150 00000-0 10000-3 0 4581
2 14129 25.8858 184.9970 6048316 56.3073 347.4042 2.05879930 72258
RS-10/11
1 18129U 87054A 96351.10110488 .00000030 00000-0 16262-4 0 02988
2 18129 82.9252 14.0731 0012707 16.5857 343.5713 13.72372450475125
UO-11
1 14781U 84021B 96351.07571970 .00000109 00000-0 26220-4 0 09396
2 14781 97.8146 333.8643 0010736 227.8283 132.2002 14.69507992684366
RS-12/13
1 21089U 91007A 96351.15675940 .00000061 00000-0 48210-4 0 09455
2 21089 82.9221 54.3975 0030628 85.8132 274.6528 13.74075558294021
UO-14
1 20437U 90005B 96351.26062985 .00000034 00000-0 29870-4 0 2330
2 20437 98.5346 70.7738 0011958 28.0841 332.0982 14.29942365360070
RS-15
1 23439U 94085A 96351.36413055 -.00000039 00000-0 10000-3 0 1841
2 23439 64.8168 88.4734 0155211 166.6946 193.8139 11.27528945 81325
AO-16
1 20439U 90005D 96350.72189000 -.00000019 00000-0 96143-5 0 318
2 20439 98.5505 72.7974 0011993 31.6633 328.5276 14.29992661360015
DO-17
1 20440U 90005E 96351.00596101 -.00000042 00000-0 37846-6 0 00330
2 20440 98.5536 73.8176 0012440 30.3594 329.8306 14.30134919360088
```

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WO-18
1 20441U 90005F 96350.78983261 -.00000011 00000-0 12375-4 0 358
2 20441 98.5527 73.5238 0012698 30.8668 329.3262 14.30103763360053
LO-19
1 20442U 90005G 96351.19142893 .00000023 00000-0 25591-4 0 00326
2 20442 98.5540 74.4933 0013568 27.5815 332.6089 14.30215827360133
FO-20
1 20480U 90013C 96351.04695389 -.00000067 00000-0 -85699-4 0 9283
2 20480 99.0224 341.2927 0541166 72.2650 293.6741 12.83235388321219
AO-21
1 21087U 91006A 96351.05925561 .00000094 00000-0 82657-4 0 07725
2 21087 82.9416 187.1063 0036925 59.6131 300.8666 13.74575463294993
UO-22
1 21575U 91050B 96351.19705165 .00000024 00000-0 22328-4 0 7381
2 21575 98.3300 51.9613 0008633 81.1076 279.1086 14.37048953284206
KO-23
1 22077U 92052B 96350.95410738 -.00000037 00000-0 10000-3 0 06280
2 22077 66.0788 168.8858 0015219 254.2559 105.6781 12.86299500204184
KO-25
1 22828U 93061F 96351.28126163 -.00000005 00000-0 15444-4 0 5011
2 22828 98.5628 63.6727 0011151 42.2435 317.9592 14.28162056136104
IO-26
1 22826U 93061D 96351.20320846 .00000020 00000-0 25722-4 0 05426
2 22826 98.5671 63.5248 0010082 57.7477 302.4666 14.27821408167978
AO-27
1 22825U 93061C 96351.15068603 .00000024 00000-0 27212-4 0 05441
2 22825 98.5663 63.2690 0009631 56.2968 303.9129 14.27712347167952
FO-29
1 24278U 96046B 96351.21372532 -.00000039 00000-0 -88126-6 0 00735
2 24278 98.5687 51.1754 0351144 300.3233 56.3606 13.52627155016384
MO-30
1 24305U 96052B 96350.88122848 .00000204 00000-0 20364-3 0 00546
2 24305 82.9299 130.0470 0030020 358.2134 1.8905 13.73086325013905
Mir
1 16609U 86017A 96351.45788768 .00004297 00000-0 52836-4 0 8800
2 16609 51.6529 285.0771 0013054 147.9679 212.2099 15.62647682618498

Keplerian bulletins are transmitted twice weekly from W1AW.
The next scheduled transmission of these data will be Saturday,
December 21, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2761. Re: Decoding Hubble Images

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: Chris Lewicki <chrisl@gamma1.lpl.arizona.edu>
Message-ID: <596r5i$t08@news.ccit.arizona.edu>
Source record: 20538

Not Setup <Not.Setup@conoco.dupont.com> wrote:
: Is there a cheap method for decoding Hubble Telescope images?

Go to http://www.stsci.edu/

: Is there a kit to build?

Yes, but its probably illegal.

: What frequency and mode of transmission (WFM, NFM, Spread Spectrum)does
: Hubble use?

I'm pretty sure that HST images are encrypted in order to maintain data access rights for the astronomers involved. Images are usually transmitted to TDRS and then transmitted from there to Goddard or STSCI.

Short answer, you can't get HST imagery from HST yourself.

--

Christopher A. Lewicki KC7NYV 520.621.4662 Maintainer of SEDS.LPL.Arizona.EDU
Chair, Students for the Exploration and Development of Space (SEDS-USA)
"Watch the stars, and from them learn." - Albert Einstein

2762. Sat gear for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-12-17 00:00:00 UTC
From: George.Henry@115-668.station1.planetc.com
Message-ID: <b21_9612181145@station1.planetc.com>
Source record: 20539

Posting for a friend who does not have access:

Kenwood 790A all-mode 2M/432. New condition. $1325

PacComm NB96 TNC and PSK-1 modem. ??? (what did they go for new?)

M2 432 Eggbeater with Ampire 20 dB mast-mount preamp (RF-switched, handles
up to 100 Watts) $200

Contact Bob, W3MDM, directly at (630) 653-2421, or at his callbook address.

73 de KA3HSW

2763. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: kwalker@qb.island.net
Message-ID: <597r9p$3vh@cliff.island.net>
Source record: 20540

In article <01bbebe2$4cb3ab00$22e10ece@vantive->, "Ken Harris" <kjh@shoreline-studios.com> wrote:
>
>
>Herb Perkins <wa2jrv@amsat.org> wrote in article <32B005D0.9C@amsat.org>...
>> Ken,
>>
>> I may not be of much help but I have assisted W4AVO (George) put his
>> station together. He is a live aboard and blue water sailor. Last year
>> he was in the Bahamas and will be there again this year. He has been on
>> UO22 and has used his station very succesfully. AF4N Wes and I have both
>
> Very interesting. What kind of gear? Radio? TNC? Software?
>Was the radio modified for 9600? How much power do you transmit?

All of the details are on George's home page at:
http://www5.palmnet.net/~ghunt/
Check it out. Great info!

Now I am wondering whether a dual band mobile rig would do the job like the two Alinco mobile rigs, the DR605 and the DR610, which they say are 9600 baud ready, would work. Details on them can be found at :
http://www.durhamradio.ca/alinco.htm
Both feature rear-panel data jack for easy connection.

Any further comment???

From: Ken Walker VE7KGW (kwalker@qb.island.net)

2764. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: FUman <kg7fu@rio.com>
Message-ID: <01bbeca4$b5296040$b68260ce@surf.rio.com>
Source record: 20541

ashleyb@ohsu.edu wrote in article <58n8qe$dvf@fremont.ohsu.edu>...
> To The Group:
>=20
>=20
> I'm in the process of setting up a satelite system. A few local guys
> are having fun with RS-10. What I would like to do is to set up a nice
> beginners station. I currently have a IC-275A with a GP-3 for the Up =
link
> and two different HF xcvr's to set up the down link. My question is =
would
> an HF vertical like the Ringo ranger AR-10 work or maybe an inverted V
> dipole. I am reading the ARRL satelite handbook but I'd like to hear =
from
> some people actually working the birds. Also should I get a pre-amp =
and if
> so does anyone have any recommendations ie buy,build?? Thanks for your
> help.

I use a turnstile for 10m in my apartment's attic/crawlspace. Cheap, =
easy,
cross-polarized and effective from horizon to horizon.

The 2m uplink is also a turnstile sitting above my radio desk! I use an =
Icom
706 for the uplink and a Uniden 2510 for the downlink.

cu on the ez-sats!

de kg7fu
Eugene, OR CN84

2765. KL7 on RS-10 or RS-15??

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: FUman <kg7fu@rio.com>
Message-ID: <01bbeca5$172e7460$b68260ce@surf.rio.com>
Source record: 20542

I'd like to make a sked for mode A cw or ssb with any station in
Alaska.

How about it?

de kg7fu
Eugene, OR CN84

2766. Mir greeting on their UHF repeater . . .

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: Mark McGregor <kb9khm@expert.cc.purdue.edu>
Message-ID: <32B84512.20DC@expert.cc.purdue.edu>
Source record: 20543

Did anyone else hear the greeting (Merry Christmas) from the Mir crew over the UHF repeater last night? I'm assuming it was a recording, but I'm not sure. Anyone else know? Also, I was supprised to hear the downlink on 437.930 (give or take for doppler) instead of the normal downlink frequency.

Mark <KB9KHM>

2767. Antenna help wanted

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: francist@corexco.com
Message-ID: <32b872bf.0@news.total.net>
Source record: 20544

Hi!

I'm currently using a VHF satellite network (Orbcomm) in remote monitoring application. My main problem is the size of the antenna which make it too visible to vandalism and thieft. The antenna I currently use is about 45 inch long and has 4 32 inch long radials. I'm looking for a small/compact antenna that could be hidden easily. Here are some specs:

Frequency range: 138-150 Mhz
Transmitter power: 5 watts
The gain can be unity or more
For some reason, in my application, the antenna need a ground plane (work ok without it anywhere else!!). I might be able to find a way to make it work without it so a built in ground plane is not important.

If anybody knows a manufacturer who has that kind of antenna, or a place where i could find some information about antennas, please E-mail me!

Thanks
Francis Taillon
francist@corexco.com

2768. ARLS017 Phase 3D delayed

Newsgroup: rec.radio.amateur.space
Date: 1996-12-18 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arls017.1996@arrl.org>
Source record: 20545
Cross-posted to: rec.radio.info,rec.radio.amateur.space

SB SPACE @ ARL $ARLS017
ARLS017 Phase 3D delayed

ZCZC AS25
QST de W1AW
Space Bulletin 017 ARLS017
From ARRL Headquarters
Newington, CT December 19, 1996
To all radio amateurs

SB SPACE ARL ARLS017
ARLS017 Phase 3D delayed

The European Space Agency has announced a launch delay for Ariane 502, the rocket that is supposed to carry Phase 3D. AMSAT-NA Executive Vice President Keith Baker, KB1SF, reports that the launch has been pushed back to ''early July,'' but said a specific launch date was not yet available. ESA said the change resulted from the recent establishment of a ''detailed timetable'' that's required to permit launch.

A brief ESA news release said: ''As each individual operation will require very close analysis, the 502 campaign is scheduled to begin on Wednesday 9 April 1997, the launch itself being planned for early July.''

''We'll be ready,'' said Baker, adding that the new schedule will give AMSAT ''a little more time to make things right.'' The Phase 3D satellite itself is under assembly in Orlando, Florida. Baker said there's still a lot of work to be done, but the project was on schedule for an April launch. The new launch schedule means that the Phase 3D satellite will not be operational until September or October.

''Obviously we would like to have the satellite in orbit a lot sooner,'' said Baker. ''But we don't want anything to be launched if it's not ready.''
NNNN
/EX

2769. Re: ARLS017 Phase 3D delayed

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: Mike Willis <mjw@rcru.rl.ac.uk>
Message-ID: <32B8FA04.AA8@rcru.rl.ac.uk>
Source record: 20546

w1aw@arrl.org wrote:
>
> SB SPACE @ ARL $ARLS017
> ARLS017 Phase 3D delayed
>
Now there is a surprise. How unusual for Ariane to be delayed.

2770. -= VK2THN HTTP URL update =-

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: ptitze@mail.usyd.edu.au
Message-ID: <32b922ec.896372@news.usyd.edu.au>
Source record: 20547
Cross-posted to: rec.radio.amateur.space,aus.radio.packet,rec.radio.amateur.misc

Citizens of the planet Earth,

As of the 1st of January 1997, my old HTTP URL will be invalid.
The new URL to my homepage, which is now effective is as follows:

http://www-personal.usyd.edu.au/~ptitze/vk2thn.htm

Please update your links.

Paul, VK2THN/HACK.AU.

Quote of the Day,
Picard: Space, the final frontier. These are the voyages of the
Starship Enterprise. Its continuing mission: to explore strange new
worlds, to seek out new life and new civilizations, to boldly go where
no one has gone before.
--"Encounter At Farpoint", Stardate 41456.8

http://www-personal.usyd.edu.au/~ptitze/sig.txt

2771. TEST

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: rinda@pl.jaring.my
Message-ID: <59blie$8ng@news2.jaring.my>
Source record: 20548

TEST

2772. MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: Steven Stark <steves68@mindspring.com>
Message-ID: <32B98365.60BC@mindspring.com>
Source record: 20549

Where is Mir These days on Packet? I have tried 145.55 and 145.80 I havn't seen any packets in the last Few days. This is the first I have tried in a year or so, Has he moved??
--
X-Signature: AKA

Steve Stark (steves68@mindspring.com)
.

2773. test

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: JungHo Yu <kc8djq@amsat.org>
Message-ID: <32B98662.558C@amsat.org>
Source record: 20550
Body handling: Binary attachment payload not displayed: M0pbedvo.jpg

```
test
--
"Make your Dream Biger even if you can't accomplish it in future"

[One or more binary attachments are retained only in the source text.]
```

2774. Need info about military satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: JungHo Yu <kc8djq@amsat.org>
Message-ID: <32B9A1F0.865@amsat.org>
Source record: 20551

I need info about the freqs of military satellite and other info.
I saw some special forces using satellite communication system which
must be military one during Gulf War. pse let me know where i can find
these infos.
thanks in advance.
73s de Matt
kc8djq@amsat.org
--
"Make your Dream Biger even if you can't accomplish it in future"

2775. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-19 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <59cvfcmqk2@news.mhv.net>
Source record: 20552

In article <32B98365.60BC@mindspring.com>, steves68@mindspring.com wrote:
>Where is Mir These days on Packet? I have tried 145.55 and 145.80 I
>havn't seen any packets in the last Few days. This is the first I have
>tried in a year or so, Has he moved??
>--
>X-Signature: AKA
>
>Steve Stark (steves68@mindspring.com)
>..

Mir had antenna trouble which is now fixed. Packet is on 145.800 simplex
now.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2776. Re: PacSat for Offshore Sailing

Newsgroup: rec.radio.amateur.space
Date: 1996-12-20 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <19961220032400.WAA27726@ladder01.news.aol.com>
Source record: 20553

I guess I don't understand why you would want to use this as any kind of reliable communications medium. If you want this type of store and forward service, why not use Inmarsat-C? It is inexpensive and has interfaces directly to the internet. The antennas are small, power consumption is very low, and the terminals are pretty much plug and play.

John...
WB4LNM
WB4LNM@aol.com

2777. Re: Decoding Hubble Images

Newsgroup: rec.radio.amateur.space
Date: 1996-12-20 00:00:00 UTC
From: Philip Chien <kc4yer@amsat.org>
Message-ID: <59d0gm$err@ddi2.digital.net>
Source record: 20554

Not Setup <Not.Setup@conoco.dupont.com> wrote:
>: Is there a cheap method for decoding Hubble Telescope images?

Chris Lewicki, chrisl@gamma1.lpl.arizona.edu writes:
>Go to http://www.stsci.edu/

while this is a good method of obtaining the publicly released low resolution images from the Wide Field/Planetary Camera and Faint Object Camera, it does not include access for the actual much higher resolution data, or data from the other instruments.

>: Is there a kit to build?
>
>Yes, but its probably illegal.

I do hope that was meant in jest. Bottom line is - in theory you *could* build something which would receive signals directly from Hubble, but in practice it's basically impossible (see later)

>: What frequency and mode of transmission (WFM, NFM, Spread Spectrum)does
>: Hubble use?

Hubble's transmits digital high rate data on S-Band frequencies allocated for government communications. The high gain antennas are aimed UP (not towards the ground) where they transmit the data up to one of NASA's Tracking Data and Relay Satellites (TDRS). From TDRS the data goes to the White Sands Ground Station Terminal in New Mexico, and then via a domestic satellite link to the Goddard Space Flight Center in Maryland. At Goddard all of the data is archived, and the spacecraft engineers strip out their engineering and spacecraft maintenance data. The raw science data is sent to the Space Telescope Science Institute via a dediated line.

>I'm pretty sure that HST images are encrypted in order to maintain data access
>rights for the astronomers involved.

Not really encrypted per say, but digitally encoded. And it is kept proprietary for a period of one year from the time the observations are collected. After that point the data is in the public domain and theroetically available for anybody who wants to get access.

>Short answer, you can't get HST imagery from HST yourself.

Philip Chien, KC4YER
Earth News - space writer and consultant
note new E-mail address - pchien@digital.net

2778. FS: AMSAT/TAPR DSP-93 Modem Fully Assembled

Newsgroup: rec.radio.amateur.space
Date: 1996-12-20 00:00:00 UTC
From: "Bruce J. Howes KG2IC" <kg2ic@amsat.org>
Message-ID: <32BACF80.1171@amsat.org>
Source record: 20555

I have a TAPR/AMSAT DSP-93 modem kit that has been professionally assembled. I purchased it this summer from a fellow club member who was overwhelmed with it. It has been assembled and verifed by me on the test bench. I have all paperwork, manuals, box, cables that come with the kit. Since I already have 2 AEA DSP2232s I do not need another TNC. I did really enjoy building the kit however! If you are interested make a resonable offer, or trade, and it's yours. I do not have a fixed price in mind, but I do know what I did pay for the unit. Tnx for your time.
--

--

73,
Bruce KG2IC
==========
Bruce J. Howes KG2IC "The governmentï¿½s view of the economy
Grid FN03pa could be summed up in a few short phrases:
East Amherst, NY If it moves, tax it. If it keeps moving,
AMSAT#30466 ARRL regulate it. And if it stops moving,
ARMY-MARS AAR2AJ subsidize it." -Ronald Reagan
==========

2779. Is the Icom 821 ok ?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-20 00:00:00 UTC
From: jrc@skypoint.com
Message-ID: <59fe9u$em0@mirage.skypoint.com>
Source record: 20556

Hi,

I would like to know how the Icom 821H works as a ground station,
especially if the plug and play 9600 bps stuff is true - does it need
surgery to operate at 9600 ? How are the other features for working
with satellites ?

--
Jeffrey Comstock
INET: jrc@brainiac.mn.org
WWW: http://www.skypoint.com/members/jrc/
CW: -. .-. ----- -..

2780. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: pokf4jrg@cheta.net
Message-ID: <32bb2d91.1815108@news2>
Source record: 20557

On Thu, 19 Dec 1996 13:03:17 -0500, Steven Stark
<steves68@mindspring.com> wrote:

>>>Where is Mir These days on Packet? I have tried 145.55 and 145.80 I
>>>havn't seen any packets in the last Few days. This is the first I have
>>>tried in a year or so, Has he moved??
>>>--
>>>X-Signature: AKA
>>>
>>>Steve Stark (steves68@mindspring.com)
>>>.

On 145.800 I don't have packet but it's a good way to test my Sat
Tracking program.

Burton kf4jrg

2781. Re: Best Ant for RS-10 Down Link

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: FUman <kg7fu@rio.com>
Message-ID: <01bbef52$d1bcf900$758260ce@surf.rio.com>
Source record: 20558

> From: orion@capital.net
> To: FUman <kg7fu@rio.com>
> Subject: Re: Best Ant for RS-10 Down Link
> Date: Friday, December 20, 1996 9:33 PM
>=20
>=20
> >I use a turnstile for 10m in my apartment's attic/crawlspace. Cheap, =
=3D
> >easy,
> >cross-polarized and effective from horizon to horizon.
>=20
> Hello Eugene. I want to try one of these too, but I'm a bit confused
> on the feedline. Can you describe your set up? I don't know the
> lengths of the matching line, stub, etc. Can you help?

Hi Butch,

The antenna is amazingly simple. See just about any ARRL Antenna
Book or Handbook for pictures.

Mine is wierd as it's in the attic/crawlspace of my apartment. But here
it is..

The first dipole length 468/f and trimmed to resonance using an MFJ-259
SWR Analyzer. I won't give you the exact length as being in an attic =
there
are affects of the surrounding structure on resonance. It is fed with a =
Van
Gorden 1:1 Balun and about 50' of RG-58 (no kidding!) to the shack. I =
usually
never recommend RG-58, but I have the unusual problem of being within
someone else's property. Drilling one hole for three runs of RG-58 (one =
for the
turnstile and two for other antennas) was easier to justify than the =
size that
would have been required for RG-8. They are short runs, so the loss is =
only
around 1.5dB overall.=20

The second dipole is laid across the first, approximating a plus (+) =
sign,
but not touching the feedpoint of the first. The phasing line is 1/4 =
wavelength
of 92 Ohm coax. The phasing line shield and center conductors are =
paralelled
with the 50 Ohm feedline. The output of the phasing line is connected as

usual to the second dipole. I used a Budwig insulator at the feedpoint. =
It's
length is also 468/f. I think the length of each side worked out to be =
99 inches.
The phasing line length is f/234 * cable VF. In this case, the RG-62 I =
used has
a published VF of .86 so the formula worked out to be 234/28.400 =3D =
98.8
inches * .86 =3D 85 inches. I added three inches on each end to allow
for the connections at the feedpoint and feedline. The phasing line was =
looped
into a small circle and held together with a few ty-wraps. Note that I =
used 28.400
as the center frequency. I operate a bunch of 10m phone down in the =
novice/tech
and cw at the bottom portions of the band so I chose the length of both =
dipoles on this. The
match at 29.400 is not bad at all, SWR is less than 1.5:1 over the =
entire 10m
band. A bit more broad than the average dipole.

Make sure the 92 or 100 ohm coax you use for the phasing line is of the
highest quality. I got mine from a local electronic supply house and =
they
had several grades. I chose the most expensive which had a really nice
braid and a solid center conductor.

The 2m version was much easier. I used 1/8" diameter brass rod and used
staggered mounting holes in the top of a 1-1/8" x 1-1/8" x 24" piece of =
furniture
grade cedar with a 12" x 13" x 3/8" piece of scrap plywood for a base. =
The elements
were about 20 inches long so I could prune to resonance (around 19.5 =
inches
for 146.000) and the same coax was used as with the 10m version. The =
phasing
line is 16.5 inches plus only the extra needed to make connections. The =
only difference
between this one and the 10m is each dipole has a 9pF trimmer cap in the =
center
conductor of each coax at the feedpoints for resonance. This is because =
I used
no balun and there is a bit of reactance present from using wood as a =
support and
the staggered element arrangement. The 2m turnstile sits above my desk =
in the living room
and my wife (KD6UFQ) referrs to is as modern art.

good luck! - de kg7fu

2782. IC-821H vs Yaesu 736R

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: mfield@ix.netcom.com
Message-ID: <32bc1f20.96185468@nntp.ix.netcom.com>
Source record: 20559

Everyone has always told me the Yaesu was a great rig for
satellite work, but it has been around a long time.

Does anyone have any opinions on the IC-821H?

Dave, AA6RE

2783. ARLK094 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk094.1996@arrl.org>
Source record: 20560
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK094
ARLK094 Keplerian data

ZCZC SK94
QST de W1AW
Keplerian Bulletin 94 ARLK094
From ARRL Headquarters
Newington, CT December 21, 1996
To all radio amateurs

SB KEP ARL ARLK094
ARLK094 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
RS-10/11
1 18129U 87054A 96355.11101058 .00000017 00000-0 21244-5 0 03002
2 18129 82.9251 11.1087 0012562 5.9821 354.1480 13.72372520475675
UO-11
1 14781U 84021B 96354.95691601 .00000181 00000-0 38345-4 0 09380
2 14781 97.8149 337.5801 0010722 214.4743 145.5744 14.69509888684933
RS-12/13
1 21089U 91007A 96355.16170271 .00000034 00000-0 19485-4 0 09459
2 21089 82.9224 51.4280 0030785 75.1274 285.3289 13.74075552294571
UO-14
1 20437U 90005B 96355.17910636 .00000016 00000-0 23101-4 0 02532
2 20437 98.5345 74.6146 0011719 18.2936 341.8667 14.29942740360633
RS-15
1 23439U 94085A 96355.17795816 -.00000039 00000-0 10000-3 0 02124
2 23439 64.8192 82.3077 0155814 165.9175 194.6164 11.27528664081752
AO-16
1 20439U 90005D 96355.19998775 .00000041 00000-0 32716-4 0 00332
2 20439 98.5502 77.1951 0012033 18.9004 341.2625 14.29993798360654
DO-17
1 20440U 90005E 96355.20376159 -.00000047 00000-0 -15275-5 0 332
2 20440 98.5484 77.9372 0013015 16.1085 344.0522 14.30135144360685
```

```
WO-18
1 20441U 90005F 96355.19761875 .00000020 00000-0 24375-4 0 366
2 20441 98.5526 77.8550 0012776 18.0970 342.0670 14.30104514360686
LO-19
1 20442U 90005G 96355.17911551 -.00000019 00000-0 94036-5 0 320
2 20442 98.5542 78.4157 0013657 17.1631 343.0013 14.30215742360709
FO-20
1 20480U 90013C 96355.49093092 .00000019 00000-0 10697-3 0 9290
2 20480 99.0220 344.8895 0541247 62.2054 303.2823 12.83236247321781
AO-21
1 21087U 91006A 96355.06273878 .00000094 00000-0 82657-4 0 07794
2 21087 82.9408 184.1425 0036769 48.8627 311.5692 13.74575624295548
UO-22
1 21575U 91050B 96355.58357352 .00000013 00000-0 18501-4 0 7396
2 21575 98.3292 56.2046 0008742 68.7534 291.4601 14.37049429284833
KO-23
1 22077U 92052B 96354.91936715 -.00000037 00000-0 10000-3 0 6288
2 22077 66.0784 160.5828 0015271 253.4363 106.4979 12.86299592204693
KO-25
1 22828U 93061F 96355.20461664 .00000028 00000-0 28509-4 0 05228
2 22828 98.5621 67.5182 0011122 32.3631 327.8228 14.28162932136661
IO-26
1 22826U 93061D 96355.19757816 .00000004 00000-0 19187-4 0 05418
2 22826 98.5669 67.4412 0010198 46.5995 313.6025 14.27821755168542
AO-27
1 22825U 93061C 96355.14536052 .00000026 00000-0 28031-4 0 05400
2 22825 98.5665 67.1860 0009721 45.0627 315.1335 14.27712788168521
FO-29
1 24278U 96046B 96355.35595076 -.00000040 00000-0 -10581-5 0 454
2 24278 98.5673 54.7624 0351041 289.5984 66.7572 13.52627299 16949
Mir
1 16609U 86017A 96355.42278607 .00005792 00000-0 68975-4 0 8900
2 16609 51.6549 265.0680 0013116 160.8621 199.2865 15.62703146619110

Keplerian bulletins are transmitted twice weekly from W1AW.
Due to the holiday, the next scheduled transmission of these data
will be Saturday, December 28, 1996, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2784. KO-23 status

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: Art Jeyes <chrishil@erols.com>
Message-ID: <32BC53EF.667B@erols.com>
Source record: 20561

KO-23 seemed to be having a problem that affected my receive perf. In the past I routinely got about 90% ... then KO-23 dropped to about 50% and about 3 days ago... my KO-23 perf dropped to 0%.... i now only copy about 500 bytes per pass... other sats are fine... any one else having this problem?

Thanks & 73
Art Jeyes -- AA3GU

2785. New Space Site opens!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: Dave Crocker <holonet@concentric.net>
Message-ID: <32BBE6A6.6224@concentric.net>
Source record: 20562

The new "SPACE" Research Web Site opens for space enthusiasts at:

=

http://www.concentric.net/~Holonet/NEBULA/NASA/NASA.shtml

A MultiScope I=A9 Production

2786. Re: ARLS017 Phase 3D delayed

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <19961221220200.RAA03374@ladder01.news.aol.com>
Source record: 20563

Better a delayed message than a destroyed message! Remember what happened to Ariane 501!

John...

2787. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-21 00:00:00 UTC
From: fritzing@mhv.net
Message-ID: <59hm1g$a03$1@news.mhv.net>
Source record: 20564

trandall@mhv.net wrote:

> Mir had antenna trouble which is now fixed. Packet is on 145.800 simplex
>now.

>Tom

Heard voice activity on 145.840 today (Saturday 12/21). Miles, WF1F
arranged an "autopatch" for KC5TZQ to his mother.. kinda of strange
hearing an astronaut saying "mommy"! The repeater on 437.950 is also
working extremely well.

2788. High Precision Synthesizer for sale. Cheap.

Newsgroup: rec.radio.amateur.space
Date: 1996-12-22 00:00:00 UTC
From: Wave@mindspring.com
Message-ID: <59i3b0$in4@camel5.mindspring.com>
Source record: 20565

I have two high quality direct analog synthesis synthesizers for sale. These are Programmed Test Sources PTS160. They cover .06 to 159,999,999 in steps of 1Hz. They have the built in TCXO or can be referenced to an external source of 5 or 10 MHz. Power is AGCed and can be varied from about 0 to 16 dBm. Switching time is between 5 and 20 microseconds depending on the frequency. All the units have the rack mount and GPIB and parallel interface allowing them to be fully computer controlled. Spurious outputs are down -75dBc(discrete), -35dBc(Harmonics). Phase noise is -63dBc(.5 Hz to 15KHz),-105dBc (100Hz), -115 dBc(1KHz). Power is within 0.5 dB flatness between .1 and 160 MHz. Price is $550 shipped. Current price on identical units is around $7000. These units are surplus from used NMR imaging equipment and are in great shape. For more information please e-mail me. Thanks

Pieter Ibelings
N4IP

2789. Blocking ham/cb interference on stereo equipment?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-22 00:00:00 UTC
From: Kingfish@voicenet.com
Message-ID: <59jrgm$5bp@news1.voicenet.com>
Source record: 20566

Hi Everyone,

A neighbor of mine has a ham or cb radio, and his transmissions come out over my stereo, telephone, clock radio - anything with a speaker. The FCC won't do anything about it.

I know there are filters you can put on your telephone to block some of the interference. Is there anything like that for stereo equipment?

Thanks,

JOn

2790. Re: Blocking ham/cb interference on stereo equipment?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-22 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32BDD8A4.6625@wco.com>
Source record: 20567

Kingfish wrote:
>
> Hi Everyone,
>
> A neighbor of mine has a ham or cb radio, and his transmissions come
> out over my stereo, telephone, clock radio - anything with a speaker.
> The FCC won't do anything about it.
>
> I know there are filters you can put on your telephone to block some
> of the interference. Is there anything like that for stereo
> equipment?
>
> Thanks,
>
> JOn

jon,ask him to ground everything and do the same.make all your
leads(wires)as short as possible,and/or coil them in small diameters.
if everything else fails and he is not a ham have a stranger cut his
coax.

73 steve

2791. New Concept! Cyberscheds Your Next DX and Satellite Contact!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-22 00:00:00 UTC
From: wb6siv@telis.org
Message-ID: <wb6siv-2212962213300001@s08-pm06-ontro-t.telis.org>
Source record: 20568

This is a new use of the WWW that can benefit ham radio operators throughout the world.

You can now schedule contacts with hams all over the world simply and easily by using the WWW and e-mail.I have set aside a section of my web site http://www.sarrio.com for hams to post their request for over-the-air schedules. Included in each posting is a place to list the posters specific ham radio contact needs (countries, zones,IOTA, grid squares ect...). The postings will also include an e-mail link that will allow hams that read the posts, to easily request an over-the-air schedule.

How Can Cyberscheds work for me?

Do you need a certain state to complete a WAS award? Are you just a few countries away from a DXCC? Are you a QRP operator looking to make contacts with hams all over the world? Are you a DX station that has grown tired of the stateside pile-ups on 20 meters? Or are you going mobile into a hard to work county?

In all the above examples you could have prearranged cyberscheds with those hams that you want to work. If band conditions are poor just e-mail the hams you could not work and set up a new schedule.

Cyberscheds are a simple way to have the internet work to the benefit of hams all over the world.

All posting will stay on-line for 6 months, or until the posting is asked to be deleted. Below is an example of one cyberpost visit the cyberpost page and view them all. Below is an example of one of the postings:

Station: BV/N0IAT

Name: Joe Fitter
QTH: Taipei, TAIWAN Republic of China
Bands: 40/20/17/15/10
Mode: CW (occasional SSB, but not much)
Comments: Looking for South America, Central America, and Carribean QSO's. I QRV from a
neighbors shack (local law), so operating times are limited to station availability. QSL via my CBA --
I DO NOT accept IRC's or Greenbacks, just please send me your QSL card and a route for returning
the favor.
Post Date: Sept. 6, 1996
--
The Raymond Sarrio Co. a full feature Ham Radio Storefront and web site developer. Located at http://www.sarrio.com.

In association with Brillar Enterprises http://win-win.com/brillar provider of discount CD-Roms!

2792. Wanted: Plans to Build A Quadrifilar Ant. for WEFAX

Newsgroup: rec.radio.amateur.space
Date: 1996-12-23 00:00:00 UTC
From: Bob Berg <bberg@connix.com>
Message-ID: <01bbf0d6.732e43a0$9967f6cd@bob-berg>
Source record: 20569

Hello,
I'm looking for plans to build a Quadrifilar Antenna for WEFAX reception
{137 Mhz}. The one Quorum Communications Sells looks fairly easy to
build but what are the internal connections like?.
Any Help about constuctions plans would be greatly appreciated.
Thanks in Advance!
N1YCH
Bob

2793. Re: Blocking ham/cb interference on stereo equipment?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-23 00:00:00 UTC
From: Ken Wells <kenwells@kiva.net>
Message-ID: <Pine.LNX.3.95.961223123233.15973B-100000@ansel.intersource.com>
Source record: 20570

Interference to consumer electronic devices is seldom the fault of the ham or CB operator. This problem is usually caused by manufacturers who are unwilling to spend a dollar or two to put necessary filters into their designs. Calling the FCC will not solve your problem.

I suggest:

Purchase RFI filters from Radio Shack. These are ferrite cores in a square configuration that are used to wind RF chokes. Take these and wind your speaker wire on them (according to directions) right at the amplifier terminals. You can also add them to the power cables of your appliances which will keep the RF energy from coming in through the power cables. The same can be done for phone lines, although there are special filters built just for phones that you just plug in.

If interference is to your TV/VCR, first check to see that your cables are tight! loose connections are an invitation to interference problems.

This is a start. If your neighbor is a ham, talk to him/her and see if you can build a partnership to solve the problem, rather than making an enemy by blaming him for a problem that is not his fault.

If this person is a CB er, or a ham that is just an appliance operator who does not really understand his own hobby, contact the local Ham Radio club. Someone there might know how to help you.

Good luck,

Ken Wells - NM9P
kenwells@kiva.net

On Sun, 22 Dec 1996, Kingfish wrote:

> Hi Everyone,
>
> A neighbor of mine has a ham or cb radio, and his transmissions come
> out over my stereo, telephone, clock radio - anything with a speaker.
> The FCC won't do anything about it.
>
> I know there are filters you can put on your telephone to block some
> of the interference. Is there anything like that for stereo
> equipment?
>
> Thanks,
>

> JOn
>
>
>

2794. Re: Need info about military satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-23 00:00:00 UTC
From: bheaton@txdirect.net
Message-ID: <32bf08cd.18915897@news.txdirect.net>
Source record: 20571

Matt,

They were most likely using AFSATCOM or FLTSATCOM/LEASAT
(currently being replaced by UHF Follow On (UFO)). Just about
everything on there will by encrypted (KY-57 voice or Minterm/ANDVT
voice/data) There is a good spread on it in the November/December
Satellite Times...
73 N5VFF

On Thu, 19 Dec 1996 15:13:36 -0500, JungHo Yu <kc8djq@amsat.org>
wrote:

>I need info about the freqs of military satellite and other info.
>I saw some special forces using satellite communication system which
>must be military one during Gulf War. pse let me know where i can find
>these infos.
>thanks in advance.
>73s de Matt
>kc8djq@amsat.org
>--
>"Make your Dream Biger even if you can't accomplish it in future"

2795. NORAD Two-Line Orbital Element Sets (TLE920)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <59nhum$h9d@blackbird.afit.af.mil>
Source record: 20472

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #920 -
Alouette 1
1 00424U 62049A 96355.37418699 .00000066 00000-0 67354-4 0 2541
2 00424 80.4630 100.0363 0022417 275.4295 84.4292 13.67883597707792
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96353.24404113 -.00000124 00000-0 10000-3 0 5959
2 03029 14.9158 357.8082 0010919 266.6508 165.2847 1.00273018106619
Starlette
1 07646U 75010A 96355.79645605 -.00000095 00000-0 38756-4 0 210
2 07646 49.8284 132.3250 0206386 126.8565 235.1451 13.82192371104771
LAGEOS
1 08820U 76039A 96356.20051874 -.00000017 00000-0 00000+0 0 2518
2 08820 109.8493 90.0897 0043548 88.2006 272.3629 6.38664674225779
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96355.62051130 .00000039 00000-0 10000-3 0 7804
2 10061 12.6135 34.9739 0011158 135.8443 324.9328 1.00278308 16318
IUE
1 10637U 78012A 96357.50948147 -.00000055 00000-0 10000-3 0 3341
2 10637 35.7635 80.5483 1340276 62.7465 8.5613 1.00058099 21827
GOES 3
1 10953U 78062A 96354.43843520 -.00000121 00000-0 10000-3 0 7567
2 10953 11.6145 37.9228 0002438 214.0174 250.1418 1.00264690 20916

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SeaSat 1
1 10967U 78064A 96354.59857133 .00000012 00000-0 48403-4 0 5392
2 10967 107.9998 198.4014 0001635 254.3863 105.7100 14.38140271968100
Nimbus 7
1 11080U 78098A 96354.67998422 -.00000063 00000-0 -19975-4 0 6360
2 11080 98.9204 207.6502 0008621 183.8167 176.2923 13.83688963916828
GOES 5
1 12472U 81049A 96350.29106950 .00000090 00000-0 10000-3 0 9738
2 12472 8.4800 48.3662 0005327 89.1419 270.8669 1.00289267 14914
Cosmos 1383
1 13301U 82066A 96355.09212388 .00000056 00000-0 48128-4 0 5524
2 13301 82.9297 357.4892 0028963 86.3984 274.0470 13.68080236722799
LandSat 4
1 13367U 82072A 96355.18321583 .00000041 00000-0 18907-4 0 308
2 13367 98.0514 40.2063 0006194 287.6610 72.3911 14.57197538767625
DMSP B5D2-1
1 13736U 82118A 96355.54306722 -.00000004 00000-0 16543-4 0 1447
2 13736 98.6214 180.9244 0007990 202.9612 157.1211 14.25815170727623
IRAS
1 13777U 83004A 96357.20618485 -.00000200 00000-0 -10801-3 0 5278
2 13777 98.9669 178.7385 0012418 297.2372 62.7530 13.99258260379660
Cosmos 1447
1 13916U 83021A 96354.72111433 .00000054 00000-0 40899-4 0 6443
2 13916 82.9462 53.8203 0038546 357.3811 2.7136 13.74350159689222
TDRS 1
1 13969U 83026B 96349.09408205 -.00000296 00000-0 00000+0 0 6811
2 13969 9.2459 41.9911 0003532 215.7374 169.6196 1.00258529 23191
GOES 6
1 14050U 83041A 96355.27290863 -.00000096 00000-0 10000-3 0 5942
2 14050 7.3441 51.9173 0003398 60.6014 329.2651 1.00217172108061
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96357.17525342 -.00000114 00000-0 -15140-4 0 5779
2 14780 98.3104 54.7568 0003564 64.3166 295.8390 14.57061886681339
UO-11
1 14781U 84021B 96354.88882485 .00000206 00000-0 42552-4 0 9376
2 14781 97.8149 337.5149 0010702 215.1143 144.9357 14.69510093684920
Cosmos 1574
1 15055U 84062A 96355.35894966 .00000036 00000-0 21713-4 0 8440
2 15055 82.9570 108.6459 0027311 180.5623 179.5504 13.73642422626549
Cosmos 1602
1 15331U 84105A 96354.84963541 .00000289 00000-0 31062-4 0 5269
2 15331 82.5324 299.0680 0022128 55.2334 305.0966 14.84819604660523
ERBS
1 15354U 84108B 96355.09031734 -.00000141 00000-0 88619-5 0 2430
2 15354 56.9952 355.3034 0006822 144.1519 215.9958 14.95003582664644
NOAA 9
1 15427U 84123A 96357.81220272 .00000066 00000-0 58160-4 0 9672
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2 15427 98.9271 62.6345 0015386 136.1880 224.0515 14.13825796620286
Mir
1 16609U 86017A 96358.17257349 .00003736 00000-0 46600-4 0 9004
2 16609 51.6542 251.1855 0013015 171.2077 188.9052 15.62723155619544
SPOT 1
1 16613U 86019A 96356.22515375 -.00000045 00000-0 00000+0 0 169
2 16613 98.8169 63.7254 0001945 90.0299 270.1107 14.19992896246856
Cosmos 1766
1 16881U 86055A 96356.06123319 .00000262 00000-0 28564-4 0 4413
2 16881 82.5181 355.5978 0021201 78.3567 281.9993 14.83791019561551
EGP
1 16908U 86061A 96354.85743115 -.00000083 00000-0 10000-3 0 1400
2 16908 50.0068 146.1720 0011382 128.0665 232.1198 12.44415525139528
NOAA 10
1 16969U 86073A 96357.86853028 .00000025 00000-0 28954-4 0 8982
2 16969 98.5318 349.6198 0012940 158.4126 201.7604 14.25014345533471
MOS-1
1 17527U 87018A 96355.70001945 -.00000043 00000-0 00000+0 0 4958
2 17527 98.9163 53.4263 0017612 166.4659 193.6957 14.00448483501098
GOES 7
1 17561U 87022A 96355.43294109 -.00000167 00000-0 10000-3 0 1989
2 17561 3.4316 68.1181 0002418 284.8788 157.7364 1.00277948 19173
Kvant-1
1 17845U 87030A 96357.91680255 -.00016654 00000-0 -17558-3 0 8485
2 17845 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654553613
DMSP B5D2-3
1 18123U 87053A 96357.69117846 .00000043 00000-0 44283-4 0 7327
2 18123 98.7647 184.8666 0015098 76.2031 284.0821 14.15462118491168
RS-10/11
1 18129U 87054A 96357.51695352 .00000034 00000-0 20557-4 0 2983
2 18129 82.9254 9.3308 0012351 359.7999 0.3153 13.72372740476004
Meteor 2-16
1 18312U 87068A 96355.54106615 .00000050 00000-0 31229-4 0 5318
2 18312 82.5547 204.2636 0013825 57.6547 302.5951 13.84089504471957
Meteor 2-17
1 18820U 88005A 96358.20571033 .00000100 00000-0 75658-4 0 1316
2 18820 82.5408 256.7265 0017485 111.6869 248.6156 13.84767342449686
DMSP B5D2-4
1 18822U 88006A 96357.53043021 .00000059 00000-0 44115-4 0 4203
2 18822 98.3798 180.5980 0006134 167.3188 192.8148 14.23211690461368
Glonass 34
1 19163U 88043A 96354.41509865 -.00000057 00000-0 10000-3 0 1414
2 19163 65.3412 79.6008 0008700 137.2309 222.8856 2.13102332 66184
Glonass 36
1 19165U 88043C 96356.34917178 -.00000061 00000-0 10000-3 0 5510
2 19165 65.3071 79.4849 0004073 357.5155 2.5000 2.13102194 66846
METEOSAT 3
1 19215U 88051A 96351.09840041 -.00000115 00000-0 10000-3 0 2973
2 19215 3.6280 66.7542 0006014 130.7880 228.9672 0.96947912 18942
OKEAN 1
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1 19274U 88056A 96355.40503883 .00000318 00000-0 36605-4 0 1414
2 19274 82.5133 97.2874 0018406 229.6940 130.2681 14.82553525456966
Meteor 3-2
1 19336U 88064A 96358.18030179 .00000051 00000-0 10000-3 0 5376
2 19336 82.5391 32.6911 0017849 119.7659 240.5240 13.16980213404358
Glonass 39
1 19503U 88085C 96354.97212994 -.00000056 00000-0 10000-3 0 4336
2 19503 65.5128 318.4482 0004350 139.8479 220.2141 2.13101732 64305
NOAA 11
1 19531U 88089A 96357.78751194 -.00000037 00000-0 52598-5 0 7908
2 19531 99.1720 20.6921 0012655 71.7666 288.4882 14.13114944425082
TDRS 3
1 19548U 88091B 96354.71334469 -.00000188 00000-0 10000-3 0 2611
2 19548 2.8615 70.2114 0025935 271.5802 88.1271 1.00262519 17398
Glonass 40
1 19749U 89001A 96357.82498100 -.00000052 00000-0 10000-3 0 6472
2 19749 65.2915 78.9936 0006870 258.5639 101.3798 2.13101461 61871
Glonass 41
1 19750U 89001B 96354.12568356 -.00000056 00000-0 10000-3 0 5513
2 19750 65.2971 79.1924 0008291 233.8779 126.0656 2.13101731 61816
GPS BII-01
1 19802U 89013A 96354.61778098 -.00000035 00000-0 10000-3 0 3339
2 19802 55.4209 103.2529 0018755 184.1561 175.8621 2.00558592 57447
Akebono
1 19822U 89016A 96357.89782474 .00012224 00000-0 62398-3 0 8345
2 19822 75.0999 14.0473 3730584 323.4852 16.1001 7.95259126181666
Meteor 2-18
1 19851U 89018A 96355.23919531 .00000049 00000-0 30190-4 0 5302
2 19851 82.5194 132.7360 0013929 169.4233 190.7229 13.84422201394574
MOP-1
1 19876U 89020B 96356.89635470 -.00000118 00000-0 00000+0 0 2376
2 19876 2.3710 71.2242 0016875 280.3835 78.8459 0.97110331 8442
TDRS 4
1 19883U 89021B 96358.11299769 -.00000269 00000-0 00000+0 0 2905
2 19883 0.2469 87.3096 0009207 215.9001 148.3079 1.00265368201007
GPS BII-02
1 20061U 89044A 96355.95422647 -.00000069 00000-0 10000-3 0 3298
2 20061 54.0772 278.6819 0164814 223.4837 135.2220 2.00562795 55203
Nadezhda 1
1 20103U 89050A 96357.47204829 .00000028 00000-0 14199-4 0 128
2 20103 82.9554 329.8103 0035968 249.9152 109.8131 13.73871979374530
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96357.81324074 -.00000370 00000-0 10000-3 0 5064
2 20217 2.1661 73.9351 0000433 343.3148 87.1994 1.00272199 27316
INTERCOSMOS 24
1 20261U 89080A 96354.85101485 .00000078 00000-0 21389-4 0 5522
2 20261 82.5906 152.1472 1242036 339.5288 15.9895 12.47370184329054
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GPS BII-04
1 20302U 89085A 96355.82227188 .00000056 00000-0 10000-3 0 3543
2 20302 53.1959 218.4280 0024744 188.5424 171.5242 2.00571142 52572
Meteor 3-3
1 20305U 89086A 96357.50835812 .00000044 00000-0 10000-3 0 7173
2 20305 82.5418 354.3728 0005091 219.2359 140.8355 13.04423025342759
COBE
1 20322U 89089A 96357.08932101 .00000081 00000-0 79387-4 0 2694
2 20322 98.9346 9.1156 0008161 232.4770 127.5652 14.03465584363283
Kvant-2
1 20335U 89093A 96357.91680255 -.00016654 00000-0 -17558-3 0 7731
2 20335 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654402625
GPS BII-05
1 20361U 89097A 96354.34504769 -.00000079 00000-0 10000-3 0 1555
2 20361 56.1019 45.9614 0094440 140.4854 220.2615 2.00565907 42022
COSMOS 2054 (Altair-1)
1 20391U 89101A 96357.76121650 -.00000139 00000-0 00000+0 0 4800
2 20391 4.2043 62.2398 0003399 172.1093 114.9999 1.00275251 25885
SPOT 2
1 20436U 90005A 96357.90416006 -.00000044 00000-0 00000+0 0 1658
2 20436 98.7475 68.8968 0001700 111.7141 248.4216 14.20016708358626
UO-14
1 20437U 90005B 96355.80886135 -.00000007 00000-0 14115-4 0 2343
2 20437 98.5343 75.2312 0011657 16.3599 343.7943 14.29942615360727
AO-16
1 20439U 90005D 96354.78016617 .00000039 00000-0 31910-4 0 323
2 20439 98.5502 76.7828 0012027 20.1632 340.0024 14.29993710360594
DO-17
1 20440U 90005E 96355.20376159 -.00000047 00000-0 -15275-5 0 332
2 20440 98.5484 77.9372 0013015 16.1085 344.0522 14.30135144360685
WO-18
1 20441U 90005F 96355.19761875 .00000020 00000-0 24375-4 0 366
2 20441 98.5526 77.8550 0012776 18.0970 342.0670 14.30104514360686
LO-19
1 20442U 90005G 96355.17911551 -.00000019 00000-0 94036-5 0 320
2 20442 98.5542 78.4157 0013657 17.1631 343.0013 14.30215742360709
GPS BII-06
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2 20478 99.1069 65.0475 0006157 91.2569 268.9128 13.93967941270866
DEBUT
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2 20479 99.0219 345.9656 0541075 59.2497 306.0740 12.83347320321931
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2 20496 43.1001 216.2105 0009918 196.4687 163.5851 15.36212386382567
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2 20546 94.1272 99.4729 0057038 0.6218 359.5083 15.49544763374032
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2 20580 28.4684 85.5940 0005930 350.6492 9.3979 14.91147275166771
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2 20608 89.9252 171.7927 0107117 123.1269 238.0280 14.64964373353571
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Meteor 2-19
1 20670U 90057A 96357.64951292 -.00000020 00000-0 -31414-4 0 1638
2 20670 82.5470 198.1844 0017048 84.0907 276.2195 13.84130542327810
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2 20724 55.0582 101.1724 0132984 186.6529 173.1504 2.00564272 45189
Feng Yun1-2
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2 20959 55.2411 103.3220 0110064 237.7311 121.1767 2.00556670 44398
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2 21008 65.2670 78.4081 0008974 267.0447 92.8810 2.13098727 46978
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RS-12/13
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2 21218 64.8407 317.1142 0007812 301.6937 58.2286 2.13102528 44431
GRO
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SARA
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TDRS 5
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Meteor 3-5
1 21655U 91056A 96354.82420335 .00000051 00000-0 10000-3 0 9422
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2 21701 56.9844 99.2918 0005210 108.7338 251.4325 14.96556634287654
DMSP B5D2-6
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Glonass 54
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2 21854 65.2184 78.0051 0014885 16.3440 343.7299 2.13104400 38107
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JERS-1
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2 22014 54.8383 161.0425 0136069 327.3174 31.8355 2.00566013 26188
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Glonass 57
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TOPEX
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KO-23
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GPS BIIA-17
1 22275U 92089A 96357.65770578 .00000046 00000-0 00000+0 0 8382
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TDRS 6
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Glonass 59
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Glonass 61
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GPS BIIA-20
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Meteor 2-21
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UFO F2
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2 22787 4.0055 328.0037 0005195 298.3561 219.2910 1.00275598 10720
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AO-27
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IO-26
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GOES 8
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MSTI 2
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Glonass 67
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OKEAN 1-7
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RESURS 1-3
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LUCH (Altair-2)
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RS-15
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NOAA 14
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Glonass 71
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2 23511 64.5887 317.6285 0007298 232.9238 126.9991 2.13103412 13962
Glonass 72
1 23512U 95009B 96358.01301933 -.00000074 00000-0 00000+0 0 2834
2 23512 64.5795 317.5823 0007996 313.7995 46.1331 2.13102266 13991
Glonass 73
1 23513U 95009C 96357.83483209 -.00000073 00000-0 00000+0 0 3022
2 23513 64.5875 317.6143 0013254 211.3599 148.5284 2.13101586 13992
GMS 5
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1 23522U 95011B 96353.66943435 -.00000292 00000-0 10000-3 0 1895
2 23522 0.4745 24.4651 0000471 201.2461 242.5519 1.00265343 6307
DMSP B5D2-8
1 23533U 95015A 96357.75515303 .00000064 00000-0 58067-4 0 7971
2 23533 98.8428 357.8261 0006373 241.7123 118.3404 14.12767952 90259
OSC 1
1 23545U 95017A 96355.39295036 .00000332 00000-0 11120-3 0 1871
2 23545 69.9707 98.0358 0015933 280.2412 79.6923 14.45452913 90566
OSC 2
1 23546U 95017B 96355.56554784 .00000381 00000-0 12505-3 0 2210
2 23546 69.9767 97.8305 0015524 272.8036 87.1325 14.45465915 90596
Microlab 1
1 23547U 95017C 96355.57161015 .00000264 00000-0 91522-4 0 1590
2 23547 69.9772 97.5045 0015813 272.6587 87.2737 14.45629327 90600
OFEQ 3
1 23549U 95018A 96357.98044997 .00022990 00000-0 54073-3 0 4029
2 23549 143.3610 302.4820 0210589 292.9497 64.9070 15.20071158 95043
GFZ-1
1 23558U 86017JE 96358.11669922 .00003702 00000-0 45016-4 0 1895
2 23558 51.6519 239.4420 0006141 204.2426 155.8282 15.63458714619559
ERS-2
1 23560U 95021A 96357.20465871 -.00000031 00000-0 46224-5 0 3134
2 23560 98.5515 68.5484 0000959 86.8641 273.2654 14.32246616 87483
Spektr
1 23579U 95024A 96357.91680255 -.00016654 00000-0 -17558-3 0 5261
2 23579 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654 90935
GOES 9
1 23581U 95025A 96354.44962900 .00000082 00000-0 10000-3 0 2965
2 23581 0.0263 263.9334 0003683 12.3608 198.4011 1.00273769 5781
Helios 1A
1 23605U 95033A 96357.73495497 .00000096 00000-0 27497-4 0 3750
2 23605 98.1385 290.8764 0001601 58.5518 301.5873 14.63832629 78149
UPM SAT 1
1 23606U 95033B 96357.87351639 .00000297 00000-0 61264-4 0 2397
2 23606 98.1201 292.6868 0007582 319.5019 40.5620 14.67330339 78383
CERISE
1 23607U 95033C 96355.45594001 .00000131 00000-0 32112-4 0 1411
2 23607 98.1187 290.0840 0005989 327.8669 32.2166 14.66986104 78043
TDRS 7
1 23613U 95035B 96354.55583226 .00000095 00000-0 00000+0 0 2738
2 23613 1.0637 81.9126 0003176 174.9248 220.8410 1.00283013 5249
Glonass 74
1 23620U 95037A 96356.21094692 .00000106 00000-0 00000+0 0 2246
2 23620 64.8154 197.7157 0018830 162.8850 197.2492 2.13102690 10997
Glonass 75
1 23621U 95037B 96355.91951744 .00000106 00000-0 00000+0 0 2355
2 23621 64.8265 197.7283 0017957 173.1947 186.8987 2.13102130 10983
Glonass 76
1 23622U 95037C 96357.85457500 .00000097 00000-0 00000+0 0 2407
2 23622 64.8153 197.6690 0036951 163.0742 197.1167 2.13102361 11024
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Prognoz-M2
1 23632U 95039A 96355.51482150 -.00000821 00000-0 00000+0 0 987
2 23632 71.5740 247.9960 7788482 326.5330 47.5280 0.26381100 1340
SICH-1
1 23657U 95046A 96354.51855762 .00000194 00000-0 26216-4 0 1327
2 23657 82.5331 29.9741 0027927 164.3733 195.8347 14.73517940 70121
RADARSAT
1 23710U 95059A 96355.88196944 .00000142 00000-0 72025-4 0 2190
2 23710 98.5794 359.9124 0001165 65.3831 294.7474 14.29985280 58928
Glonass 79
1 23734U 95068A 96355.62632340 .00000106 00000-0 00000+0 0 2125
2 23734 64.8255 197.6592 0017364 328.5123 31.4543 2.13101891 7941
Glonass 78
1 23735U 95068B 96356.28815681 .00000106 00000-0 00000+0 0 2052
2 23735 64.8216 197.6187 0006116 201.9954 158.0442 2.13124877 7952
Glonass 77
1 23736U 95068C 96357.73779017 .00000098 00000-0 00000+0 0 1864
2 23736 64.8104 197.5895 0007497 186.0790 173.9762 2.13101764 7982
XTE
1 23757U 95074A 96355.99029059 .00000693 00000-0 28827-4 0 1092
2 23757 22.9805 220.1334 0013987 136.8629 223.2958 14.97746454 53505
Polar
1 23802U 96013A 96355.08290203 .00000042 00000-0 00000+0 0 914
2 23802 86.3306 24.0562 6531491 277.0070 18.0455 1.36263876 4092
1996010E
1 23824U 96010E 96355.04137057 .00364004 00000-0 45298-1 0 1516
2 23824 47.4645 201.2744 7173280 74.7731 348.8261 2.43527380 6785
GPS BIIA-25
1 23833U 96019A 96353.37282135 -.00000066 00000-0 00000+0 0 1232
2 23833 54.6506 340.5168 0028458 144.2757 215.9268 2.00564868 5378
Priroda
1 23848U 96023A 96357.91680255 -.00016654 00000-0 -17558-3 0 2144
2 23848 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654 38026
MSX
1 23851U 96024A 96358.03286561 -.00000047 00000-0 00000+0 0 1557
2 23851 99.3979 341.4236 0006297 11.4397 348.6905 13.97480760 33870
SAX
1 23857U 96027A 96343.48681186 .00001179 00000-0 41425-4 0 456
2 23857 3.9494 284.3100 0012499 354.1731 6.1064 14.91674524 33212
MSTI 3
1 23868U 96031A 96356.57738393 .00000878 00000-0 19293-4 0 958
2 23868 97.1188 183.7947 0008893 210.8257 149.2472 15.46681182 33776
TOMS-EP
1 23940U 96037A 96357.21379156 .00003240 00000-0 14577-3 0 691
2 23940 97.4322 260.3318 0014563 47.3123 312.9338 15.21725233 26221
GPS BIIA-26
1 23953U 96041A 96356.27939725 -.00000056 00000-0 00000+0 0 942
2 23953 55.0611 100.7364 0028044 328.9422 30.8659 2.00562642 3226
ADEOS
1 24277U 96046A 96355.53537236 -.00000044 00000-0 00000+0 0 1236
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2 24277 98.6171 69.8041 0000836 80.3763 279.7514 14.27646706 17879
FO-29
1 24278U 96046B 96355.35595076 -.00000040 00000-0 -10581-5 0 454
2 24278 98.5673 54.7624 0351041 289.5984 66.7572 13.52627299 16949
Soyuz TM-24
1 24280U 96047A 96357.91680255 -.00016654 00000-0 -17558-3 0 1184
2 24280 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654 19925
FAST
1 24285U 96049A 96356.47304478 .00000870 00000-0 89695-4 0 464
2 24285 82.9908 121.6637 2206045 306.6602 35.0815 10.81656403 13209
Microsat
1 24291U 96050A 96358.10741835 .00033992 62055-5 22955-3 0 950
2 24291 62.7946 356.0606 0607501 124.2941 241.7199 14.67979088 16955
MO-30
1 24305U 96052B 96354.45183101 .00000204 00000-0 20364-3 0 531
2 24305 82.9308 127.4080 0030236 348.1194 11.9240 13.73086790 14390
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
SAC-B/HETE
1 24645U 96061A 96357.88578065 .00000693 00000-0 42016-4 0 323
2 24645 37.9774 195.7243 0049685 325.5272 34.2353 15.14807665 7313
Progress M-33
1 24663U 96066A 96357.91680255 -.00016654 00000-0 -17558-3 0 314
2 24663 51.6532 252.4801 0013093 172.4296 187.7947 15.62698654 5161
1996068B
1 24668U 96068B 96358.07934394 .00279054 21716-5 67607-3 0 433
2 24668 36.3857 264.2394 1771960 121.4363 257.1728 12.20106026 2285
1996069A
1 24670U 96069A 96358.34813887 .00000318 00000-0 10000-4 0 260
2 24670 65.0419 255.4322 0009959 270.8707 89.0917 15.52047243 1831
1996070A
1 24674U 96070A 96357.27634671 -.00000155 00000-0 00000+0 0 50
2 24674 2.6815 286.7422 0024055 107.5676 314.1839 1.00171619 34
1996070B
1 24675U 96070B 96357.35510368 -.00000231 00000-0 00000+0 0 107
2 24675 22.7115 283.8219 7016432 183.1417 167.4533 2.22334146 90
1996071A
1 24677U 96071A 96356.50726807 .00000015 00000-0 00000+0 0 45
2 24677 82.9400 217.3204 0022369 259.6636 100.1921 13.71045781 167
1996071B
1 24678U 96071B 96357.89104079 .00000015 00000-0 00000+0 0 84
2 24678 82.9394 216.3024 0019405 236.7497 123.1741 13.72557697 358
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology
```

2796. Re: KO-23 status

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: kc5egg@ix.netcom.com
Message-ID: <59nm19$3jj@sjx-ixn3.ix.netcom.com>
Source record: 20473

In <32BC53EF.667B@erols.com> Art Jeyes <chrishil@erols.com> writes:
>
>KO-23 seemed to be having a problem that affected my receive perf. In
>the past I routinely got about 90% ... then KO-23 dropped to about
50%
>and about 3 days ago... my KO-23 perf dropped to 0%.... i now only
copy
>about 500 bytes per pass... other sats are fine... any one else
having
>this problem?
>
>Thanks & 73
>Art Jeyes -- AA3GU

I was down for a few days and when I came back up I noticed just what
you did. KO-23 seems to be one sick bird.

Jerry KK5YY

2797. AO-13

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: w9sz@prairienet.org
Message-ID: <59nnte$5j7@vixen.cso.uiuc.edu>
Source record: 20474

I haven't been keeping up lately, but did AO-13 finally fall to Earth?

I remember reading in QST a while back that it was predicted to enter the atmosphere some time in early December.

Zack W9SZ

--

2798. test

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: dcampbel@lon.hookup.net
Message-ID: <32bfa431.18484459@news.lon.hookup.net>
Source record: 20475

```
testing system
```

2799. O-scope for sale

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: Bob Bocskay <phoniexbobb@worldnet.att.net>
Message-ID: <01bbf175$e4bbc840$9ca993cf@default>
Source record: 20476
Cross-posted to: alt.radio.scanner,rec.radio.amateur.digital.misc,rec.radio.amateur.misc,rec.radio.amateur.space

```
Tektronics 543 scope with plugins (CA,53E/54E, type H wideband), probes and
a real nice Tek scope cart all for $60
contact:
Luis Ibarra
(602)759-8903
PHX AZ
```

2800. Kits for phase-3D?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: "Timothy S. Powell" <tpowell@mindspring.com>
Message-ID: <32C01C2A.4A4D@mindspring.com>
Source record: 20477
Cross-posted to: rec.radio.amateur.digital.misc,alt.ham-radio.ssb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

Does anyone know of any 6-meter, 2-meter and 70-cm SSB kits that would be good to use for the Phase-3D sat when it gets in orbit. I'm a college student with limited funds. I would like to work the sat when it get up but can not buy the high price equipment that is needed but would like to build a small sat station if possible.

Thanks

Timothy
KD4IKY

2801. Re: AO-13

Newsgroup: rec.radio.amateur.space
Date: 1996-12-24 00:00:00 UTC
From: n4okl@amsat.org
Message-ID: <01bbf1e1$7a18c580$39ac63ce@Pjharmon.newwave>
Source record: 20478

Zack Widup <w9sz@prairienet.org> wrote in article
<59nnte$5j7@vixen.cso.uiuc.edu>...
>
> I haven't been keeping up lately, but did AO-13 finally fall to Earth?
>
> I remember reading in QST a while back that it was predicted to enter the

> atmosphere some time in early December.
>
> Zack W9SZ
>
> --
>
>
Yes it died Nov 24th and bit the big one Dec 5...

de John - N4OKL

2802. Re: Kits for phase-3D?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: skerns@mail.talon.net
Message-ID: <59q0ds$72c$1@news3.microserve.net>
Source record: 20479
Cross-posted to: rec.radio.amateur.digital.misc,alt.ham-radio.ssb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

Try Down East Microwave; http\\downeastmicrowave.com

They have a lot of neat stuff for VHF/UHF/microwave.

73 Steve N3FTI

In article <32C01C2A.4A4D@mindspring.com>, tpowell@mindspring.com says...
>
>Does anyone know of any 6-meter, 2-meter and 70-cm SSB kits that would
>be good to use for the Phase-3D sat when it gets in orbit. I'm a
>college student with limited funds. I would like to work the sat when
>it get up but can not buy the high price equipment that is needed but
>would like to build a small sat station if possible.
>
>Thanks
>
>
>Timothy
>KD4IKY

2803. Wanted:Plans to build a quadrifilar ant. for WEFAX

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: sermon@plug-in.COM.BR
Message-ID: <32C08546.1EBD@plug-in.com.br>
Source record: 20480
Body handling: HTML body converted to readable text

<"Bob Berg"

2804. Re: Kits for phase-3D?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: dhutter@pacifier.com
Message-ID: <59qaec$5n5@news.pacifier.com>
Source record: 20481
Cross-posted to: rec.radio.amateur.digital.misc,alt.ham-radio.ssb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

In article <32C01C2A.4A4D@mindspring.com>, tpowell@mindspring.com says...
>
>Does anyone know of any 6-meter, 2-meter and 70-cm SSB kits that would
>be good to use for the Phase-3D sat when it gets in orbit. I'm a
>college student with limited funds. I would like to work the sat when
>it get up but can not buy the high price equipment that is needed but
>would like to build a small sat station if possible.
>
>Thanks
>
>
>Timothy
>KD4IKY

Tim,

Down East Microwave, Steve has a WEB site.

Derek K7XD

2805. Re: Need info about military satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: scederas@bellsouth.net
Message-ID: <32c0f10a.17297261@news.rdu.bellsouth.net>
Source record: 20482

On Thu, 19 Dec 1996 15:13:36 -0500, JungHo Yu <kc8djq@amsat.org>
wrote:

>I need info about the freqs of military satellite and other info.
>I saw some special forces using satellite communication system which
>must be military one during Gulf War. pse let me know where i can find
>these infos.
\

Why don't you call the Military up and ask them to tell you
the frequencies for the military satellites and while you are at it
ask them if their is anything else that they can tell you that is a
threat to the security of this nation.

2806. Weak Signal Protection Proposal

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: kg7fu <kg7fu@rio.com>
Message-ID: <01bbf28a$e4be3560$LocalHost@surf.rio.com>
Source record: 20483
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.space

(Note: This is not intedend to be a "spam", I chose the dx and space = newsgroups
instead of all the rec.radio.amateur. with the intent of gaining = stimulating and
intelligent responses.)

Below is the text of a proposal I'm working on to gain some protection = for
cw/ssb, EME and Satellite subbands in the VHF+ bands (other than what
currently exists for cw and Satellite only).

Please read and comment to:

James Kaplan KG7FU
ARRL Spectrum Committee Member
<kg7fu@rio.com>

You may point your browser to <http://users.aol.com/kg7fu/wsfccbp.htm> = as well.

Thanks in advance for your responses.

de kg7fu

Petition for Rulemaking, draft of Protection for Weak Signal, EME
and Satellite sub-bands.

Whereas, users of the 6m and up bands are experiencing encroachment
by FM Repeaters, Packet Radio, ATV and other modes, and

Whereas, there is currently protection for CW only in the 6m 50.00 - = 50.10 MHz
and 2m 144.00 - 144.10 bands, and

Whereas, it is generally accepted in the Amateur Community that = protection
for a certain mode or sub-band comes from Part 97 of the Commission's = rules,
not from band plans or gentlemen's agreements.

This rulemaking would serve to protect certain band segments from = encroachment
by non-compatible modes, such as FM Repeaters, by removing them from=20
ambiguous status and placing the Commission's strict authority upon = them.

Spectrum management is fast becoming a difficult task in some areas due
to the proliferation of FM Repeaters, Amateur Television, Packet Radio =
and
other modes. While it is accepted that these modes have their place in =
the
Amateur Radio Service, it should be noted that the use of a particular
operating mode should not preclude the use of another mode by others, =
especially
when the two are incompatible.=20

Further, it should be noted with respect to operators of FM, ATV, Packet =
and
other systems, that the use of Weak Signal, EME and Satellite modes is a
minority in the Amateur Community, yet these users provide valuable data =
on
Radio Wave Propagation, Experimental Techniques and New Technologies, =
therefore
should be afforded protection from interference from incompatible modes.

6m 50.00 - 51.00
2m 144.0 - 144.6, 145.8 - 146.00
1.25m 222.00 - 222.25
70cm 432.00 - 433.00, 435.00 - 438.00
33cm 902.00 - 903.00
23cm 1260.00 - 1270.00, 1295.00 - 1300.00
13cm 2303.00 - 2305.00, 2400.00 - 2410.00, 2430.00 - 2438.00

Affected section(s):

97.305(c) 6m, 2m, 1.25m, 70cm, 33cm, 23cm, 13cm

Notes:

The band segments were chosen based on the current ARRL Bandplans.
The bands above 13cm were not included due to the lack of incompatible
modes there currently.
=20

2807. someone wanted military freqs...

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: scederas@bellsouth.net
Message-ID: <32c17a15.52385720@news.rdu.bellsouth.net>
Source record: 20484

http://users.arn.net/~webbfeat/PROJECT%20BLACK/MIL%20FREQS%20MENU.HTML

Try trhat page. Maybe you should not call up the military
like I suggested.
Let me know if this helps.

2808. MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: Travis Roy <travis.tigger@worldnet.att.net>
Message-ID: <01bbf298$26d71040$748092cf@551137821worldnet.att.net>
Source record: 20485

Hi, I'm having trouble getting anything in or out of Mir. Could someone please tell me the frequencies they use and for what. Also I could you some advise on what Satellite tracking software I should use. Right now I use Logsat. My equipment is a Yaesu FT-530 (Just picked it up yesterday, I had a Kenwood TH-79A but the display died) and a mag mount dual band antenna. I also have a diamond dual band whip.

Thanks
TTFN
Travis

2809. Re: AO-13

Newsgroup: rec.radio.amateur.space
Date: 1996-12-25 00:00:00 UTC
From: rob@pe1chl
Message-ID: <E2yyyC.Ey8@pe1chl>
Source record: 20486

In <59nnte$5j7@vixen.cso.uiuc.edu> w9sz@prairienet.org (Zack Widup) writes:

>I haven't been keeping up lately, but did AO-13 finally fall to Earth?

>I remember reading in QST a while back that it was predicted to enter the
>atmosphere some time in early December.

And so it did. On the day that it was predicted to do so back in 1990.

Rob
--
+-----------------------------------+--------------------------------------+
| Rob Janssen pe1chl@amsat.org | WWWhome: http://www.pe1chl.demon.nl/ |
| AMPRnet: rob@pe1chl.ampr.org | AX.25 BBS: PE1CHL@PI8WNO.#UTR.NLD.EU |
+-----------------------------------+--------------------------------------+

2810. Re: Wanted: Plans to Build A Quadrifilar Ant. for WEFAX

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: Richard Rohrer <rrohrer@mail.bcpl.lib.md.usw>
Message-ID: <59u19o$2r0@news.abs.net>
Source record: 20487

Bob,

There is a good article in August or Sept QST for Quadrifilar antennas
for VHF including the 137mHz band. The 137mHz is for APT not Wefax.
Wefax is up around 1600 mHz.

Dick
KC3EF

2811. Re: Wanted: Plans to Build A Quadrifilar Ant. for WEFAX

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: Richard Rohrer <rrohrer@mail.bcpl.lib.md.usw>
Message-ID: <59u1a5$2r0@news.abs.net>
Source record: 20488

Bob,

There is a good article in August or Sept QST for Quadrifilar antennas
for VHF including the 137mHz band. The 137mHz is for APT not Wefax.
Wefax is up around 1600 mHz.

Dick
KC3EF

2812. Re: Need info about military satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <19961226142801.JAA20830@ladder01.news.aol.com>
Source record: 20489

The UHF frequencies for these satellites are published in an available military standard and are unclassified. If you really need to know (you won't be able to decrypt any of it anyhow) then send me a note and I'll send you the title for the specification to request. You will be wasting your time, though.

John...
73
WB4LNM@aol.com

2813. FOR SALE - GE 19" COLOR TV/VCR COMBO - $250

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: ccc19380@jetson.uh.edu
Message-ID: <32e7b15f.2645603@news.uh.edu>
Source record: 20490

Hello,

I am selling a GE COLOR TV/VCR 19" COMBO. It is less than 45
days old. I am only selling it because I just bought a sound system
and it need audio/video outputs which this TV does NOT have. This TV
has Audio/Video Inputs and a Cable (Antenna) Jack In. It is a very
nice T.V. to have since the VCR is already built in. Just plug it in
and you are ready to go!!!! Please Reply If Interested. $250

ccc19380@jetson.uh.edu

(Email Only)

buyer must prepay only the shipping charges. i live in Houston, TX

2814. Re: Blocking ham/cb interference on stereo equipment?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: robert@kd3bj.ampr.org
Message-ID: <robert.851566020@kd3bj.ampr.org>
Source record: 20491

Kingfish@voicenet.com (Kingfish) writes:

>Hi Everyone,

>A neighbor of mine has a ham or cb radio, and his transmissions come
>out over my stereo, telephone, clock radio - anything with a speaker.
>The FCC won't do anything about it.

>I know there are filters you can put on your telephone to block some
>of the interference. Is there anything like that for stereo
>equipment?

>Thanks,

>JOn

Jon: What works sometimes depends on the environment. Is you neighbor
in the next single-family dwelling? In the next apartment? Down the street?
Some fixes require filters on the power line. Some require filters on
his transmitter and your receiver. If he is getting into the stereo,
phone and clock radio, it sounds like he is VERY close. For better help,
give us some particulars, please.

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

2815. Re: Need info about military satellite

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: robert@kd3bj.ampr.org
Message-ID: <robert.851566284@kd3bj.ampr.org>
Source record: 20492

scederas@bellsouth.net (scederas@bellsouth.net) writes:

>On Thu, 19 Dec 1996 15:13:36 -0500, JungHo Yu <kc8djq@amsat.org>
>wrote:

>>I need info about the freqs of military satellite and other info.
>>I saw some special forces using satellite communication system which
>>must be military one during Gulf War. pse let me know where i can find
>>these infos.
>\

Check the scanner news group. rec.radio.scanner. Also look for info on
www.grove.net, where the Monitoring Times and Satellite Times folks have
their pages.

> Why don't you call the Military up and ask them to tell you
>the frequencies for the military satellites and while you are at it
>ask them if their is anything else that they can tell you that is a
>threat to the security of this nation.

By the time he finds someone in the military who knows the answers, and
is clueless enough to tell him, his phone bill will be too large to let him
enjoy the listening hobby.

If it's important enough to keep secret, it will be encrypted. After
all, the other governments know the frequencies, and they DO listen!

--
Robert Garland NX3S @ N3ACL.PA.USA.NOAM
Hilltown Township Bucks County robert@kd3bj.ampr.org
Pennsylvania USA Grid FN20ii
"Ham Radio is a calling"

2816. Re: FOR SALE - GE 19" COLOR TV/VCR COMBO - $250

Newsgroup: rec.radio.amateur.space
Date: 1996-12-26 00:00:00 UTC
From: steve <kd6fyk@wco.com>
Message-ID: <32C2D60F.7627@wco.com>
Source record: 20493

ccc19380@jetson.uh.edu wrote:
>
> Hello,
>
> I am selling a GE COLOR TV/VCR 19" COMBO. It is less than 45
> days old. I am only selling it because I just bought a sound system
> and it need audio/video outputs which this TV does NOT have. This TV
> has Audio/Video Inputs and a Cable (Antenna) Jack In. It is a very
> nice T.V. to have since the VCR is already built in. Just plug it in
> and you are ready to go!!!! Please Reply If Interested. $250
>
> ccc19380@jetson.uh.edu
>
> (Email Only)
>
> buyer must prepay only the shipping charges. i live in Houston, TX

I think he put this in space group because of name in address.

hint,it starts with a J.

2817. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-27 00:00:00 UTC
From: orion@capital.net
Message-ID: <32c363e5.56550648@news.capital.net>
Source record: 20494

"Travis Roy" <travis.tigger@worldnet.att.net> wrote:

>Hi, I'm having trouble getting anything in or out of Mir. Could someone
>please tell me the frequencies they use and for what. Also I could you some
>advise on what Satellite tracking software I should use. Right now I use
>Logsat. My equipment is a Yaesu FT-530 (Just picked it up yesterday, I
>had a Kenwood TH-79A but the display died) and a mag mount dual band
>antenna. I also have a diamond dual band whip.
>
>Thanks
>TTFN
>Travis

Mir's frequencies are:
Uplink (they listen) 145.800
Downlink (you listen) 145.200
Packet (simplex) 145.800

I use STSplus for tracking. It's good. Logsat is good too. There are
others.

--
73,
Butch N2YMJ

2818. how run F0-29 (MODE etc)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-27 00:00:00 UTC
From: HB9VAF <marcom@iprolink.ch>
Message-ID: <01bbf408$8e3b7e80$03a0bd8a@mam>
Source record: 20495

hi

I dont now witch mode, freq is in use to trafic with f0-29 ?

Tank four your help

PS: Excuse my english (I speek french)

--
HB9VAF - MANCASTROPPA MARCO - SWITZERLAND
Email : marcom@iprolink.ch

2819. mir uhf repeater

Newsgroup: rec.radio.amateur.space
Date: 1996-12-27 00:00:00 UTC
From: perkiert@nildram.co.uk
Message-ID: <32c43bdb.0@scooby.nildram.co.uk>
Source record: 20496

I gather that mir has a uhf amateur repeater Is it 437.950 or 437.930
MHz Today (27 December 1996)
at 17:35 I heard a Xmas greeting message I also heard what sounded
like a burst of packet data. I
would be interested in any information regarding the amateur radio
activity on mir, I have a handy
talky for 430Mhz band it has no tone squelch and the repeater shift is
600khz for Europe so I think
I will only be listening.. Am I likley to hear a beacon if the
repeater is not active?

Thanks and happy new year to all.

Paul G4BKS
Locator IO91OT 51 deg 49 min north 0 deg 49 min west

2820. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-27 00:00:00 UTC
From: Bob Houghton <houghton@cyberg8t.com>
Message-ID: <5a1k62$316$1@nntp.cyberg8t.com>
Source record: 20497

>Mir's frequencies are:
>Uplink (they listen) 145.800
>Downlink (you listen) 145.200
>Packet (simplex) 145.800

The Nov/Dec issue of the Amsat Journal shows the following:

145.200 Uplink, 145.800 Downlink, Voice or Packet. Who's right?

Bob KC6LVG

2821. Good Quotes (erXXpE)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Qoute-A-Day@juno.com
Message-ID: <5a20la$11di@useneta1.news.prodigy.com>
Source record: 20498

Every day, we at Quote-A-Day e-mail an interesting quote to people on the Internet. The quotes are inspirational, witty and insightful. We don't charge for this service and we hope you'll want to be a part of it.

If you would like to join our mailing, send e-mail to
Subscribe2@Juno.com
And put your name in the body of the message.

Later, if you like, you can stop receiving this mailing by sending e-mail to
Unsubscribe2@Juno.com

(erXXpE)

2822. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Bob Winingham <kc5ejk@onramp.net>
Message-ID: <5a2bfk$m5t@news.onramp.net>
Source record: 20499

>The Nov/Dec issue of the Amsat Journal shows the following:
>145.200 Uplink, 145.800 Downlink, Voice or Packet. Who's right?

Well Amsat Journal is RIGHT but the MIR station decided
after the fact to change.

We have two large repeaters in Dallas on 145.190 and 145.210
and that makes it a problem to catch the voice downlink.

73

2823. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <5a2gb4$3ck$1@news.mhv.net>
Source record: 20500

In article <5a1k62$316$1@nntp.cyberg8t.com>, Bob Houghton <houghton@cyberg8t.com> wrote:
>>Mir's frequencies are:
>>Uplink (they listen) 145.800
>>Downlink (you listen) 145.200
>>Packet (simplex) 145.800
>
>The Nov/Dec issue of the Amsat Journal shows the following:
>
>145.200 Uplink, 145.800 Downlink, Voice or Packet. Who's right?
>
>Bob KC6LVG

The downlink where you listen for voice is 145.200, your uplink is
145.800.

Packet is simplex on 145.800

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2824. Re: Kits for phase-3D?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Dec28.061418.3750@ke4zv.atl.ga.us>
Source record: 20501
Cross-posted to: rec.radio.amateur.digital.misc,alt.ham-radio.ssb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

In article <32C01C2A.4A4D@mindspring.com> "Timothy S. Powell" <tpowell@mindspring.com> writes:
>Does anyone know of any 6-meter, 2-meter and 70-cm SSB kits that would
>be good to use for the Phase-3D sat when it gets in orbit. I'm a
>college student with limited funds. I would like to work the sat when
>it get up but can not buy the high price equipment that is needed but
>would like to build a small sat station if possible.
>Timothy
>KD4IKY

Well, lets see what you need. For mode U/V (the old mode B), you'll need a 70cm Tx and a 2m Rx. Now an easy way to get these is with transverters from a 10m rig (or an old SSB CB). The latter can be had cheap if you don't already have something for 10m. You don't have to convert it, you can choose the crystals in the transverters to go direct to and from CB frequencies. You'll want to mod it to allow enough RIT range to cover between channels, and to allow XIT as well. This is usually pretty easy to do. Down East Microwave sells suitable transverter kits, or you can build from scratch based on the designs in the RSGB VHF/UHF Dx Book. A preamp will be needed, and the ARRL Handbook and the Proceedings of the Central States VHF Conference (available from ARRL) have several suitable designs.

Another approach is to build a 2m Rx and 70cm Tx. The Rick Campbell R2 and T2, described in a QST series and in newer Handbooks, are suitable for this. Kanga sells kits, but these radios are simple enough to build dead bug style. The R2 and T2 are universal designs which can be made to work from LF up through UHF (up to 500 MHz anyway). They use the phasing method to generate SSB and to obtain single signal reception. You have to supply the LO. A VXO and multiplier should do fine. You can find suitable VXO designs in the Handbook. A good mast mount preamp will be required for receive, and any of the ones referenced above should work fine. You'll need a PA for the Tx. RF Parts sells suitable brick amps, as does Down East Microwave. Depending on antenna gain, you'll need from 10 watts to 100 watts uplink power. Err on the side of too much, you can turn it down if you wind up louder than the beacon.

(Note that you can set the R2 and T2 up for 10m and use transverters, as with the CB set recomendation above, if you prefer. There are some advantages to this approach, though it adds some complexity and cost.)

If you'd like to try your hand at digital via the satellite. A suitable receiver for 9600 baud on P3D and the Microsats can be made from a GE UHF Exec II or Mastr II receive strip. Use the temperature compensation input of the Icom (channel element) for doppler tracking. These Rx strips can be found at hamfests for $25, or $50 for a complete radio. The UHF Tx strip can be used as a CW transmitter for mode U/V as is. With 80 watts output, they do great. For data uplink, a VHF version of the Tx strip can be modified for 9600 baud. Disable the PM modulator and use the temperature compensation input to the Icom for modulation (or rewire to use a Motorola channel element and modulate that, it's a bit more linear).

If you prefer to scratch build the FM setup, a receiver based on the MC13135 receiver subsystem chip, and a Tx based on the MC2833 exciter chip, are pretty easy to do. Add a power brick from RF Parts, and you're on your way. Converting the business band radios is so easy and cheap, though, it is really the better way to go.

P3D will have many more modes. Setting up for them will require either more transverters or more radios. Mode U/V and the Microsat style 9600 baud digital mode will likely the be the most popular in the beginning, however, because everyone equipped for Oscar 10 and Oscar 13 will already be set for mode U/V and all the Microsat ground stations will be set for 9600 baud data.

You'll need a pair of steerable yagis or helixes, for mode U/V. You can build these yourself and save a bunch of money. When the sat is near apogee, it hangs in virtually the same spot in the sky for long periods, so you can aim the antennas by hand, no need for auto-tracking, or even for rotators. The antennas don't have to be very high off the ground, since they are looking up. You can use a tripod or post mount and turn them directly by hand as needed. The antennas can be made from a length of 2x2 and use aluminum clothesline wire for elements. There are a number of antenna programs available on the net which can optimize the design for you.

It doesn't have to cost gobs of money to get on the satellites if you use a little ingenuity. You can be on the digital birds for under $100, or on U/V SSB for a bit over $300, if you scrounge and adapt a bit.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

2825. Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: dmann10@juno.com
Message-ID: <851794158.12184@dejanews.com>
Source record: 20502
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

Besides DirectPC what other home Internet satellite service
companies are there? Thanks in advace,
dmann
----------==== Posted via Deja News ====----------
http://www.dejanews.com/ Search, Read, Post to Usenet

2826. Got a Nice Visual on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <32C565BB.3B0C@ix.netcom.com>
Source record: 20503

On the evening of 27 Dec on a pass that peaked at 17:13 EST, I had a nice visual sighting of Mir. There was cloud cover to my west, but as soon as it cleared them, I had a nice view from near 50 degrees elevation until it disappeared over my horizon to the ESE. It was neat - the first time that I have seen it. I tried some 7x50 binoculars, though they didn't help too much.

I used STSPLUS to predict the orbits.

--
73 de Jim, KD1YV
http://pw1.netcom.com/~jimkd1yv/hamily.html

2827. MIR Repeater Working

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <32C5723F.7F7B@amsat.org>
Source record: 20504

I've been monitoring the MIR Space Station the last few weeks. The last couple of days, I haven't heard the repeater. Has anyone used it in the last couple of days?

Mark - N0NSV

2828. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Mark Saunders <tracker@dancris.com>
Message-ID: <32C56A19.7E2@dancris.com>
Source record: 20505

Travis Roy wrote:
>
> Hi, I'm having trouble getting anything in or out of Mir. Could someone
> please tell me the frequencies they use and for what. Also I could you some
> advise on what Satellite tracking software I should use. Right now I use
> Logsat. My equipment is a Yaesu FT-530 (Just picked it up yesterday, I
> had a Kenwood TH-79A but the display died) and a mag mount dual band
> antenna. I also have a diamond dual band whip.
>
> Thanks
> TTFN
> Travis

Hi Travis,

MIR also has a 70cm FM repeater onboard, it just went on the air. The January 1997 issue of QST has the into on page 51. The voice uplink frequency is 435.750 MHz and the downline is 437.950 MHz with a141.3 CTCSS tone. This is an odd split, but your Yaesu owners manual tells you how to set it up (on page 31 "Storing Independent Transmit Frequencies"). The repeater callsign is RR0LL. QST reports, and I quote, "Its signal is so loud that it can be easily heard with H-Ts and "rubber duck" antennas. In fact, a number of hams have worked it with H-Ts."

I've not heard it for a few days, but I've not been waiting by the radio for each pass, either.

I use tracksat v3.1. It is FREE and works very well. E-mail me and I'll tell you where you can get it. AMSAT-NA provides the orbital elements in the 2-line format required by tracksat.

Regards,

Mark Saunders -- KJ7BS
Glendale, Arizona
tracker@dancris.com
KJ7BS@KC7Y.AZ.USA.NOAM

2829. NEED MONEY?!?!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: unverified.user@nd.edu
Message-ID: <unverified.user-2812961608560001@mac04.ccmblab.nd.edu>
Source record: 20506

(I'm an unverified sender because I'm using the Internet at a college lab)
$
$ $ DO NOT THROW THIS LETTER AWAY, JUST TRY $
$
$
$ $ IT, I DID AND I ALREADY HAVE OVER $1000.$
$
$
$ (Is this legal?>>>GO TO END OF
DOC!!!!)
$
I was once a doubting Thomas also, one who never thought any of those
schemes worked or where even legal. But after hearing so much about it
and
all those testimonials I thought HEY, WHY NOT TRY! And I did. After 2
week
I received several thousand dollars. After four weeks my local mailman
suggested if I am going to expect such a volume of mail I should open a
post office box, A LARGE ONE! Now with the Internet this money making
idea
gets even better. Why do you see so many of these get rich quick messages
on the Internet? IT REALLY WORKS. Besides whats $5, Consider it an
investment. Take this advice, if it doesn't recover your time and money,
don't try it again.

Testimonials from others who have tried this idea have reported FANTASIC
results. Markus Valppu says he made $53,664 doing this, Dan Stepstone
made
$17,000 in this perfectly legal and simple plan.

****
This works, I did it and have already received $682.00 in the past week.
****
Hello! I've got some awesome news that I think you need to take two
minutes to read if you have ever thought "How could I make some
serious cash in a hurry???" , or been in serious debt, ready to do
almost anything to get the money needed to pay off those bill
collectors. So grab a snack, a warm cup of coffee, or a glass of your
favorite beverage, get comfortable and listen to this interesting,
exciting find!
Let me start by saying that I FINALLY FOUND IT! That's right!. I
found it! And I HATE GET RICH QUICK SCHEMES!! I hate those schemes
like multi-level marketing, mail-order schemes, envelope stuffing
scams, 900 number scams... the list goes on forever. I have tried
every darn get rich quick scheme out there over the past 12 years. I

somehow got on mailing lists for people looking to make money (more like 'desperate stupid people who will try anything for money!'). Well, when I was a teenager, these claims to 'get me rich quick' sounded irresistible! I would shell out $14.95 here, $29.95 there, $24.95 here, and another $49.95 there. I had maxed out my new Circuit City Card AND my Visa...I was desperate for money!! So, I gave them all a chance but failed at every one of them! Maybe they worked for some people, but not for me. Eventually, I just tossed that JUNK MAIL in the trash when I got the mail. I recognized it right away. I can smell a money scam from a mile away these days, SO I THOUGHT.... I thought I could sniff out a scam easily. WAS I WRONG!! ....I LOVE THE INTERNET!!!

I was scanning thru a NEWSGROUP and saw an article stating to GET CASH FAST!! I thought..."Here on the Internet?? Well, I'll just have to see what schemes could possibly be on the internet." The article described a way to MAIL A ONE DOLLAR BILL TO ONLY FIVE PEOPLE AND MAKE $50, 0000 IN CASH WITHIN 4 WEEKS! Well, the more I thought about it, the more I became very curious. Why? Because of the way it worked AND BECAUSE IT WOULD ONLY COST ME FIVE DOLLARS (AND FIVE STAMPS), THAT'S ALL I EVER PAY....EVER!!

Ok, so the $50,000 in cash was maybe an tough amount to reach, but it was possible. I knew that I could at least get a return of $1,000 or so. So I did it!! As per the instructions in the article, I mailed out ('snail mail'for you e-mail fanatics) a single dollar bill to each of the five people on the list that was contained in the article. I included a small note, with the dollar, that stated "Please Add Me To Your List." I then removed the first position name of the five names listed and moved everyone up one position, and I put my name in position five of the list. This is how the money starts rolling in! I then took this revised article now with my name on the list and REPOSTED IT ON AS MANY NEWSGROUPS AND LOCAL BULLETIN BOARD MESSAGE AREAS THAT I KNEW. I then waited to watch the money come in...prepared to maybe receive about $1000 to $1500 in cash or so.... But what a welcome surprise when those envelopes kept coming in!!! I knew what they were as soon as I saw the return addresses from people all over the world-Most from the U.S., but some from Canada, even some from Australia! I tell you, THAT WAS EXCITING!! So how much did I get in total return? $1000? $5000? Not even!!! I received a total of $23,343!!! I couldn't believe it!!

I now have a brand new black Acura Integra to speak for, due to this!! Now after almost 8 months, I am ready to do it again!!! So maybe it was possible to get $50,000 in cash, I don't know, but IT COMPLETELY DEPENDS ON YOU, THE INDIVIDUAL! You must follow through and repost this article everywhere you can think of! The more postings you achieve will determine how much cash will arrive in your very own mailbox!! It's just too easy to pass up!!!

Let's review the reasons why you should do this: The only cost factors are for the five stamps, the 5 envelopes and the 5 one dollar bills that you send out to the listed names by snail mail (US Postal Service Mail). Then just simply repost the article (WITH YOUR NAME ADDED) to all the newsgroups and local BBS's you can. Then sit back and, (ironically), enjoy walking (you can run if you like! :o) down your driveway to your mailbox and scoop up your rewards!! We all have five dollars to put into such an easy effortless investment with SPECTACULAR REALISTIC RETURNS OF $15,000 to $25,000 in about 3-5 weeks! So HOLD OFF ON THOSE LOTTERY NUMBERS FOR TODAY,EAT AT HOME TONIGHT INSTEAD OF TAKEOUT FROM McDONALDS AND INVEST FIVE DOLLARS IN THIS AMAZING MONEY MAKING SYSTEM NOW!!! YOU CAN'T LOSE!!

So how do you do it exactly, you ask? I have carefully provided the mostdetailed, yet straightforward instructions on how to easily get this underway and get your cash on its way. SO, ARE YOU READY TO MAKE SOME CASH!!!?? HERE WE GO!!!

*** THE LIST OF NAMES IS AT THE END OF THIS ARTICLE. ***

OK, Read this carefully. Get a printout of this information, if you like, so you can easily refer to it as often as needed.

INSTRUCTIONS:

1. Take a sheet of paper and write on it the following: "Please add my name to your list". This creates a service out of this money making system and thus making it completely legal. You are not just randomly sending a dollar to someone, you are paying one dollar for a legitimate service. Make sure you include your name and address. I assure you that, again, this is completely legal! For a neat little twist, also write what slot their name was in: "You were in slot 3", Just to add a little fun! This is all about having fun and making money at the same time!

2. Now fold this sheet of paper around a dollar bill ,(no checks or money orders), and put them into an envelope and send it on its way to the five people listed. The folding of the paper around the bill will insure its arrival to its recipient. THIS STEP IS IMPORTANT!!

3. Now listen carefully, here's where you get YOUR MONEY COMING TO YOUR MAILBOX. Look at the list of five people; remove the first name from position one and move everyone on the list up slot one on the list. Position 2 name will now move to the position 1 slot , position 3 will now become position 2, 4 will be be 3, 5 wil be 4. Now put your name, address, zipcode AND COUNTRY in position 5, the bottom position on the list.

4. Now upload this updated file to as many newsgroups and local bulletin boards' message areas & file section as possible. Give a catchy description of the file so it gets noticed!! Such as: "NEED FAST CASH?, HERE IT IS!" or "NEED CASH TO PAY OFF YOUR DEBTS??", etc. And the more uploads, the more money you will make, and of course, the more money the others on the list will make

too. LET'S ALL TAKE CARE OF EACH OTHER BY BEING HONEST AND BY PUTTING FORTH 120 PERCENT INTO THIS PROFITABLE & AMAZING SYSTEM!!! You'll reap the benefits, believe me!!! Set a goal for the number of total uploads you'll post, such as 15-20 postings or more! Always have a goal in mind!!! If you can UUE encode the file when uploading, that will make it easier for the people to receive it and have it downloaded to their hard drive. That way they get a copy of the article right on their computer without hassles of viewing and then saving the article from the File menu. Don't alter the file type, leave it as an MS-DOS Text file. The best test is to be able to view this file using Microsoft's Notepad for Windows 3.x or WordPad for Windows '95. If the margins look right without making the screen slide left or right when at the ends of the sentences, you're in business!

5. If you need help uploading, simply ask the sysop of the BBS, or "POST" a message on a newsgroup asking how to post a file, tell them who your Internet provider is and PEOPLE WILL ALWAYS BE GLAD TO HELP. I would try to describe how to do it but there are simply too many internet software packages with slightly different yet relatively simple ways to post or upload a file. Just ask for help or look in the help section for 'posting'. I do know that for GNN, you simply select 'POST' then enter a catchy description under the subject box, choose 'ATTACH', selecting 'UUE' and NOT 'TXT', then choose 'Browse' to go look for the file. Find your text file CASH.TXT and click on it and choose 'OK'. Place a one line statement in the main body section of the message post screen. Something like "Download this to read how to get cash arriving in your mailbox with no paybacks!" or whatever. Just make sure it represents its true feasibility, NOT something like..."Get one million dollars flooding in your mailbox in two days!"

You'll never get ANY responses!

6. And this is the step I like. JUST SIT BACK AND ENJOY LIFE BECAUSE CASH IS ON ITS THE WAY!! Expect to see a little money start to trickle in around 2 weeks, but AT ABOUT WEEKS 3 & 4, THE MONEY STORM WILL HIT YOUR MAILBOX!! All you have to do is take it out of the mailbox and try not to scream too loud (outside anyway) when you realize YOU HIT THE BIG TIME AT LAST!!

7. So go PAY OFF YOUR BILLS AND DEBTS and then get that something special you always wanted or buy that special person in your life (or the one you want in your life) a gift they'll never forget. ENJOY LIFE!

8. Now when you get low on this money supply, simply re-activate this file again; Reposting it in the old places where you originally posted and possibly some new places you now know of. Don't ever lose this file, always keep a copy at your reach for when you ever need cash. THIS IS AN INCREDIBLE TOOL THAT YOU CAN ALWAYS RE-USE TIME AND TIME AGAIN WHEN CASH IS NEEDED!

2
****
****
THE NAMES LIST THE NAMES LIST THE NAME LIST
****
* HONESTY IS WHAT MAKES THIS PROGRAM SUCCESSFUL!!!
*
*
1. Clint Chizinski
* 42 Cavalry Hill Road
* Wilton, CT 06897
* USA

2. Florian Meyer
* Vogt-Groth Weg 45c
* 22609 Hamburg
* Germany

3. Rob Thayer
* 2150 W. 10th Ave. #L-106
* Broomfield, CO 80020
* USA

4. Bill Kendall
* 9975 University Pkwy #72
* Pensacola, FL 32514
* USA

5. Jon Geib
* 52768 Brandel Ave.
* South Bend, IN 46635
* USA

****
People have asked, "What if the plan is played out and none sends you any money?" So what! What are the chances of that happening when there are tons of new honest users and new honest people who are joining the Internet everyday and are willing to give it a try?!? Estimates are 20,000 to 50,000 new users EVERYDAY!!! Remember, play FAIR and HONEST, and THIS WILL WORK, I PROMISE YOU!!! You just have to be honest. Make sure you print this article out RIGHT NOW! ! ! Also, keep a list of everyone
who sends you money and always keep an eye on the newsgroups postings to make sure everyone is playing fair.

FINAL THOUGHT
In order for this system to work and remain legal, you have to follow the steps and send your $5. Honesty is always the best policy. Good luck, have fun and make some serious money!!!!!

Proof:
This arraignment does not constitute a "chain letter" under US Title 18 Code section1302. Because you are purchasing a service.

2830. Re: Kits for phase-3D?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: gary@ke4zv.atl.ga.us
Message-ID: <1996Dec28.222644.8158@ke4zv.atl.ga.us>
Source record: 20507
Cross-posted to: rec.radio.amateur.digital.misc,alt.ham-radio.ssb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

In article <32C01C2A.4A4D@mindspring.com> "Timothy S. Powell" <tpowell@mindspring.com> writes:
>Does anyone know of any 6-meter, 2-meter and 70-cm SSB kits that would
>be good to use for the Phase-3D sat when it gets in orbit. I'm a
>college student with limited funds. I would like to work the sat when
>it get up but can not buy the high price equipment that is needed but
>would like to build a small sat station if possible.
>Timothy
>KD4IKY

Well, lets see what you need. For mode U/V (the old mode B), you'll need a 70cm Tx and a 2m Rx. Now an easy way to get these is with transverters from a 10m rig (or an old SSB CB). The latter can be had cheap if you don't already have something for 10m. You don't have to convert it, you can choose the crystals in the transverters to go direct to and from CB frequencies. You'll want to mod it to allow enough RIT range to cover between channels, and to allow XIT as well. This is usually pretty easy to do. Down East Microwave sells suitable transverter kits, or you can build from scratch based on the designs in the RSGB VHF/UHF Dx Book. A preamp will be needed, and the ARRL Handbook and the Proceedings of the Central States VHF Conference (available from ARRL) have several suitable designs.

Another approach is to build a 2m Rx and 70cm Tx. The Rick Campbell R2 and T2, described in a QST series and in newer Handbooks, are suitable for this. Kanga sells kits, but these radios are simple enough to build dead bug style. The R2 and T2 are universal designs which can be made to work from LF up through UHF (up to 500 MHz anyway). They use the phasing method to generate SSB and to obtain single signal reception. You have to supply the LO. A VXO and multiplier should do fine. You can find suitable VXO designs in the Handbook. A good mast mount preamp will be required for receive, and any of the ones referenced above should work fine. You'll need a PA for the Tx. RF Parts sells suitable brick amps, as does Down East Microwave. Depending on antenna gain, you'll need from 10 watts to 100 watts uplink power. Err on the side of too much, you can turn it down if you wind up louder than the beacon.

(Note that you can set the R2 and T2 up for 10m and use transverters, as with the CB set recomendation above, if you prefer. There are some advantages to this approach, though it adds some complexity and cost.)

If you'd like to try your hand at digital via the satellite. A suitable receiver for 9600 baud on P3D and the Microsats can be made from a GE UHF Exec II or Mastr II receive strip. Use the temperature compensation input of the Icom (channel element) for doppler tracking. These Rx strips can be found at hamfests for $25, or $50 for a complete radio. The UHF Tx strip can be used as a CW transmitter for mode U/V as is. With 80 watts output, they do great. For data uplink, a VHF version of the Tx strip can be modified for 9600 baud. Disable the PM modulator and use the temperature compensation input to the Icom for modulation (or rewire to use a Motorola channel element and modulate that, it's a bit more linear).

If you prefer to scratch build the FM setup, a receiver based on the MC13135 receiver subsystem chip, and a Tx based on the MC2833 exciter chip, are pretty easy to do. Add a power brick from RF Parts, and you're on your way. Converting the business band radios is so easy and cheap, though, it is really the better way to go.

P3D will have many more modes. Setting up for them will require either more transverters or more radios. Mode U/V and the Microsat style 9600 baud digital mode will likely the be the most popular in the beginning, however, because everyone equipped for Oscar 10 and Oscar 13 will already be set for mode U/V and all the Microsat ground stations will be set for 9600 baud data.

You'll need a pair of steerable yagis or helixes, for mode U/V. You can build these yourself and save a bunch of money. When the sat is near apogee, it hangs in virtually the same spot in the sky for long periods, so you can aim the antennas by hand, no need for auto-tracking, or even for rotators. The antennas don't have to be very high off the ground, since they are looking up. You can use a tripod or post mount and turn them directly by hand as needed. The antennas can be made from a length of 2x2 and use aluminum clothesline wire for elements. There are a number of antenna programs available on the net which can optimize the design for you.

It doesn't have to cost gobs of money to get on the satellites if you use a little ingenuity. You can be on the digital birds for under $100, or on U/V SSB for a bit over $300, if you scrounge and adapt a bit.

Gary
--
Gary Coffman KE4ZV | You make it, | Due to provider problems
Destructive Testing Systems | we break it. | with previous uucp addresses
534 Shannon Way | Guaranteed! | Email to ke4zv@radio.org
Lawrenceville, GA 30244 | |

2831. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Jim Leveraus <elint@execpc.com>
Message-ID: <32C5DA87.FC3@execpc.com>
Source record: 20508
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

dmann10@juno.com wrote:
>
> Besides DirectPC what other home Internet satellite service
> companies are there? Thanks in advace,
> dmann
> ----------==== Posted via Deja News ====----------
> http://www.dejanews.com/ Search, Read, Post to Usenet

--

Check http://www.nsn.net

-.-
Jim Leveraus
Internet: elint@execpc.com

2832. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: Jim Leveraus <elint@execpc.com>
Message-ID: <32C5FC5C.EDA@execpc.com>
Source record: 20509
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

Alex Chapman wrote:
>
> On Sat, 28 Dec 1996 20:42:15 -0600, Jim Leveraus <elint@execpc.com>
> wrote:
>
> >> Besides DirectPC what other home Internet satellite service
> >> companies are there? Thanks in advace,
> > >
> > >Check http://www.nsn.net
>
> Doesn't look to me like these folks are aiming at the consumer market
> in the same way that DirecPC are. Do they even offer internet access
> to individuals over their satellite service - I can't find any prices
> for setup and monthly charges.
>
> Anyone here using them care to comment?
> ---
> Alex Chapman <alex@budgetweb.com> http://www.budgetweb.com/
> lists of web space providers/list of os/2 netscape plug-ins

They target multiuser sites or remote ISP'S

--
-.-
Jim Leveraus
Internet: elint@execpc.com

2833. Re: Got a Nice Visual on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-28 00:00:00 UTC
From: trandall@mhv.net
Message-ID: <5a4j6a$2bh$1@news.mhv.net>
Source record: 20510

In article <32C565BB.3B0C@ix.netcom.com>, KD1YV <jimkd1yv@ix.netcom.com> wrote:
>On the evening of 27 Dec on a pass that peaked at 17:13 EST, I had a
>nice visual sighting of Mir. There was cloud cover to my west, but as
>soon as it cleared them, I had a nice view from near 50 degrees elevation
>until it disappeared over my horizon to the ESE. It was neat - the first
>time that I have seen it. I tried some 7x50 binoculars, though they
>didn't help too much.
>
>I used STSPLUS to predict the orbits.
>
>--
>73 de Jim, KD1YV
>http://pw1.netcom.com/~jimkd1yv/hamily.html

Ahhh congrats Jim! Neat isn't it?! Have you seen the shuttle flyover yet?
STSPLUS is a great tracker, I've been using it for years.

Tom

Tom Randall Amateur Radio - KB2SMS
trandall@mhv.net Mt. Beacon Amateur Radio Club / ARRL / 10-10
Member: AAVSO Solar Division

Opinions herein are mine and may not be that of MHV.NET!

2834. Kenwood TM-401B below 440 MHz?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: Earl Needham <NeedhamE.NO.SPAM@3lefties.com>
Message-ID: <01bbf548$3ad971c0$a01865ce@SNeedha.3lefties.com>
Source record: 20422
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.space

Having recently discovered FM activity through sattelites, I'd like to try my hand at getting through the FM repeater on the Mir space station. Unfortunately, my UHF rig (a Kenwood TM-401B) only covers 440-450 MHz. Is there a mod available to allow this rig to operate below 440 MHz?
BTW -- the Japanese TM-401 apparently oerated from 430-450 MHz, judging by some of the Japanese WWW pages.

Thanks for any help
Earl Needham, KD5XB
needhame@3lefties.com

2835. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: pvale@midusa.net
Message-ID: <5a4rtr$ooo1@news.midusa.net>
Source record: 20423

Bob Houghton <houghton@cyberg8t.com> wrote:

>>Mir's frequencies are:
>>Uplink (they listen) 145.800
>>Downlink (you listen) 145.200
>>Packet (simplex) 145.800

>The Nov/Dec issue of the Amsat Journal shows the following:

>145.200 Uplink, 145.800 Downlink, Voice or Packet. Who's right?

>Bob KC6LVG
I have it programmed in my radios both ways.....

2836. Re: Got a Nice Visual on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: wmeara@erols.com
Message-ID: <32c69884.1024461@news.erols.com>
Source record: 20424

FB Jim - I know that spotting the MIR is a lot of fun. I used to follow MIR, the Shuttle and the Hubble Space Telescope from Santo Domingo. Check out the October 95 issue of QST.

73 Bill N2CQR

2837. HAM TOOLKIT CD ROM..AWSOME!!!!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: aidan@ThePentagon.com
Message-ID: <32e4937a.3360244@news.indigo.ie>
Source record: 20425

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

2838. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: elefther@club-internet.fr
Message-ID: <32c62d90.2146551@News>
Source record: 20426
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On Sat, 28 Dec 1996 20:42:15 -0600, Jim Leveraus <elint@execpc.com>
wrote:

>dmann10@juno.com wrote:
>>
>> Besides DirectPC what other home Internet satellite service
>> companies are there? Thanks in advace,
>> dmann
>> --------------------==== Posted via Deja News ====-----------------------
>> http://www.dejanews.com/ Search, Read, Post to Usenet
>
>--
>
>Check http://www.nsn.net

TPS are planning to start offering an internet access service as part
of their DTH digital bouquet.
The internet accesss should start around the end of 1997.

>
>-.-
>Jim Leveraus
> Internet: elint@execpc.com

2839. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: alex@budgetweb.com
Message-ID: <32c69d2c.685628@news.pagesz.net>
Source record: 20427
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On 29 Dec 1996 07:38:34 GMT, "David Little" <dalite01@sprynet.com>
wrote:

>Planet Connect and Skylink - Both from Planet Systems; The folks
>that bring you Sho at Home Network
>
>PC-Sat http://www.pc-sat.com who recently took over Page sat operations
>
>I know there are others, but these came to mind. I have been trying to
>remember planet connects web site, but can't recall it.

Can't find any pricing information on the PC-Sat home page. Planet
Connects home page is http://www.planetc.com/pc.htm

Their pricing seems to be in the same range as DirecPC, although they
aren't real clear on whether they offer standard internet connections.
They talk a lot about BBS and FidoNet, and only mention the internet
in passing. Furthermore I can't find where they describe how upstream
is handled. I'm guessing you don't transmit upstream via the dish, so
it must rely on a telephone connection for upstream.

DirecPC allows you to use your current ISP for upstream, and
downstream comes over the satellite. Planet Connect don't seem to go
into any details on this. Anyone using them care to comment?

Alex Chapman <alex@budgetweb.com> http://www.budgetweb.com/
lists of web space providers/list of os/2 netscape plug-ins

2840. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: alex@budgetweb.com
Message-ID: <32c6a0a1.1533725@news.pagesz.net>
Source record: 20428
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On Sun, 29 Dec 1996 15:16:25 GMT, eleftheR@club-internet.fr (Sotires
Eleftheriou) wrote:

>TPS are planning to start offering an internet access service as part
>of their DTH digital bouquet.
>The internet accesss should start around the end of 1997.

I can't find any mention of this at their home page http://www.tps.fr/
but then my french isn't fantastic. Presumably this service would be
aimed at France, and not available in the USA.

Alex Chapman <alex@budgetweb.com> http://www.budgetweb.com/
lists of web space providers/list of os/2 netscape plug-ins

2841. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: dwittich@concentric.net
Message-ID: <32c6b2ff.186295439@news.concentric.net>
Source record: 20429

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for many, as well. Folks in Indianapolis want APRS to move from it's coordinated frequency. Seems like MIR could have researched a bit and tried to coordinate before they moved.

73

Doug

2842. LOW LOW PRICE HAM RADIO

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: hiway@delta1.deltanet.com
Message-ID: <5a6e39$1bb@news04.deltanet.com>
Source record: 20430

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon
through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

2843. WinTrak Pro Release

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: "Paul E. Traufler" <wintrak@traveller.com>
Message-ID: <01bbf5e1$cbe12fc0$51ae1ace@traveller.com.traveller.com>
Source record: 20431

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program. The Rendered views have been improved along with several new views available also. This is just a small list of the many improvements made to the program. Remember this program is a full 32-bit version, do not accept any substitutions! Do not let those other programs fool you with the old, "It works under Win95", but in reality it is a Windows 3.1 16-bit program. Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS Text conversion)
Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or provided Wave files.
Greatly improved help file with printed manual options included in help file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

2844. Re: Got a Nice Visual on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: orion@capital.net
Message-ID: <32c5b760.29024653@news.capital.net>
Source record: 20511

KD1YV <jimkd1yv@ix.netcom.com> wrote:

>On the evening of 27 Dec on a pass that peaked at 17:13 EST, I had a
>nice visual sighting of Mir. There was cloud cover to my west, but as
>soon as it cleared them, I had a nice view from near 50 degrees elevation
>until it disappeared over my horizon to the ESE. It was neat - the first
>time that I have seen it. I tried some 7x50 binoculars, though they
>didn't help too much.
>
>I used STSPLUS to predict the orbits.
>
>--
>73 de Jim, KD1YV
>http://pw1.netcom.com/~jimkd1yv/hamily.html

Congrats on your sighting, Jim. I've used STSPlus for a long time. I
don't believe there is a better program for tracking sats.

--
73,
Butch N2YMJ

2845. FS: Packet Stuff

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: crshi@aloha.net
Message-ID: <5a4eb8$3il@nuhou.aloha.net>
Source record: 20512

Packet Stuff for Sale:

Toshiba T1000SE 8086 Computer, with 2Meg Ram Disk. Charges using 12VDC Cigirette socket. Battery life is approx. 1.5hours, internal batteries changed I have packet software installed on Ram Disk. $ 190.00+shipping

T-1000 8086 Computer, with 768K Ram Disk. Battery life is OK. I have packet software isntalled on RAM Disk, but greatly reduced size.
$ 90+shipping

KPC-3 TNC. Version 6.0(supports APRS), 128K memory module. runs on 9V battery. The power LED broke, I took the Mail LED and replaced it with the broken power LED. $ 90.00+shipping

HTX-202 Radio Shack 2M Xceiver. No antenna. No manual. Battery pack is alkaline, but I used it for packet so I always used an external power.
$ 90.00+shipping

All items shipped from Hawaii, COD.

Thanks, Lawrence M. Koga, NH6NJ

Why am I selling? I am going to 440, 9600

2846. Re: MIR Repeater Working

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: mbv@flash.net
Message-ID: <5a4eas$j1g$1@excalibur.flash.net>
Source record: 20513

In article <32C5723F.7F7B@amsat.org>, n0nsv@amsat.org says...
>
>I've been monitoring the MIR Space Station the last few weeks. The last
>couple of days, I haven't heard the repeater. Has anyone used it in the
>last couple of days?
>
>Mark - N0NSV
>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Mark, The first times I've tried to hear it were the last two
passes and there was nothing to be heard. Could it be a lack
of activity, or does the operator turn it off due to power
budget requirements?....Anyone know?
Ken K5MBV
was nothing there

2847. DXER.COM is back online

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: rdale@pacbell.net
Message-ID: <32c5ddd4.8381514@news.pacbell.net>
Source record: 20514

"WE'RE BACK", "DXER.COM" "Your Ham Radio Resource Site"
is back on line and ready to provide you with the most
comprehensive ham radio related site on the Internet...

Stop by and check it out..29 indexes. Everything from
DX Clubs, EME, Packet Radio, Scanners, Shortwave, QRP,
Maritime, Callbooks, Contest Calendars, Software, Clusters.
Radio Modifications, Sarex, Mir, MARS and many others.
Many more links have been added and we are now approaching
500 links, with more to come...

In addition to the interactive BBS, we will be adding in
the near future a Ham E-Mail Callbook...

Stop on by "http://www.dxer.com" and let us know what you
think, and what you would like to see added to the ever
growing list of links..

2848. Got a Nice Visual on Mir

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: KD1YV <jimkd1yv@ix.netcom.com>
Message-ID: <5a4nm0$5b2@nr1.vancouver.istar.net>
Source record: 20515

On the evening of 27 Dec on a pass that peaked at 17:13 EST, I had a nice visual sighting of Mir. There was cloud cover to my west, but as soon as it cleared them, I had a nice view from near 50 degrees elevation until it disappeared over my horizon to the ESE. It was neat - the first time that I have seen it. I tried some 7x50 binoculars, though they didn't help too much.

I used STSPLUS to predict the orbits.

--
73 de Jim, KD1YV
http://pw1.netcom.com/~jimkd1yv/hamily.html

2849. MIR info..

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: dfrandin@vegas.infi.net
Message-ID: <5a4nk2$3om@nw101.infi.net>
Source record: 20516

For the last several weeks I've tried on several high (40+ degree) passes to hear some sort of rf out of mir, w/o any luck.. I'm using STSPlus with a fresh KEP file (TLE920.. The latest, I believe), and have been able to *see* mir at least once during this time on a visual pass, but everytime, the freqs I'm scanning are stone-cold dead... They are: 143.625 (the beacon), 145.200 (the voice d/l) and 437.950 (the repeater output) I've seen many claim that MIR can be easily heard with a rubber-duck on high-inclination orbits.. I'm using a Radio Shack PRO37 with a magmount antenna mounted outside the house. Am I just very unlucky or am I jinxed, equipment-wise?? Does the repeater remain on at all times or do they shut it off during work/sleep periods, and does the .625 beacon still operate???

Thanx,
Dave Frandin, WA6QNW
dfrandin@vegas.infi.net

2850. MIR Repeater Working

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: Mark Fossum <n0nsv@amsat.org>
Message-ID: <5a4pll$5b2@nr1.vancouver.istar.net>
Source record: 20517

I've been monitoring the MIR Space Station the last few weeks. The last couple of days, I haven't heard the repeater. Has anyone used it in the last couple of days?

Mark - N0NSV

2851. Re: MIR

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: Mark Saunders <tracker@dancris.com>
Message-ID: <5a4pn9$5b2@nr1.vancouver.istar.net>
Source record: 20518

Travis Roy wrote:
>
> Hi, I'm having trouble getting anything in or out of Mir. Could someone
> please tell me the frequencies they use and for what. Also I could you some
> advise on what Satellite tracking software I should use. Right now I use
> Logsat. My equipment is a Yaesu FT-530 (Just picked it up yesterday, I
> had a Kenwood TH-79A but the display died) and a mag mount dual band
> antenna. I also have a diamond dual band whip.
>
> Thanks
> TTFN
> Travis

Hi Travis,

MIR also has a 70cm FM repeater onboard, it just went on the air. The January 1997 issue of QST has the into on page 51. The voice uplink frequency is 435.750 MHz and the downline is 437.950 MHz with a141.3 CTCSS tone. This is an odd split, but your Yaesu owners manual tells you how to set it up (on page 31 "Storing Independent Transmit Frequencies"). The repeater callsign is RR0LL. QST reports, and I quote, "Its signal is so loud that it can be easily heard with H-Ts and "rubber duck" antennas. In fact, a number of hams have worked it with H-Ts."

I've not heard it for a few days, but I've not been waiting by the radio for each pass, either.

I use tracksat v3.1. It is FREE and works very well. E-mail me and I'll tell you where you can get it. AMSAT-NA provides the orbital elements in the 2-line format required by tracksat.

Regards,

Mark Saunders -- KJ7BS
Glendale, Arizona
tracker@dancris.com
KJ7BS@KC7Y.AZ.USA.NOAM

2852. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: alex@budgetweb.com
Message-ID: <32c5ef03.23240360@news.pagesz.net>
Source record: 20519
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On Sat, 28 Dec 1996 20:42:15 -0600, Jim Leveraus <elint@execpc.com>
wrote:

>> Besides DirectPC what other home Internet satellite service
>> companies are there? Thanks in advace,
>
>Check http://www.nsn.net

Doesn't look to me like these folks are aiming at the consumer market
in the same way that DirecPC are. Do they even offer internet access
to individuals over their satellite service - I can't find any prices
for setup and monthly charges.

Anyone here using them care to comment?

Alex Chapman <alex@budgetweb.com> http://www.budgetweb.com/
lists of web space providers/list of os/2 netscape plug-ins

2853. Packet <--> INTERNET Gateway??????

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: herksen@ibm.net
Message-ID: <5a50rk$14q8$1@news-s01.ny.us.ibm.net>
Source record: 20520

Hi there, and thanks for reading my message.

Does someone know a fully functional PACKET <--> INTERNET gateway??

Thanks for any help!!

Regards

Please respond to this message by email to: <herksen@ibm.net>

Robbert J. van Herksen / TA2IX
Istanbul, Turkey

2854. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-29 00:00:00 UTC
From: David Little <dalite01@sprynet.com>
Message-ID: <01bbf55a$f47216c0$34b0aec7@node2>
Source record: 20521
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

> Besides DirectPC what other home Internet satellite service
> companies are there? Thanks in advace,

Planet Connect and Skylink - Both from Planet Systems; The folks
that bring you Sho at Home Network

PC-Sat http://www.pc-sat.com who recently took over Page sat operations

I know there are others, but these came to mind. I have been trying to
remember
planet connects web site, but can't recall it.

Happy hunting

2855. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: fhagan@pe.net
Message-ID: <32c760de.20665955@news>
Source record: 20432
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On Sun, 29 Dec 1996 16:37:13 GMT, alex@budgetweb.com (Alex Chapman)
wrote:

>Connects home page is http://www.planetc.com/pc.htm
>
>Their pricing seems to be in the same range as DirecPC, although they
>aren't real clear on whether they offer standard internet connections.

About 8 months ago I looked into this ... they send usenet feeds via
satellite, so you could get newsgroups, but couldn't get web service
like DirectPC promises.

2856. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: eleftheR@club-internet.fr
Message-ID: <32c6fb35.33653903@News>
Source record: 20433
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

On Sun, 29 Dec 1996 16:49:52 GMT, alex@budgetweb.com (Alex Chapman)
wrote:

>On Sun, 29 Dec 1996 15:16:25 GMT, eleftheR@club-internet.fr (Sotires
>Eleftheriou) wrote:
>
>>TPS are planning to start offering an internet access service as part
>>of their DTH digital bouquet.
>>The internet accesss should start around the end of 1997.
>
>I can't find any mention of this at their home page http://www.tps.fr/
>but then my french isn't fantastic. Presumably this service would be
>aimed at France, and not available in the USA.

TPS are running off the Eutelsat satellite at 13 degrees east.
You're right, it can't be seen in the USA.
I orriginally posted this in reply to your message in a group that is
aimed primarily at European satellite TV, but I see that the orriginal
message was posted quite widely.

TPS are really only intended for France, but the signal can be picked
up all over Europe.
They haven't made much noise about their Internet plans yet as its
still early days.
It should probably use the same kind of technology as Direc PC.

2857. comunicato stampa

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: mose@tv.shineline.IT
Message-ID: <32C79854.4D93@tv.shineline.it>
Source record: 20434

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

2858. new mir freq for 1997

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: jim ryan <sigma4@iol.ie>
Message-ID: <32C7F1C8.DF6@iol.ie>
Source record: 20435

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

2859. Re: MIR info..

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Message-ID: <5a9180$9@faatcrl.faa.gov>
Source record: 20436

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

2860. Total Newbie Looking for help

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: Susan Driggers <Insight@cris.com>
Message-ID: <Pine.SUN.3.95.961230183159.15918A-100000@mariner.cris.com>
Source record: 20437

I am totally new to satellite communications and am looking for some advice on the bare minimum needed to get started. I am operating on a very restricted budget so anything that could be homebrewed would be appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

2861. NORAD Two-Line Orbital Element Sets (TLE922)

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <5a9jpd$7ge@blackbird.afit.af.mil>
Source record: 20438

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026

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SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547
2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
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2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
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1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
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GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
2 20322 98.9340 16.3974 0008115 209.8648 150.2056 14.03461035364320
Kvant-2
1 20335U 89093A 96364.95302371 .00011432 00000-0 13426-3 0 7796
2 20335 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366403724
GPS BII-05
1 20361U 89097A 96362.32232386 -.00000062 00000-0 10000-3 0 1580
2 20361 56.1079 45.6462 0094374 140.5981 220.1528 2.00565251 42185
COSMOS 2054 (Altair-1)
1 20391U 89101A 96364.82969829 -.00000128 00000-0 00000+0 0 4834
2 20391 4.2180 62.2030 0003361 176.6109 142.2528 1.00275094 25951
SPOT 2
1 20436U 90005A 96363.75244592 -.00000044 00000-0 00000+0 0 1679
2 20436 98.7463 74.6767 0001619 93.0931 267.0415 14.20017908359456
UO-14
1 20437U 90005B 96364.27556361 .00000024 00000-0 26190-4 0 2365
2 20437 98.5335 83.5280 0011265 352.6013 7.4998 14.29944025361931
AO-16
1 20439U 90005D 96363.24656844 -.00000041 00000-0 83825-6 0 346
2 20439 98.5490 85.0934 0011729 357.0387 3.0725 14.29993943361805
DO-17
1 20440U 90005E 96363.38946554 .00000056 00000-0 38505-4 0 352
2 20440 98.5506 85.9814 0012894 354.0834 6.0290 14.30137389361850
WO-18
1 20441U 90005F 96363.73332933 -.00000029 00000-0 54220-5 0 389
2 20441 98.5520 86.2408 0012432 355.3509 4.7561 14.30104776361907
LO-19
1 20442U 90005G 96363.29440200 -.00000005 00000-0 14885-4 0 340
2 20442 98.5554 86.3954 0013259 356.8533 3.2567 14.30216416361863
GPS BII-06
1 20452U 90008A 96359.72677644 .00000025 00000-0 10000-3 0 2562
2 20452 54.0425 159.0066 0069939 90.3808 270.6229 2.00551999 50638
MOS-1B
1 20478U 90013A 96362.21015652 .00000307 00000-0 26531-3 0 106
2 20478 99.1081 69.1507 0006322 79.0628 281.1249 13.93971212271447
DEBUT
1 20479U 90013B 96365.02749046 .00000004 00000-0 76347-4 0 352
2 20479 99.0240 352.8466 0541231 39.9770 323.9897 12.83347960323027
FO-20
1 20480U 90013C 96363.91101197 -.00000040 00000-0 -21925-4 0 9318
2 20480 99.0226 351.7062 0541303 43.1492 321.0740 12.83235801322868
MOS-1B R/B
1 20491U 90013D 96362.17806360 -.00000033 00000-0 38089-5 0 3057
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2 20491 99.0613 61.5895 0469458 202.5646 155.4205 13.02987887326995
LACE
1 20496U 90015A 96362.89101436 .00001249 00000-0 42717-4 0 7162
2 20496 43.1013 177.2030 0011268 241.3487 118.6233 15.36231845383615
Nadezhda 2
1 20508U 90017A 96364.79245973 .00000033 00000-0 19380-4 0 189
2 20508 82.9533 98.8944 0043911 179.7075 180.4115 13.73516156342741
OKEAN 2
1 20510U 90018A 96363.66562371 .00000155 00000-0 17996-4 0 5510
2 20510 82.5240 45.1246 0020503 44.9065 315.3801 14.78654500368414
GPS BII-07
1 20533U 90025A 96344.15313412 -.00000033 00000-0 00000+0 0 2938
2 20533 54.4399 279.9734 0040350 77.4335 283.2059 2.00570186 49091
PegSat
1 20546U 90028A 96364.81658177 .00005196 00000-0 88866-4 0 124
2 20546 94.1270 104.0607 0055155 329.8738 29.9347 15.49642349375276
HST
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2 20670 82.5466 192.5008 0017109 66.2168 294.0783 13.84131356328809
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Glonass 59
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Nadezhda 4
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2 23558 51.6533 210.6935 0005565 223.1698 136.8872 15.63499278620441
ERS-2
1 23560U 95021A 96363.21264826 -.00000031 00000-0 46224-5 0 3151
2 23560 98.5512 74.4710 0000829 81.1463 278.9818 14.32247049 88345
Spektr
1 23579U 95024A 96364.95302371 .00011432 00000-0 13426-3 0 5327
2 23579 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 92035
GOES 9
1 23581U 95025A 96362.40889671 .00000089 00000-0 10000-3 0 2982
2 23581 0.0165 254.8857 0003991 28.0801 184.9833 1.00276324 5863
Helios 1A
1 23605U 95033A 96363.68180125 .00000104 00000-0 28907-4 0 3791
2 23605 98.1397 296.7506 0001503 55.3005 304.8364 14.63833937 79019
UPM SAT 1
1 23606U 95033B 96362.23778593 .00000230 00000-0 49320-4 0 2403
2 23606 98.1201 297.0105 0007274 305.4662 54.5866 14.67332614 79029
CERISE
1 23607U 95033C 96364.25472764 .00000141 00000-0 33773-4 0 1437
2 23607 98.1207 298.8029 0005521 298.2746 61.7920 14.66989512 79334
TDRS 7
1 23613U 95035B 96363.79409425 .00000102 00000-0 00000+0 0 2764
2 23613 1.0856 82.0409 0001962 192.9172 297.3340 1.00266553 5336
Glonass 74
1 23620U 95037A 96362.78051941 .00000063 00000-0 00000+0 0 2270
2 23620 64.8138 197.4969 0018665 162.8800 197.2305 2.13102985 11135
Glonass 75
1 23621U 95037B 96363.89689661 .00000069 00000-0 00000+0 0 2388
2 23621 64.8284 197.4642 0018004 173.2234 186.8434 2.13102165 11159
Glonass 76
1 23622U 95037C 96363.48565102 .00000066 00000-0 00000+0 0 2429
2 23622 64.8148 197.4823 0037159 163.2409 196.9279 2.13102499 11143
```

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Prognoz-M2
1 23632U 95039A 96362.51482150 -.00000471 00000-0 00000+0 0 1000
2 23632 71.1630 248.1760 7732851 326.9610 350.0030 0.26346200 1368
SICH-1
1 23657U 95046A 96362.53152501 .00000192 00000-0 25968-4 0 1342
2 23657 82.5329 22.5977 0028510 138.5995 221.7392 14.73520703 71301
RADARSAT
1 23710U 95059A 96364.90818249 .00000142 00000-0 72025-4 0 2226
2 23710 98.5810 8.8123 0001126 58.5629 301.5664 14.29988672 60213
Glonass 79
1 23734U 95068A 96364.07296375 .00000070 00000-0 00000+0 0 2151
2 23734 64.8260 197.3781 0017305 328.5125 31.4272 2.13102099 8122
Glonass 78
1 23735U 95068B 96363.32628408 .00000065 00000-0 00000+0 0 2070
2 23735 64.8236 197.3855 0005378 200.8843 159.1443 2.13125057 8109
Glonass 77
1 23736U 95068C 96362.89961877 .00000064 00000-0 00000+0 0 1889
2 23736 64.8141 197.4133 0007068 185.0879 174.9509 2.13102117 8094
XTE
1 23757U 95074A 96360.85345406 .00000716 00000-0 30691-4 0 1100
2 23757 22.9799 187.0114 0013801 192.1341 167.8812 14.97749861 54233
Polar
1 23802U 96013A 96360.95384396 .00000049 00000-0 00000+0 0 921
2 23802 86.3323 23.9889 6527806 276.7308 18.1855 1.36264148 4173
1996010E
1 23824U 96010E 96359.52765300 .00444128 00000-0 53211-1 0 1522
2 23824 47.4289 199.9140 7145591 76.0524 349.6752 2.47145198 6894
GPS BIIA-25
1 23833U 96019A 96361.35001648 -.00000087 00000-0 00000+0 0 1241
2 23833 54.6478 340.1903 0028404 145.6441 214.5433 2.00564915 5535
Priroda
1 23848U 96023A 96364.95302371 .00011432 00000-0 13426-3 0 2200
2 23848 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 39125
MSX
1 23851U 96024A 96364.47653378 -.00000047 00000-0 00000+0 0 1589
2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
SAX
1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
MSTI 3
1 23868U 96031A 96363.24119229 -.00000386 00000-0 -60197-5 0 979
2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
TOMS-EP
1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
2 23940 97.4336 266.8297 0014273 27.5212 332.6756 15.21760654 27220
GPS BIIA-26
1 23953U 96041A 96359.27090176 -.00000050 00000-0 00000+0 0 958
2 23953 55.1057 100.6566 0020598 358.5109 1.4602 2.00562484 3283
ADEOS
1 24277U 96046A 96363.80540922 -.00000044 00000-0 00000+0 0 1264
```

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2 24277 98.6118 77.9459 0000790 163.0215 197.0111 14.27634832 19057
FO-29
1 24278U 96046B 96364.23223921 -.00000011 00000-0 28523-4 0 471
2 24278 98.5633 62.4492 0350774 266.6338 89.4603 13.52627680 18140
Soyuz TM-24
1 24280U 96047A 96364.95302371 .00011432 00000-0 13426-3 0 1240
2 24280 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 21026
FAST
1 24285U 96049A 96365.25881303 .00000756 00000-0 77998-4 0 485
2 24285 82.9917 117.5809 2206325 291.1706 46.8382 10.81673477 14152
Microsat
1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
2 24291 62.7960 336.2075 0605290 125.1255 240.8108 14.68407669 17854
MO-30
1 24305U 96052B 96361.59304391 .00000204 00000-0 20364-3 0 552
2 24305 82.9321 122.1265 0030086 329.5013 30.4391 13.73087597 15376
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
SAC-B/HETE
1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
1 24663U 96066A 96364.95302371 .00011432 00000-0 13426-3 0 379
2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
1996068B
1 24668U 96068B 96365.02295234 .00240695 15329-5 54336-3 0 548
2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
1996069A
1 24670U 96069A 96365.11393753 -.00008726 00000-0 -13883-3 0 396
2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
INMARSAT III F3
1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
2 24674 2.6748 286.8762 0021193 122.5138 283.0068 1.00265982 100
1996070B
1 24675U 96070B 96361.84055799 -.00000150 00000-0 00000+0 0 119
2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
--
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2862. Re: Internet satellite services

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: Jim Leveraus <elint@execpc.com>
Message-ID: <32C86F0A.1B57@execpc.com>
Source record: 20439
Cross-posted to: rec.video.satellite.dbs,alt.satellite.tv.crypt,rec.radio.scanner,rec.radio.amateur.space

Frank Hagan wrote:
>
> On Sun, 29 Dec 1996 16:37:13 GMT, alex@budgetweb.com (Alex Chapman)
> wrote:
>
> >Connects home page is http://www.planetc.com/pc.htm
> >
> >Their pricing seems to be in the same range as DirecPC, although they
> >aren't real clear on whether they offer standard internet connections.
>
> About 8 months ago I looked into this ... they send usenet feeds via
> satellite, so you could get newsgroups, but couldn't get web service
> like DirectPC promises.

Here is a two-way service for Internet via satellite I just discovered.

http://www.netsatx.com/netsatinfo.htm

--
-.-
Jim Leveraus
Internet: elint@execpc.com
Snail Mail: PO Box 451
Muskego, WI 53150

2863. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290955142206289856@n3baf.com>
Source record: 20440

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id ma000168 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
09:04:46 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA10137 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 04:38:29 -0800
(PST)
Received: by mail.ucsd.edu; id EAA03627
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:53 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA03609
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:49 -0800 (PST)
Message-Id: <199612301230.EAA03609@mail.ucsd.edu>
Date: Mon, 30 Dec 96 04:30:47 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #457
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 457

Today's Topics:
comunicato stampa
HAM TOOLKIT CD ROM..AWSOME!!!!
LOW LOW PRICE HAM RADIO
MIR
WinTrak Pro Release

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Dec 96 10:24:20 GMT
From: mose@tv.shineline.IT (Mose' Battocchio)
Subject: comunicato stampa

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

Date: Sun, 29 Dec 1996 14:36:53 GMT
From: aidan@ThePentagon.com
Subject: HAM TOOLKIT CD ROM..AWSOME!!!!

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

Date: 29 Dec 1996 18:42:49 GMT
From: hiway@delta1.deltanet.com ()
Subject: LOW LOW PRICE HAM RADIO

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon
through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

Date: Sun, 29 Dec 1996 18:07:37 GMT
From: dwittich@concentric.net (Doug Wittich)
Subject: MIR

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for many, as well. Folks in Indianapolis want APRS to move from it's coordinated frequency. Seems like MIR could have researched a bit and tried to coordinate before they moved.

73

Doug

Date: 29 Dec 1996 23:37:56 GMT
From: "Paul E. Traufler" <wintrak@traveller.com>
Subject: WinTrak Pro Release

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program. The Rendered views have been improved along with several new views available also. This is just a small list of the many improvements made to the program. Remember this program is a full 32-bit version, do not accept any substitutions! Do not let those other programs fool you with the old, "It works under Win95", but in reality it is a Windows 3.1 16-bit program. Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS Text conversion)
Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or provided Wave files.
Greatly improved help file with printed manual options included in help file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

End of Ham-Space Digest V96 #457
****

2864. Please Read!

Newsgroup: rec.radio.amateur.space
Date: 1996-12-30 00:00:00 UTC
From: george.tamayo@infosoftpub.com
Message-ID: <17704644@infosoftpub.com>
Source record: 20441

Fellow Amateurs: Please read the first two paragraphs!

CLAWSON@TELEGRAFIX.COM (PAT CLAWSON) said to ALL in comp.bbs.misc:

Boardwatch may have abandoned the BBS sysop, but TeleGrafix is still standing strong with them. However, we think that BBS systems must become Internet-connected if they are to survive in a Webbed world.

First, we need to quit calling these online systems by the moniker "BBS." The term has come to reflect something on the order of ham radio -- low-rent communications run by amateurs. That may accurately reflect some BBS systems, but we've found that many sysops run very professional online businesses.

Second, we need to start emphasizing the Power of Telnet and talk about Telnet Sites, not BBS systems. A telnettable BBS or legacy system can do many things the Web can't. Most of the computer industry and public has been Web-washed (brainwashed) by all the press hype. They think the Web is all there is to the Internet/online experience. Just a couple of days ago, I was talking to the Internet reporter for one of America's most prestigious newspapers. He had never even heard of Telnet, didn't have a clue what it was -- and his news reports influence literally millions of Americans. BBS sysops and BBS system manufacturers need to refocus their efforts, and begin producing tools and content that take advantage of the Power of Telnet.

Third, Telnet Site operators (such as BBS sysops) must professionalize the look and feel of their systems. Most sysops make little investment in quality graphics for their systems. In a glitzy Web world, it is little wonder that the public is turned off by ANSI BBS systems no matter how if the content on them is of high quality. We constantly hear BBS sysops complain about having to pay what are very modest sums of money for RIPscrip graphics -- but the people running Web sites don't think twice about investing thousands of dollars for a fabulous look.

Despite all the flack we take from BBS sysops, we continue to support their efforts -- and we always will. But BBS sysops have to change with the times, and they have to be willing to invest to upgrade their systems to compete with (or complement) the Web.

On Christmas, TeleGrafix released the first multimedia Telnet browsers. RIPtel Visual Telnet is available now from our Web site at www.telegrafix.com. This is a huge step forward for the Internet, and it represents a salvation for BBS sysops by placing Telnet graphically on a higher level than the Web.

The serious professional operators will get on board the Visual Telnet train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

2865. mir comms problems

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: perkiert@nildram.co.uk
Message-ID: <32c877e3.0@scooby.nildram.co.uk>
Source record: 20442

I see on Hearsat mail list that there have been problems on the mir communications, Has that effected Amateur Radio activities I wonder?

2866. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290956083212064032@n3baf.com>
Source record: 20443

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)
Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..
new mir freq for 1997
NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.
>
>
>73
>
>
>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles Mann WF1F were told well in advance that this was going to be a problem with not only APRS, but also the Repeaters, they in turn I would assume notified their contacts at AMSAT and ARRL and NASA and SOUP, at any rate G3BGM also was told that especially here in the states that pair would be a problem, and it was taken to the European Amateur radio conference where the frequencies were decided upon. I realized long ago that the doppler shift would bring it into interference with both, and it does.. there is little hope. there is a possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket, 437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system.

Element sets (also updated daily) and some documentation and software are
available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the
directory pub/space.

As a service to the satellite user community, the most current of these
elements are uploaded weekly to sci.space.news and rec.radio.amateur.space.
This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
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2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
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2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
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1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
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Kvant-2
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Feng Yun1-2
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2 20826 82.5250 133.1017 0013698 351.6581 8.4353 13.83642218315127
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TUBSAT-A
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UFO F2
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1996070B
1 24675U 96070B 96361.84055799 -.00000150 00000-0 00000+0 0 119
2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
```

```
Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

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End of Ham-Space Digest V96 #458
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2867. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290956621264630048@n3baf.com>
Source record: 20444

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id za000181 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
02:42:35 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id VAA07983 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 21:33:13 -0800
(PST)
Received: by mail.ucsd.edu; id VAA10772
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:41 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id VAA10732
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:36 -0800 (PST)
Message-Id: <199612310512.VAA10732@mail.ucsd.edu>
Date: Mon, 30 Dec 96 21:12:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #459
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 459

Today's Topics:
mir comms problems
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 31 Dec 1996 02:18:00 GMT
From: perkiert@nildram.co.uk (Paul Erkiert)
Subject: mir comms problems

I see on Hearsat mail list that there have been problems on the mir
communications, Has that effected Amateur Radio activities I wonder?

Date: 31 Dec 96 01:20:02 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)
Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..
new mir freq for 1997

NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug
Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.
>
>
>73
>
>
>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles
Mann WF1F were told well in advance that this was going to be a
problem with not only APRS, but also the Repeaters, they in turn I
would assume notified their contacts at AMSAT and ARRL and NASA and
SOUP, at any rate G3BGM also was told that especially here in the
states that pair would be a problem, and it was taken to the European
Amateur radio conference where the frequencies were decided upon. I
realized long ago that the doppler shift would bring it into
interference with both, and it does.. there is little hope. there is a
possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system.

Element sets (also updated daily) and some documentation and software are
available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the
directory pub/space.

As a service to the satellite user community, the most current of these
elements are uploaded weekly to sci.space.news and rec.radio.amateur.space.
This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1

```
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026
SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547
2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
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GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
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2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
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1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
2 20322 98.9340 16.3974 0008115 209.8648 150.2056 14.03461035364320
Kvant-2
1 20335U 89093A 96364.95302371 .00011432 00000-0 13426-3 0 7796
2 20335 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366403724
GPS BII-05
1 20361U 89097A 96362.32232386 -.00000062 00000-0 10000-3 0 1580
2 20361 56.1079 45.6462 0094374 140.5981 220.1528 2.00565251 42185
COSMOS 2054 (Altair-1)
1 20391U 89101A 96364.82969829 -.00000128 00000-0 00000+0 0 4834
2 20391 4.2180 62.2030 0003361 176.6109 142.2528 1.00275094 25951
SPOT 2
1 20436U 90005A 96363.75244592 -.00000044 00000-0 00000+0 0 1679
2 20436 98.7463 74.6767 0001619 93.0931 267.0415 14.20017908359456
UO-14
1 20437U 90005B 96364.27556361 .00000024 00000-0 26190-4 0 2365
2 20437 98.5335 83.5280 0011265 352.6013 7.4998 14.29944025361931
AO-16
1 20439U 90005D 96363.24656844 -.00000041 00000-0 83825-6 0 346
2 20439 98.5490 85.0934 0011729 357.0387 3.0725 14.29993943361805
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DO-17
1 20440U 90005E 96363.38946554 .00000056 00000-0 38505-4 0 352
2 20440 98.5506 85.9814 0012894 354.0834 6.0290 14.30137389361850
WO-18
1 20441U 90005F 96363.73332933 -.00000029 00000-0 54220-5 0 389
2 20441 98.5520 86.2408 0012432 355.3509 4.7561 14.30104776361907
LO-19
1 20442U 90005G 96363.29440200 -.00000005 00000-0 14885-4 0 340
2 20442 98.5554 86.3954 0013259 356.8533 3.2567 14.30216416361863
GPS BII-06
1 20452U 90008A 96359.72677644 .00000025 00000-0 10000-3 0 2562
2 20452 54.0425 159.0066 0069939 90.3808 270.6229 2.00551999 50638
MOS-1B
1 20478U 90013A 96362.21015652 .00000307 00000-0 26531-3 0 106
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2 20546 94.1270 104.0607 0055155 329.8738 29.9347 15.49642349375276
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Feng Yun1-2
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2 20788 98.8100 3.6070 0014589 318.2048 41.8004 14.01382899323507
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RS-12/13
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2 21232 82.5390 235.2570 0014433 39.6677 320.5498 13.16474029273130
NOAA 12
1 21263U 91032A 96365.08079934 .00000099 00000-0 63176-4 0 2143
2 21263 98.5462 18.4645 0013886 65.9126 294.3504 14.22680978292314
OKEAN 3
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TDRS 5
1 21639U 91054B 96358.00000000 .00000082 00000-0 10000-3 0 1290
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Meteor 3-5
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Glonass 54
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Glonass 57
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Glonass 58
1 22058U 92047C 96363.99404139 -.00000041 00000-0 10000-3 0 1694
2 22058 64.6926 316.7910 0009678 281.5419 78.3474 2.13102644 34361
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GPS BIIA-17
1 22275U 92089A 96364.63698533 .00000058 00000-0 00000+0 0 8415
2 22275 54.6278 159.3998 0050357 245.7309 113.7046 2.00587702 29493
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2 22314 0.0573 139.0797 0003200 150.4614 329.0535 1.00270257 14524
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2 22446 54.0819 279.4128 0097326 6.1666 353.9685 2.00572088 28362
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Glonass 60
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1 22563U 93015A 96358.00000000 -.00000235 00000-0 00000+0 0 5454
2 22563 24.9641 285.6257 0009366 304.0139 343.4335 0.99252311 17943
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NOAA 13
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UFO F2
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2 22787 3.9733 328.1413 0005072 296.7235 165.7906 1.00274628 10738
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2 22825 98.5650 76.5940 0009701 20.4350 339.7218 14.27713638169894
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2 22826 98.5658 77.2633 0010225 19.7179 340.4390 14.27822670169979
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1 22827U 93061E 96364.20666869 .00000016 00000-0 24059-4 0 5875
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Meteor 3-6
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TUBSAT-B
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Glonass 64
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Nadezhda 4
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RESURS 1-3
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NOAA 14
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Glonass 72
1 23512U 95009B 96363.64416953 -.00000044 00000-0 00000+0 0 2868
2 23512 64.5778 317.3877 0007947 313.5278 46.3975 2.13101422 14111
Glonass 73
1 23513U 95009C 96364.40447342 -.00000040 00000-0 00000+0 0 3069
2 23513 64.5860 317.3770 0013388 210.4613 149.4625 2.13102914 14136
GMS 5
1 23522U 95011B 96361.58284086 -.00000283 00000-0 10000-3 0 1907
2 23522 0.4857 28.8889 0000605 186.3669 229.8386 1.00278062 6384
DMSP B5D2-8
1 23533U 95015A 96365.04987224 .00000075 00000-0 64210-4 0 8067
2 23533 98.8432 5.0289 0006523 217.3964 142.6755 14.12769233 91282
OSC 1
1 23545U 95017A 96364.25067438 .00000249 00000-0 87713-4 0 1890
2 23545 69.9706 77.4734 0016088 270.3363 89.5939 14.45460166 91849
OSC 2
1 23546U 95017B 96364.21559829 .00000271 00000-0 93790-4 0 2233
2 23546 69.9777 77.7595 0015867 261.3516 98.5818 14.45472111 91849
Microlab 1
1 23547U 95017C 96364.22069507 .00000122 00000-0 51572-4 0 1612
2 23547 69.9781 77.4325 0016213 263.4963 96.4310 14.45632485 91855
OFEQ 3
1 23549U 95018A 96364.87699976 .00017495 00000-0 40718-3 0 4089
2 23549 143.3636 344.8168 0208722 351.1132 8.5979 15.20338130 96090
GFZ-1
1 23558U 86017JE 96363.80532495 .00002124 00000-0 28255-4 0 1917
2 23558 51.6533 210.6935 0005565 223.1698 136.8872 15.63499278620441
ERS-2
1 23560U 95021A 96363.21264826 -.00000031 00000-0 46224-5 0 3151
2 23560 98.5512 74.4710 0000829 81.1463 278.9818 14.32247049 88345
Spektr
1 23579U 95024A 96364.95302371 .00011432 00000-0 13426-3 0 5327
2 23579 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 92035
GOES 9
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1 23581U 95025A 96362.40889671 .00000089 00000-0 10000-3 0 2982
2 23581 0.0165 254.8857 0003991 28.0801 184.9833 1.00276324 5863
Helios 1A
1 23605U 95033A 96363.68180125 .00000104 00000-0 28907-4 0 3791
2 23605 98.1397 296.7506 0001503 55.3005 304.8364 14.63833937 79019
UPM SAT 1
1 23606U 95033B 96362.23778593 .00000230 00000-0 49320-4 0 2403
2 23606 98.1201 297.0105 0007274 305.4662 54.5866 14.67332614 79029
CERISE
1 23607U 95033C 96364.25472764 .00000141 00000-0 33773-4 0 1437
2 23607 98.1207 298.8029 0005521 298.2746 61.7920 14.66989512 79334
TDRS 7
1 23613U 95035B 96363.79409425 .00000102 00000-0 00000+0 0 2764
2 23613 1.0856 82.0409 0001962 192.9172 297.3340 1.00266553 5336
Glonass 74
1 23620U 95037A 96362.78051941 .00000063 00000-0 00000+0 0 2270
2 23620 64.8138 197.4969 0018665 162.8800 197.2305 2.13102985 11135
Glonass 75
1 23621U 95037B 96363.89689661 .00000069 00000-0 00000+0 0 2388
2 23621 64.8284 197.4642 0018004 173.2234 186.8434 2.13102165 11159
Glonass 76
1 23622U 95037C 96363.48565102 .00000066 00000-0 00000+0 0 2429
2 23622 64.8148 197.4823 0037159 163.2409 196.9279 2.13102499 11143
Prognoz-M2
1 23632U 95039A 96362.51482150 -.00000471 00000-0 00000+0 0 1000
2 23632 71.1630 248.1760 7732851 326.9610 350.0030 0.26346200 1368
SICH-1
1 23657U 95046A 96362.53152501 .00000192 00000-0 25968-4 0 1342
2 23657 82.5329 22.5977 0028510 138.5995 221.7392 14.73520703 71301
RADARSAT
1 23710U 95059A 96364.90818249 .00000142 00000-0 72025-4 0 2226
2 23710 98.5810 8.8123 0001126 58.5629 301.5664 14.29988672 60213
Glonass 79
1 23734U 95068A 96364.07296375 .00000070 00000-0 00000+0 0 2151
2 23734 64.8260 197.3781 0017305 328.5125 31.4272 2.13102099 8122
Glonass 78
1 23735U 95068B 96363.32628408 .00000065 00000-0 00000+0 0 2070
2 23735 64.8236 197.3855 0005378 200.8843 159.1443 2.13125057 8109
Glonass 77
1 23736U 95068C 96362.89961877 .00000064 00000-0 00000+0 0 1889
2 23736 64.8141 197.4133 0007068 185.0879 174.9509 2.13102117 8094
XTE
1 23757U 95074A 96360.85345406 .00000716 00000-0 30691-4 0 1100
2 23757 22.9799 187.0114 0013801 192.1341 167.8812 14.97749861 54233
Polar
1 23802U 96013A 96360.95384396 .00000049 00000-0 00000+0 0 921
2 23802 86.3323 23.9889 6527806 276.7308 18.1855 1.36264148 4173
1996010E
1 23824U 96010E 96359.52765300 .00444128 00000-0 53211-1 0 1522
2 23824 47.4289 199.9140 7145591 76.0524 349.6752 2.47145198 6894
```

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GPS BIIA-25
1 23833U 96019A 96361.35001648 -.00000087 00000-0 00000+0 0 1241
2 23833 54.6478 340.1903 0028404 145.6441 214.5433 2.00564915 5535
Priroda
1 23848U 96023A 96364.95302371 .00011432 00000-0 13426-3 0 2200
2 23848 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 39125
MSX
1 23851U 96024A 96364.47653378 -.00000047 00000-0 00000+0 0 1589
2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
SAX
1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
MSTI 3
1 23868U 96031A 96363.24119229 -.00000386 00000-0 -60197-5 0 979
2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
TOMS-EP
1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
2 23940 97.4336 266.8297 0014273 27.5212 332.6756 15.21760654 27220
GPS BIIA-26
1 23953U 96041A 96359.27090176 -.00000050 00000-0 00000+0 0 958
2 23953 55.1057 100.6566 0020598 358.5109 1.4602 2.00562484 3283
ADEOS
1 24277U 96046A 96363.80540922 -.00000044 00000-0 00000+0 0 1264
2 24277 98.6118 77.9459 0000790 163.0215 197.0111 14.27634832 19057
FO-29
1 24278U 96046B 96364.23223921 -.00000011 00000-0 28523-4 0 471
2 24278 98.5633 62.4492 0350774 266.6338 89.4603 13.52627680 18140
Soyuz TM-24
1 24280U 96047A 96364.95302371 .00011432 00000-0 13426-3 0 1240
2 24280 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 21026
FAST
1 24285U 96049A 96365.25881303 .00000756 00000-0 77998-4 0 485
2 24285 82.9917 117.5809 2206325 291.1706 46.8382 10.81673477 14152
Microsat
1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
2 24291 62.7960 336.2075 0605290 125.1255 240.8108 14.68407669 17854
MO-30
1 24305U 96052B 96361.59304391 .00000204 00000-0 20364-3 0 552
2 24305 82.9321 122.1265 0030086 329.5013 30.4391 13.73087597 15376
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
SAC-B/HETE
1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
1 24663U 96066A 96364.95302371 .00011432 00000-0 13426-3 0 379
2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
1996068B
1 24668U 96068B 96365.02295234 .00240695 15329-5 54336-3 0 548
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2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
1996069A
1 24670U 96069A 96365.11393753 -.00008726 00000-0 -13883-3 0 396
2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
INMARSAT III F3
1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
2 24674 2.6748 286.8762 0021193 122.5138 283.0068 1.00265982 100
1996070B
1 24675U 96070B 96361.84055799 -.00000150 00000-0 00000+0 0 119
2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

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End of Ham-Space Digest V96 #458
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End of Ham-Space Digest V96 #459
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2868. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290956783044753312@n3baf.com>
Source record: 20445

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id aa000182 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
04:37:47 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id AAA23003 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 00:04:25 -0800
(PST)
Received: by mail.ucsd.edu; id XAA28829
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:13 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id XAA28795
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:06 -0800 (PST)
Message-Id: <199612310744.XAA28795@mail.ucsd.edu>
Date: Mon, 30 Dec 96 23:44:04 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #460
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 460

Today's Topics:
Please Read!
Undeliverable mail (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 21:01:00 (PST)
From: george.tamayo@infosoftpub.com (George Tamayo)
Subject: Please Read!

Fellow Amateurs: Please read the first two paragraphs!

CLAWSON@TELEGRAFIX.COM (PAT CLAWSON) said to ALL in comp.bbs.misc:

Boardwatch may have abandoned the BBS sysop, but TeleGrafix is still standing strong with them. However, we think that BBS systems must become Internet-connected if they are to survive in a Webbed world.

First, we need to quit calling these online systems by the moniker "BBS." The term has come to reflect something on the order of ham radio -- low-rent communications run by amateurs. That may accurately reflect some BBS systems, but we've found that many sysops run very professional online businesses.

Second, we need to start emphasizing the Power of Telnet and talk about Telnet Sites, not BBS systems. A telnettable BBS or legacy system can do many things the Web can't. Most of the computer industry and public has been Web-washed (brainwashed) by all the press hype. They think the Web is all there is to the Internet/online experience. Just a couple of days ago, I was talking to the Internet reporter for one of America's most prestigious newspapers. He had never even heard of Telnet, didn't have a clue what it was -- and his news reports influence literally millions of Americans. BBS sysops and BBS system manufacturers need to refocus their efforts, and begin producing tools and content that take advantage of the Power of Telnet.

Third, Telnet Site operators (such as BBS sysops) must professionalize the look and feel of their systems. Most sysops make little investment in quality graphics for their systems. In a glitzy Web world, it is little wonder that the public is turned off by ANSI BBS systems no matter how if the content on them is of high quality. We constantly hear BBS sysops complain about having to pay what are very modest sums of money for RIPscrip graphics -- but the people running Web sites don't think twice about investing thousands of dollars for a fabulous look.

Despite all the flack we take from BBS sysops, we continue to support their efforts -- and we always will. But BBS sysops have to change with the times, and they have to be willing to invest to upgrade their systems to compete with (or complement) the Web.

On Christmas, TeleGrafix released the first multimedia Telnet browsers. RIPtel Visual Telnet is available now from our Web site at www.telegrafix.com. This is a huge step forward for the Internet, and it represents a salvation for BBS sysops by placing Telnet graphically on a higher level than the Web.

The serious professional operators will get on board the Visual Telnet
train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 30 Dec 96 14:05:29 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id ma000168 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
09:04:46 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA10137 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 04:38:29 -0800
(PST)
Received: by mail.ucsd.edu; id EAA03627
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:53 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA03609
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:49 -0800 (PST)
Message-Id: <199612301230.EAA03609@mail.ucsd.edu>
Date: Mon, 30 Dec 96 04:30:47 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #457
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 457

Today's Topics:
comunicato stampa
HAM TOOLKIT CD ROM..AWSOME!!!!
LOW LOW PRICE HAM RADIO
MIR
WinTrak Pro Release

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Dec 96 10:24:20 GMT
From: mose@tv.shineline.IT (Mose' Battocchio)
Subject: comunicato stampa

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

Date: Sun, 29 Dec 1996 14:36:53 GMT
From: aidan@ThePentagon.com
Subject: HAM TOOLKIT CD ROM..AWSOME!!!!

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

Date: 29 Dec 1996 18:42:49 GMT
From: hiway@delta1.deltanet.com ()
Subject: LOW LOW PRICE HAM RADIO

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

Date: Sun, 29 Dec 1996 18:07:37 GMT
From: dwittich@concentric.net (Doug Wittich)
Subject: MIR

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for many, as well. Folks in Indianapolis want APRS to move from it's coordinated frequency. Seems like MIR could have researched a bit and tried to coordinate before they moved.

73

Doug

Date: 29 Dec 1996 23:37:56 GMT
From: "Paul E. Traufler" <wintrak@traveller.com>
Subject: WinTrak Pro Release

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program. The Rendered views have been improved along with several new views available also. This is just a small list of the many improvements made to the program. Remember this program is a full 32-bit version, do not accept any substitutions! Do not let those other programs fool you with the old, "It works under Win95", but in reality it is a Windows 3.1 16-bit program. Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS Text conversion)
Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or provided Wave files.
Greatly improved help file with printed manual options included in help file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

End of Ham-Space Digest V96 #457
****

Date: 31 Dec 96 07:43:21 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com (NTMail 3.02.10) with ESMTP id za000181 for <ham.space@n3baf.com>; Tue, 31 Dec 1996 02:42:35 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with ESMTP id VAA07983 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 21:33:13 -0800 (PST)
Received: by mail.ucsd.edu; id VAA10772
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:41 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id VAA10732
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:36 -0800 (PST)
Message-Id: <199612310512.VAA10732@mail.ucsd.edu>
Date: Mon, 30 Dec 96 21:12:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #459
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 459

Today's Topics:
mir comms problems
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 31 Dec 1996 02:18:00 GMT
From: perkiert@nildram.co.uk (Paul Erkiert)
Subject: mir comms problems

I see on Hearsat mail list that there have been problems on the mir
communications, Has that effected Amateur Radio activities I wonder?

Date: 31 Dec 96 01:20:02 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)
Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..
new mir freq for 1997
NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
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Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug
Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.
>
>
>73
>
>
>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles
Mann WF1F were told well in advance that this was going to be a
problem with not only APRS, but also the Repeaters, they in turn I
would assume notified their contacts at AMSAT and ARRL and NASA and
SOUP, at any rate G3BGM also was told that especially here in the
states that pair would be a problem, and it was taken to the European
Amateur radio conference where the frequencies were decided upon. I
realized long ago that the doppler shift would bring it into
interference with both, and it does.. there is little hope. there is a
possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system.

Element sets (also updated daily) and some documentation and software are
available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the
directory pub/space.

As a service to the satellite user community, the most current of these
elements are uploaded weekly to sci.space.news and rec.radio.amateur.space.
This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530

```
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026
SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547
2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
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1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
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DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
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2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
2 20322 98.9340 16.3974 0008115 209.8648 150.2056 14.03461035364320
Kvant-2
1 20335U 89093A 96364.95302371 .00011432 00000-0 13426-3 0 7796
2 20335 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366403724
GPS BII-05
1 20361U 89097A 96362.32232386 -.00000062 00000-0 10000-3 0 1580
2 20361 56.1079 45.6462 0094374 140.5981 220.1528 2.00565251 42185
COSMOS 2054 (Altair-1)
1 20391U 89101A 96364.82969829 -.00000128 00000-0 00000+0 0 4834
2 20391 4.2180 62.2030 0003361 176.6109 142.2528 1.00275094 25951
SPOT 2
1 20436U 90005A 96363.75244592 -.00000044 00000-0 00000+0 0 1679
2 20436 98.7463 74.6767 0001619 93.0931 267.0415 14.20017908359456
UO-14
1 20437U 90005B 96364.27556361 .00000024 00000-0 26190-4 0 2365
2 20437 98.5335 83.5280 0011265 352.6013 7.4998 14.29944025361931
AO-16
1 20439U 90005D 96363.24656844 -.00000041 00000-0 83825-6 0 346
2 20439 98.5490 85.0934 0011729 357.0387 3.0725 14.29993943361805
DO-17
1 20440U 90005E 96363.38946554 .00000056 00000-0 38505-4 0 352
2 20440 98.5506 85.9814 0012894 354.0834 6.0290 14.30137389361850
WO-18
1 20441U 90005F 96363.73332933 -.00000029 00000-0 54220-5 0 389
2 20441 98.5520 86.2408 0012432 355.3509 4.7561 14.30104776361907
LO-19
1 20442U 90005G 96363.29440200 -.00000005 00000-0 14885-4 0 340
2 20442 98.5554 86.3954 0013259 356.8533 3.2567 14.30216416361863
GPS BII-06
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1 20452U 90008A 96359.72677644 .00000025 00000-0 10000-3 0 2562
2 20452 54.0425 159.0066 0069939 90.3808 270.6229 2.00551999 50638
MOS-1B
1 20478U 90013A 96362.21015652 .00000307 00000-0 26531-3 0 106
2 20478 99.1081 69.1507 0006322 79.0628 281.1249 13.93971212271447
DEBUT
1 20479U 90013B 96365.02749046 .00000004 00000-0 76347-4 0 352
2 20479 99.0240 352.8466 0541231 39.9770 323.9897 12.83347960323027
FO-20
1 20480U 90013C 96363.91101197 -.00000040 00000-0 -21925-4 0 9318
2 20480 99.0226 351.7062 0541303 43.1492 321.0740 12.83235801322868
MOS-1B R/B
1 20491U 90013D 96362.17806360 -.00000033 00000-0 38089-5 0 3057
2 20491 99.0613 61.5895 0469458 202.5646 155.4205 13.02987887326995
LACE
1 20496U 90015A 96362.89101436 .00001249 00000-0 42717-4 0 7162
2 20496 43.1013 177.2030 0011268 241.3487 118.6233 15.36231845383615
Nadezhda 2
1 20508U 90017A 96364.79245973 .00000033 00000-0 19380-4 0 189
2 20508 82.9533 98.8944 0043911 179.7075 180.4115 13.73516156342741
OKEAN 2
1 20510U 90018A 96363.66562371 .00000155 00000-0 17996-4 0 5510
2 20510 82.5240 45.1246 0020503 44.9065 315.3801 14.78654500368414
GPS BII-07
1 20533U 90025A 96344.15313412 -.00000033 00000-0 00000+0 0 2938
2 20533 54.4399 279.9734 0040350 77.4335 283.2059 2.00570186 49091
PegSat
1 20546U 90028A 96364.81658177 .00005196 00000-0 88866-4 0 124
2 20546 94.1270 104.0607 0055155 329.8738 29.9347 15.49642349375276
HST
1 20580U 90037B 96364.29867543 .00000459 00000-0 30082-4 0 9058
2 20580 28.4691 44.2856 0006305 57.6666 302.4505 14.91150929167730
MACSAT 2
1 20608U 90043B 96363.89144134 .00000143 00000-0 21371-4 0 2363
2 20608 89.9255 171.7184 0108165 94.6015 266.7566 14.64966862354799
Glonass 44
1 20619U 90045A 96361.00760275 -.00000060 00000-0 10000-3 0 3511
2 20619 65.1039 317.3905 0024872 211.2145 148.6271 2.13102456 51392
Glonass 45
1 20620U 90045B 96363.94188852 -.00000041 00000-0 10000-3 0 3400
2 20620 65.0992 317.2699 0009911 39.0085 321.0552 2.13102495 51499
Glonass 46
1 20621U 90045C 96364.00941844 -.00000041 00000-0 10000-3 0 9504
2 20621 65.1150 317.3253 0012712 197.7144 162.2598 2.13102530 51490
Kristall
1 20635U 90048A 96364.95302371 .00011432 00000-0 13426-3 0 5711
2 20635 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366374555
ROSAT
1 20638U 90049A 96360.84454523 -.00000155 00000-0 87507-5 0 6216
2 20638 52.9919 155.8906 0011513 357.3295 2.7641 15.07520799361224
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Meteor 2-19
1 20670U 90057A 96364.80604045 .00000037 00000-0 19504-4 0 1693
2 20670 82.5466 192.5008 0017109 66.2168 294.0783 13.84131356328809
CRRES
1 20712U 90065A 96364.91425450 .00000146 00000-0 26545-3 0 3798
2 20712 17.6849 170.1675 7175535 166.1367 236.1363 2.35819812 47733
GPS BII-08
1 20724U 90068A 96364.43979467 -.00000015 00000-0 00000+0 0 1566
2 20724 55.0610 100.8114 0132520 187.1050 172.7224 2.00564435 45366
Feng Yun1-2
1 20788U 90081A 96364.86770033 .00000262 00000-0 20170-3 0 2126
2 20788 98.8100 3.6070 0014589 318.2048 41.8004 14.01382899323507
Meteor 2-20
1 20826U 90086A 96359.24292314 .00000068 00000-0 48098-4 0 426
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1 20830U 90088A 96362.00132499 -.00000063 00000-0 00000+0 0 1319
2 20830 56.0464 43.5701 0066094 95.2019 265.6220 2.00568418 45951
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2 20959 55.2477 102.9210 0113475 237.5904 121.3248 2.00556597 44595
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2 20978 98.5785 74.4694 0078727 312.4931 46.9623 14.32707786317778
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1 21006U 90110A 96363.56357224 -.00000022 00000-0 10000-3 0 9103
2 21006 65.2807 78.1379 0056768 187.1576 172.8135 2.13102722 47155
Glonass 48
1 21007U 90110B 96363.28687250 -.00000022 00000-0 10000-3 0 480
2 21007 65.2915 78.2297 0032947 178.5838 181.4777 2.13101135 47137
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2 21008 65.2693 78.1216 0008910 268.4666 91.4863 2.13098724 47159
AO-21
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2 21087 82.9407 177.8406 0036462 25.9802 334.3174 13.74576182296714
RS-12/13
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MOP-2
1 21140U 91015B 96362.08442575 -.00000008 00000-0 00000+0 0 3100
2 21140 0.9377 77.8151 0002374 169.1324 238.9678 1.00272786 23547
Nadezhda 3
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2 21152 82.9224 0.7158 0041952 155.5192 204.7966 13.73541449290635
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1 21216U 91025A 96360.76606348 -.00000062 00000-0 10000-3 0 5666
2 21216 64.8515 316.8697 0011734 204.5844 155.3476 2.13103225 44600
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2 21218 64.8369 316.8348 0008221 295.0496 64.9181 2.13102545 44609
GRO
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2 21225 28.4619 268.6944 0002353 256.7832 103.2456 15.44740203200002
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2 21232 82.5390 235.2570 0014433 39.6677 320.5498 13.16474029273130
NOAA 12
1 21263U 91032A 96365.08079934 .00000099 00000-0 63176-4 0 2143
2 21263 98.5462 18.4645 0013886 65.9126 294.3504 14.22680978292314
OKEAN 3
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2 21552 56.3360 41.3281 0077813 262.3916 96.7738 2.00573156 40209
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2 21575 98.3278 64.5579 0008582 44.5211 315.6664 14.37050794286079
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TUBSAT-A
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2 21577 98.3220 63.2026 0007506 45.4303 314.7507 14.36536893286038
SARA
1 21578U 91050E 96363.20405853 .00000470 00000-0 16514-3 0 9364
2 21578 98.3581 71.5226 0005988 48.9859 311.1846 14.39303547286240
TDRS 5
1 21639U 91054B 96358.00000000 .00000082 00000-0 10000-3 0 1290
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Meteor 3-5
1 21655U 91056A 96362.57404162 .00000051 00000-0 10000-3 0 9445
2 21655 82.5531 183.8790 0014601 46.7297 313.5038 13.16850118258123
UARS
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DMSP B5D2-6
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2 21798 98.9339 22.4389 0013463 36.2985 323.9096 14.14013186262616
Glonass 53
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2 21853 65.2201 77.7860 0006870 205.8157 154.2037 2.13102249 38266
Glonass 54
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2 21855 65.2219 77.7244 0008246 207.6052 152.4049 2.13102068 38279
JERS-1
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2 21867 97.6733 79.1114 0001864 124.4270 235.7132 14.98687331267157
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2 21890 53.7347 218.5999 0057060 202.0907 157.7161 2.00560361 35551
GPS BIIA-13
1 21930U 92019A 96364.29233537 -.00000069 00000-0 10000-3 0 8346
2 21930 55.6662 340.8358 0030151 195.2412 164.5791 2.00556033 34488
EUVE
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2 21987 28.4329 317.9541 0009304 20.4981 339.5985 15.20047246253235
SAMPEX
1 22012U 92038A 96362.18171266 .00000655 00000-0 55004-4 0 7719
2 22012 81.6712 275.4428 0115728 261.1292 97.6809 14.91829190244006
GPS BIIA-14
1 22014U 92039A 96364.37666844 .00000057 00000-0 00000+0 0 8231
2 22014 54.8456 160.7686 0133445 328.7796 30.3921 2.00565342 26327
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1 22056U 92047A 96363.28833707 -.00000045 00000-0 00000+0 0 3007
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Glonass 57
1 22057U 92047B 96363.58534170 -.00000043 00000-0 00000+0 0 2718
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Glonass 58
1 22058U 92047C 96363.99404139 -.00000041 00000-0 10000-3 0 1694
2 22058 64.6926 316.7910 0009678 281.5419 78.3474 2.13102644 34361
TOPEX
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KO-23
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2 22077 66.0774 141.8583 0014847 254.9557 104.9817 12.86300106205847
S80/T
1 22078U 92052C 96363.82007442 -.00000037 00000-0 10000-3 0 6285
2 22078 66.0762 140.2346 0016291 251.4202 108.5045 12.86583955205937
GPS BIIA-15
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FREJA
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2 22161 62.9792 106.0932 0857489 34.2070 331.1246 13.21937377204219
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GPS BIIA-17
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2 22275 54.6278 159.3998 0050357 245.7309 113.7046 2.00587702 29493
TDRS 6
1 22314U 93003B 96363.57846990 -.00000276 00000-0 10000-3 0 6809
2 22314 0.0573 139.0797 0003200 150.4614 329.0535 1.00270257 14524
GPS BIIA-18
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2 22446 54.0819 279.4128 0097326 6.1666 353.9685 2.00572088 28362
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Glonass 60
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2 22513 65.2351 77.6518 0007636 201.3347 158.6898 2.13102553 30025
Glonass 61
1 22514U 93010C 96363.27152851 -.00000022 00000-0 00000+0 0 103
2 22514 65.2568 77.6569 0011042 191.7711 168.2571 2.13101681 30021
ASTRO-D
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2 22521 31.1039 263.1789 0055974 299.5929 59.9143 15.03240466211794
UFO F1
1 22563U 93015A 96358.00000000 -.00000235 00000-0 00000+0 0 5454
2 22563 24.9641 285.6257 0009366 304.0139 343.4335 0.99252311 17943
GPS BIIA-19
1 22581U 93017A 96361.89601253 -.00000084 00000-0 10000-3 0 6227
2 22581 55.1536 340.2391 0059420 38.7026 321.6988 2.00572136 27487
GPS BIIA-20
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2 22657 55.1880 340.0286 0084828 232.0629 127.1653 2.00563613 22856
RADCAL
1 22698U 93041A 96364.17241516 .00000081 00000-0 29621-4 0 5437
2 22698 89.5464 261.2518 0093535 51.4641 309.4894 14.21387465182128
GPS BIIA-21
1 22700U 93042A 96364.98760781 .00000041 00000-0 10000-3 0 6292
2 22700 54.1627 220.3368 0063101 29.0995 331.2522 2.00562917 25677
NOAA 13
1 22739U 93050A 96364.91956873 .00000026 00000-0 39973-4 0 2307
2 22739 99.0674 321.7192 0010657 37.4602 322.7304 14.10981094174657
GPS BIIA-22
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2 22779 54.2461 279.2862 0013775 284.7108 75.1881 2.00554319 24409
Meteor 2-21
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UFO F2
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AO-27
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2 22825 98.5650 76.5940 0009701 20.4350 339.7218 14.27713638169894
IO-26
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2 22828 98.5610 76.8569 0011082 6.5017 353.6307 14.28163766138020
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2 22829 98.5629 76.9507 0010490 8.2821 351.8531 14.28146126169943
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2 22877 55.7699 41.3502 0042132 305.9534 53.6985 2.00561459 23323
METEOSAT 6
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HST Array
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Meteor 3-6
1 22969U 94003A 96362.45169166 .00000051 00000-0 10000-3 0 3105
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Glonass 62
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Glonass 63
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Glonass 64
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GOES 8
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STRV-1B
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Nadezhda 4
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Glonass 65
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Glonass 67
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OKEAN 1-7
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ELEKTRO (GOMS)
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RESURS 1-3
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LUCH (Altair-2)
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Glonass 73
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DMSP B5D2-8
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2 23533 98.8432 5.0289 0006523 217.3964 142.6755 14.12769233 91282
OSC 1
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2 23545 69.9706 77.4734 0016088 270.3363 89.5939 14.45460166 91849
OSC 2
1 23546U 95017B 96364.21559829 .00000271 00000-0 93790-4 0 2233
2 23546 69.9777 77.7595 0015867 261.3516 98.5818 14.45472111 91849
Microlab 1
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2 23549 143.3636 344.8168 0208722 351.1132 8.5979 15.20338130 96090
GFZ-1
1 23558U 86017JE 96363.80532495 .00002124 00000-0 28255-4 0 1917
2 23558 51.6533 210.6935 0005565 223.1698 136.8872 15.63499278620441
ERS-2
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2 23560 98.5512 74.4710 0000829 81.1463 278.9818 14.32247049 88345
Spektr
1 23579U 95024A 96364.95302371 .00011432 00000-0 13426-3 0 5327
2 23579 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 92035
GOES 9
1 23581U 95025A 96362.40889671 .00000089 00000-0 10000-3 0 2982
2 23581 0.0165 254.8857 0003991 28.0801 184.9833 1.00276324 5863
Helios 1A
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2 23605 98.1397 296.7506 0001503 55.3005 304.8364 14.63833937 79019
UPM SAT 1
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2 23606 98.1201 297.0105 0007274 305.4662 54.5866 14.67332614 79029
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TDRS 7
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Glonass 74
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2 23620 64.8138 197.4969 0018665 162.8800 197.2305 2.13102985 11135
Glonass 75
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2 23621 64.8284 197.4642 0018004 173.2234 186.8434 2.13102165 11159
Glonass 76
1 23622U 95037C 96363.48565102 .00000066 00000-0 00000+0 0 2429
2 23622 64.8148 197.4823 0037159 163.2409 196.9279 2.13102499 11143
Prognoz-M2
1 23632U 95039A 96362.51482150 -.00000471 00000-0 00000+0 0 1000
2 23632 71.1630 248.1760 7732851 326.9610 350.0030 0.26346200 1368
SICH-1
1 23657U 95046A 96362.53152501 .00000192 00000-0 25968-4 0 1342
2 23657 82.5329 22.5977 0028510 138.5995 221.7392 14.73520703 71301
RADARSAT
1 23710U 95059A 96364.90818249 .00000142 00000-0 72025-4 0 2226
2 23710 98.5810 8.8123 0001126 58.5629 301.5664 14.29988672 60213
Glonass 79
1 23734U 95068A 96364.07296375 .00000070 00000-0 00000+0 0 2151
2 23734 64.8260 197.3781 0017305 328.5125 31.4272 2.13102099 8122
Glonass 78
1 23735U 95068B 96363.32628408 .00000065 00000-0 00000+0 0 2070
2 23735 64.8236 197.3855 0005378 200.8843 159.1443 2.13125057 8109
Glonass 77
1 23736U 95068C 96362.89961877 .00000064 00000-0 00000+0 0 1889
2 23736 64.8141 197.4133 0007068 185.0879 174.9509 2.13102117 8094
XTE
1 23757U 95074A 96360.85345406 .00000716 00000-0 30691-4 0 1100
2 23757 22.9799 187.0114 0013801 192.1341 167.8812 14.97749861 54233
Polar
1 23802U 96013A 96360.95384396 .00000049 00000-0 00000+0 0 921
2 23802 86.3323 23.9889 6527806 276.7308 18.1855 1.36264148 4173
1996010E
1 23824U 96010E 96359.52765300 .00444128 00000-0 53211-1 0 1522
2 23824 47.4289 199.9140 7145591 76.0524 349.6752 2.47145198 6894
GPS BIIA-25
1 23833U 96019A 96361.35001648 -.00000087 00000-0 00000+0 0 1241
2 23833 54.6478 340.1903 0028404 145.6441 214.5433 2.00564915 5535
Priroda
1 23848U 96023A 96364.95302371 .00011432 00000-0 13426-3 0 2200
2 23848 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 39125
MSX
1 23851U 96024A 96364.47653378 -.00000047 00000-0 00000+0 0 1589
2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
SAX
```

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1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
MSTI 3
1 23868U 96031A 96363.24119229 -.00000386 00000-0 -60197-5 0 979
2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
TOMS-EP
1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
2 23940 97.4336 266.8297 0014273 27.5212 332.6756 15.21760654 27220
GPS BIIA-26
1 23953U 96041A 96359.27090176 -.00000050 00000-0 00000+0 0 958
2 23953 55.1057 100.6566 0020598 358.5109 1.4602 2.00562484 3283
ADEOS
1 24277U 96046A 96363.80540922 -.00000044 00000-0 00000+0 0 1264
2 24277 98.6118 77.9459 0000790 163.0215 197.0111 14.27634832 19057
FO-29
1 24278U 96046B 96364.23223921 -.00000011 00000-0 28523-4 0 471
2 24278 98.5633 62.4492 0350774 266.6338 89.4603 13.52627680 18140
Soyuz TM-24
1 24280U 96047A 96364.95302371 .00011432 00000-0 13426-3 0 1240
2 24280 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 21026
FAST
1 24285U 96049A 96365.25881303 .00000756 00000-0 77998-4 0 485
2 24285 82.9917 117.5809 2206325 291.1706 46.8382 10.81673477 14152
Microsat
1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
2 24291 62.7960 336.2075 0605290 125.1255 240.8108 14.68407669 17854
MO-30
1 24305U 96052B 96361.59304391 .00000204 00000-0 20364-3 0 552
2 24305 82.9321 122.1265 0030086 329.5013 30.4391 13.73087597 15376
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
SAC-B/HETE
1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
1 24663U 96066A 96364.95302371 .00011432 00000-0 13426-3 0 379
2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
1996068B
1 24668U 96068B 96365.02295234 .00240695 15329-5 54336-3 0 548
2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
1996069A
1 24670U 96069A 96365.11393753 -.00008726 00000-0 -13883-3 0 396
2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
INMARSAT III F3
1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
2 24674 2.6748 286.8762 0021193 122.5138 283.0068 1.00265982 100
1996070B
1 24675U 96070B 96361.84055799 -.00000150 00000-0 00000+0 0 119
2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
```

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Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

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End of Ham-Space Digest V96 #458
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End of Ham-Space Digest V96 #459
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End of Ham-Space Digest V96 #460
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2869. Re: Kenwood TM-401B below 440 MHz?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: cathryn@junglevision.junglevision.com
Message-ID: <slrn5ch0lh.i6u.cathryn@junglevision.junglevision.com>
Source record: 20446
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.space

In article <01bbf548$3ad971c0$a01865ce@SNeedha.3lefties.com>, "Earl Needham" wrote:
>
> Having recently discovered FM activity through sattelites, I'd like to try
>my hand at getting through the FM repeater on the Mir space station.
>Unfortunately, my UHF rig (a Kenwood TM-401B) only covers 440-450 MHz. Is
>there a mod available to allow this rig to operate below 440 MHz?

Yeah, I have the same problem with my IC-T7a. I can receive below 440, but
there's no way to transmit below 440Mhz. Arrgh.

2870. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290956993435740096@n3baf.com>
Source record: 20447

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id fa000187 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
07:10:48 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id CAA24878 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 02:03:08 -0800
(PST)
Received: by mail.ucsd.edu; id BAA12481
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:21 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id BAA12459
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:14 -0800 (PST)
Message-Id: <199612310942.BAA12459@mail.ucsd.edu>
Date: Tue, 31 Dec 96 01:42:12 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #461
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 461

Today's Topics:
Please Read!
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 21:01:00 (PST)
From: george.tamayo@infosoftpub.com (George Tamayo)
Subject: Please Read!

Fellow Amateurs: Please read the first two paragraphs!

CLAWSON@TELEGRAFIX.COM (PAT CLAWSON) said to ALL in comp.bbs.misc:

Boardwatch may have abandoned the BBS sysop, but TeleGrafix is still standing strong with them. However, we think that BBS systems must become Internet-connected if they are to survive in a Webbed world.

First, we need to quit calling these online systems by the moniker "BBS." The term has come to reflect something on the order of ham radio -- low-rent communications run by amateurs. That may accurately reflect some BBS systems, but we've found that many sysops run very professional online businesses.

Second, we need to start emphasizing the Power of Telnet and talk about Telnet Sites, not BBS systems. A telnettable BBS or legacy system can do many things the Web can't. Most of the computer industry and public has been Web-washed (brainwashed) by all the press hype. They think the Web is all there is to the Internet/online experience. Just a couple of days ago, I was talking to the Internet reporter for one of America's most prestigious newspapers. He had never even heard of Telnet, didn't have a clue what it was -- and his news reports influence literally millions of Americans. BBS sysops and BBS system manufacturers need to refocus their efforts, and begin producing tools and content that take advantage of the Power of Telnet.

Third, Telnet Site operators (such as BBS sysops) must professionalize the look and feel of their systems. Most sysops make little investment in quality graphics for their systems. In a glitzy Web world, it is little wonder that the public is turned off by ANSI BBS systems no matter how if the content on them is of high quality. We constantly hear BBS sysops complain about having to pay what are very modest sums of money for RIPscrip graphics -- but the people running Web sites don't think twice about investing thousands of dollars for a fabulous look.

Despite all the flack we take from BBS sysops, we continue to support their efforts -- and we always will. But BBS sysops have to change with the times, and they have to be willing to invest to upgrade their systems to compete with (or complement) the Web.

On Christmas, TeleGrafix released the first multimedia Telnet browsers. RIPtel Visual Telnet is available now from our Web site at www.telegrafix.com. This is a huge step forward for the Internet, and it represents a salvation for BBS sysops by placing Telnet graphically on a higher level than the Web.

The serious professional operators will get on board the Visual Telnet
train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 31 Dec 96 09:40:50 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id aa000182 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
04:37:47 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id AAA23003 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 00:04:25 -0800
(PST)
Received: by mail.ucsd.edu; id XAA28829
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:13 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id XAA28795
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:06 -0800 (PST)
Message-Id: <199612310744.XAA28795@mail.ucsd.edu>
Date: Mon, 30 Dec 96 23:44:04 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #460
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 460

Today's Topics:
Please Read!
Undeliverable mail (2 msgs)

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Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
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Date: 30 Dec 96 14:05:29 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id ma000168 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
09:04:46 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA10137 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 04:38:29 -0800
(PST)
Received: by mail.ucsd.edu; id EAA03627
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:53 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA03609
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:49 -0800 (PST)
Message-Id: <199612301230.EAA03609@mail.ucsd.edu>

Date: Mon, 30 Dec 96 04:30:47 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #457
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 457

Today's Topics:
comunicato stampa
HAM TOOLKIT CD ROM..AWSOME!!!!
LOW LOW PRICE HAM RADIO
MIR
WinTrak Pro Release

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Dec 96 10:24:20 GMT
From: mose@tv.shineline.IT (Mose' Battocchio)
Subject: comunicato stampa

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

Date: Sun, 29 Dec 1996 14:36:53 GMT
From: aidan@ThePentagon.com
Subject: HAM TOOLKIT CD ROM..AWSOME!!!!

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

Date: 29 Dec 1996 18:42:49 GMT
From: hiway@delta1.deltanet.com ()
Subject: LOW LOW PRICE HAM RADIO

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon
through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

Date: Sun, 29 Dec 1996 18:07:37 GMT
From: dwittich@concentric.net (Doug Wittich)
Subject: MIR

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for
many, as well. Folks in Indianapolis want APRS to move from it's
coordinated frequency. Seems like MIR could have researched a bit
and tried to coordinate before they moved.

73

Doug

Date: 29 Dec 1996 23:37:56 GMT
From: "Paul E. Traufler" <wintrak@traveller.com>
Subject: WinTrak Pro Release

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program.
The Rendered views have been improved along with several new views
available also. This is just a small list of the many improvements made to
the program. Remember this program is a full 32-bit version, do not accept
any substitutions! Do not let those other programs fool you with the old,
"It works under Win95", but in reality it is a Windows 3.1 16-bit program.
Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of
elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS
Text conversion)
Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or
provided Wave files.
Greatly improved help file with printed manual options included in help
file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

End of Ham-Space Digest V96 #457
****

Date: 31 Dec 96 07:43:21 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id za000181 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
02:42:35 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id VAA07983 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 21:33:13 -0800
(PST)
Received: by mail.ucsd.edu; id VAA10772
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:41 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id VAA10732
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:36 -0800 (PST)
Message-Id: <199612310512.VAA10732@mail.ucsd.edu>
Date: Mon, 30 Dec 96 21:12:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #459
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 459

Today's Topics:
mir comms problems
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 31 Dec 1996 02:18:00 GMT
From: perkiert@nildram.co.uk (Paul Erkiert)
Subject: mir comms problems

I see on Hearsat mail list that there have been problems on the mir
communications, Has that effected Amateur Radio activities I wonder?

Date: 31 Dec 96 01:20:02 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)
Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..

new mir freq for 1997
NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug
Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.
>
>
>73
>
>
>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles
Mann WF1F were told well in advance that this was going to be a
problem with not only APRS, but also the Repeaters, they in turn I
would assume notified their contacts at AMSAT and ARRL and NASA and
SOUP, at any rate G3BGM also was told that especially here in the
states that pair would be a problem, and it was taken to the European
Amateur radio conference where the frequencies were decided upon. I
realized long ago that the doppler shift would bring it into
interference with both, and it does.. there is little hope. there is a
possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are
also available on this system.

Element sets (also updated daily) and some documentation and software are
available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the
directory pub/space.

As a service to the satellite user community, the most current of these
elements are uploaded weekly to sci.space.news and rec.radio.amateur.space.
This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564

```
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026
SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547
2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
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1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
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DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
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2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
2 20322 98.9340 16.3974 0008115 209.8648 150.2056 14.03461035364320
Kvant-2
1 20335U 89093A 96364.95302371 .00011432 00000-0 13426-3 0 7796
2 20335 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366403724
GPS BII-05
1 20361U 89097A 96362.32232386 -.00000062 00000-0 10000-3 0 1580
2 20361 56.1079 45.6462 0094374 140.5981 220.1528 2.00565251 42185
COSMOS 2054 (Altair-1)
1 20391U 89101A 96364.82969829 -.00000128 00000-0 00000+0 0 4834
2 20391 4.2180 62.2030 0003361 176.6109 142.2528 1.00275094 25951
SPOT 2
1 20436U 90005A 96363.75244592 -.00000044 00000-0 00000+0 0 1679
2 20436 98.7463 74.6767 0001619 93.0931 267.0415 14.20017908359456
UO-14
1 20437U 90005B 96364.27556361 .00000024 00000-0 26190-4 0 2365
2 20437 98.5335 83.5280 0011265 352.6013 7.4998 14.29944025361931
AO-16
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1 20439U 90005D 96363.24656844 -.00000041 00000-0 83825-6 0 346
2 20439 98.5490 85.0934 0011729 357.0387 3.0725 14.29993943361805
DO-17
1 20440U 90005E 96363.38946554 .00000056 00000-0 38505-4 0 352
2 20440 98.5506 85.9814 0012894 354.0834 6.0290 14.30137389361850
WO-18
1 20441U 90005F 96363.73332933 -.00000029 00000-0 54220-5 0 389
2 20441 98.5520 86.2408 0012432 355.3509 4.7561 14.30104776361907
LO-19
1 20442U 90005G 96363.29440200 -.00000005 00000-0 14885-4 0 340
2 20442 98.5554 86.3954 0013259 356.8533 3.2567 14.30216416361863
GPS BII-06
1 20452U 90008A 96359.72677644 .00000025 00000-0 10000-3 0 2562
2 20452 54.0425 159.0066 0069939 90.3808 270.6229 2.00551999 50638
MOS-1B
1 20478U 90013A 96362.21015652 .00000307 00000-0 26531-3 0 106
2 20478 99.1081 69.1507 0006322 79.0628 281.1249 13.93971212271447
DEBUT
1 20479U 90013B 96365.02749046 .00000004 00000-0 76347-4 0 352
2 20479 99.0240 352.8466 0541231 39.9770 323.9897 12.83347960323027
FO-20
1 20480U 90013C 96363.91101197 -.00000040 00000-0 -21925-4 0 9318
2 20480 99.0226 351.7062 0541303 43.1492 321.0740 12.83235801322868
MOS-1B R/B
1 20491U 90013D 96362.17806360 -.00000033 00000-0 38089-5 0 3057
2 20491 99.0613 61.5895 0469458 202.5646 155.4205 13.02987887326995
LACE
1 20496U 90015A 96362.89101436 .00001249 00000-0 42717-4 0 7162
2 20496 43.1013 177.2030 0011268 241.3487 118.6233 15.36231845383615
Nadezhda 2
1 20508U 90017A 96364.79245973 .00000033 00000-0 19380-4 0 189
2 20508 82.9533 98.8944 0043911 179.7075 180.4115 13.73516156342741
OKEAN 2
1 20510U 90018A 96363.66562371 .00000155 00000-0 17996-4 0 5510
2 20510 82.5240 45.1246 0020503 44.9065 315.3801 14.78654500368414
GPS BII-07
1 20533U 90025A 96344.15313412 -.00000033 00000-0 00000+0 0 2938
2 20533 54.4399 279.9734 0040350 77.4335 283.2059 2.00570186 49091
PegSat
1 20546U 90028A 96364.81658177 .00005196 00000-0 88866-4 0 124
2 20546 94.1270 104.0607 0055155 329.8738 29.9347 15.49642349375276
HST
1 20580U 90037B 96364.29867543 .00000459 00000-0 30082-4 0 9058
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2 20621 65.1150 317.3253 0012712 197.7144 162.2598 2.13102530 51490
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2 20635 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366374555
ROSAT
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2 20638 52.9919 155.8906 0011513 357.3295 2.7641 15.07520799361224
Meteor 2-19
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2 20670 82.5466 192.5008 0017109 66.2168 294.0783 13.84131356328809
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1 20712U 90065A 96364.91425450 .00000146 00000-0 26545-3 0 3798
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Feng Yun1-2
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2 20788 98.8100 3.6070 0014589 318.2048 41.8004 14.01382899323507
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2 20959 55.2477 102.9210 0113475 237.5904 121.3248 2.00556597 44595
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2 20978 98.5785 74.4694 0078727 312.4931 46.9623 14.32707786317778
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1 21006U 90110A 96363.56357224 -.00000022 00000-0 10000-3 0 9103
2 21006 65.2807 78.1379 0056768 187.1576 172.8135 2.13102722 47155
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2 21007 65.2915 78.2297 0032947 178.5838 181.4777 2.13101135 47137
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RS-12/13
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2 21218 64.8369 316.8348 0008221 295.0496 64.9181 2.13102545 44609
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NOAA 12
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2 21263 98.5462 18.4645 0013886 65.9126 294.3504 14.22680978292314
OKEAN 3
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TDRS 5
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Meteor 3-5
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Glonass 57
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GPS BIIA-17
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TDRS 6
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ASTRO-D
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UFO F1
1 22563U 93015A 96358.00000000 -.00000235 00000-0 00000+0 0 5454
2 22563 24.9641 285.6257 0009366 304.0139 343.4335 0.99252311 17943
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1 22581U 93017A 96361.89601253 -.00000084 00000-0 10000-3 0 6227
2 22581 55.1536 340.2391 0059420 38.7026 321.6988 2.00572136 27487
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1 22657U 93032A 96364.02250091 -.00000071 00000-0 00000+0 0 7969
2 22657 55.1880 340.0286 0084828 232.0629 127.1653 2.00563613 22856
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Meteor 2-21
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2 22782 82.5504 192.3249 0022162 147.4477 212.8062 13.83065958168132
UFO F2
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2 22787 3.9733 328.1413 0005072 296.7235 165.7906 1.00274628 10738
SPOT 3
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2 22824 98.5629 75.3188 0007123 27.5846 332.5713 14.27106650169750
AO-27
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2 22826 98.5658 77.2633 0010225 19.7179 340.4390 14.27822670169979
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Meteor 3-6
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Nadezhda 4
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Glonass 65
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Glonass 66
1 23204U 94050B 96363.31006116 .00000065 00000-0 00000+0 0 3987
2 23204 64.7546 197.6291 0014650 354.6035 5.4273 2.13102235 18539
Glonass 67
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OKEAN 1-7
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ELEKTRO (GOMS)
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RESURS 1-3
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Microlab 1
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GFZ-1
1 23558U 86017JE 96363.80532495 .00002124 00000-0 28255-4 0 1917
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2 23560 98.5512 74.4710 0000829 81.1463 278.9818 14.32247049 88345
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1 23579U 95024A 96364.95302371 .00011432 00000-0 13426-3 0 5327
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2 23579 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 92035
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1 23581U 95025A 96362.40889671 .00000089 00000-0 10000-3 0 2982
2 23581 0.0165 254.8857 0003991 28.0801 184.9833 1.00276324 5863
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2 23605 98.1397 296.7506 0001503 55.3005 304.8364 14.63833937 79019
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2 23606 98.1201 297.0105 0007274 305.4662 54.5866 14.67332614 79029
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1 23607U 95033C 96364.25472764 .00000141 00000-0 33773-4 0 1437
2 23607 98.1207 298.8029 0005521 298.2746 61.7920 14.66989512 79334
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2 23613 1.0856 82.0409 0001962 192.9172 297.3340 1.00266553 5336
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1 23620U 95037A 96362.78051941 .00000063 00000-0 00000+0 0 2270
2 23620 64.8138 197.4969 0018665 162.8800 197.2305 2.13102985 11135
Glonass 75
1 23621U 95037B 96363.89689661 .00000069 00000-0 00000+0 0 2388
2 23621 64.8284 197.4642 0018004 173.2234 186.8434 2.13102165 11159
Glonass 76
1 23622U 95037C 96363.48565102 .00000066 00000-0 00000+0 0 2429
2 23622 64.8148 197.4823 0037159 163.2409 196.9279 2.13102499 11143
Prognoz-M2
1 23632U 95039A 96362.51482150 -.00000471 00000-0 00000+0 0 1000
2 23632 71.1630 248.1760 7732851 326.9610 350.0030 0.26346200 1368
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2 23657 82.5329 22.5977 0028510 138.5995 221.7392 14.73520703 71301
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1 23710U 95059A 96364.90818249 .00000142 00000-0 72025-4 0 2226
2 23710 98.5810 8.8123 0001126 58.5629 301.5664 14.29988672 60213
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2 23802 86.3323 23.9889 6527806 276.7308 18.1855 1.36264148 4173
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2 23833 54.6478 340.1903 0028404 145.6441 214.5433 2.00564915 5535
Priroda
1 23848U 96023A 96364.95302371 .00011432 00000-0 13426-3 0 2200
2 23848 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 39125
MSX
1 23851U 96024A 96364.47653378 -.00000047 00000-0 00000+0 0 1589
2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
SAX
1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
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2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
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1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
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1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
2 24291 62.7960 336.2075 0605290 125.1255 240.8108 14.68407669 17854
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1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
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2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
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2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
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1 24670U 96069A 96365.11393753 -.00008726 00000-0 -13883-3 0 396
2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
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1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
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2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
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2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
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1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

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End of Ham-Space Digest V96 #458
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End of Ham-Space Digest V96 #459
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End of Ham-Space Digest V96 #460
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End of Ham-Space Digest V96 #461
****

2871. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <290957261368423104@n3baf.com>
Source record: 20448

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.12) with ESMTP id ga000188 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
10:21:05 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA28620 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 04:55:44 -0800
(PST)
Received: by mail.ucsd.edu; id EAA25520
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 04:13:31 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA25498
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 04:13:26 -0800 (PST)
Message-Id: <199612311213.EAA25498@mail.ucsd.edu>
Date: Tue, 31 Dec 96 04:13:25 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #462
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 462

Today's Topics:
Kenwood TM-401B below 440 MHz?
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

Date: 31 Dec 1996 11:13:41 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: Kenwood TM-401B below 440 MHz?

In article <01bbf548$3ad971c0$a01865ce@SNeedha.3lefties.com>, "Earl Needham" wrote:
>
> Having recently discovered FM activity through sattelites, I'd like to try
>my hand at getting through the FM repeater on the Mir space station.
>Unfortunately, my UHF rig (a Kenwood TM-401B) only covers 440-450 MHz. Is
>there a mod available to allow this rig to operate below 440 MHz?

Yeah, I have the same problem with my IC-T7a. I can receive below 440, but
there's no way to transmit below 440Mhz. Arrgh.

Date: 31 Dec 96 12:11:49 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id fa000187 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
07:10:48 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id CAA24878 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 02:03:08 -0800
(PST)
Received: by mail.ucsd.edu; id BAA12481
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:21 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id BAA12459
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:14 -0800 (PST)
Message-Id: <199612310942.BAA12459@mail.ucsd.edu>
Date: Tue, 31 Dec 96 01:42:12 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #461
To: Ham-Space@ucsd.edu

X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 461

Today's Topics:
Please Read!
Undeliverable mail

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 21:01:00 (PST)
From: george.tamayo@infosoftpub.com (George Tamayo)
Subject: Please Read!

Fellow Amateurs: Please read the first two paragraphs!

CLAWSON@TELEGRAFIX.COM (PAT CLAWSON) said to ALL in comp.bbs.misc:

Boardwatch may have abandoned the BBS sysop, but TeleGrafix is still standing
strong with them. However, we think that BBS systems must become
Internet-connected if they are to survive in a Webbed world.

First, we need to quit calling these online systems by the moniker "BBS."
The term has come to reflect something on the order of ham radio -- low-rent
communications run by amateurs. That may accurately reflect some BBS
systems, but we've found that many sysops run very professional online
businesses.

Second, we need to start emphasizing the Power of Telnet and talk about
Telnet Sites, not BBS systems. A telnettable BBS or legacy system can do
many things the Web can't. Most of the computer industry and public has
been Web-washed (brainwashed) by all the press hype. They think the Web
is all there is to the Internet/online experience. Just a couple of days
ago, I was talking to the Internet reporter for one of America's most
prestigious newspapers. He had never even heard of Telnet, didn't have a
clue what it was -- and his news reports influence literally millions of
Americans. BBS sysops and BBS system manufacturers need to refocus their
efforts, and begin producing tools and content that take advantage of the
Power of Telnet.

Third, Telnet Site operators (such as BBS sysops) must professionalize the
look and feel of their systems. Most sysops make little investment in
quality graphics for their systems. In a glitzy Web world, it is little
wonder that the public is turned off by ANSI BBS systems no matter how if

the content on them is of high quality. We constantly hear BBS sysops complain about having to pay what are very modest sums of money for RIPscrip graphics -- but the people running Web sites don't think twice about investing thousands of dollars for a fabulous look.

Despite all the flack we take from BBS sysops, we continue to support their efforts -- and we always will. But BBS sysops have to change with the times, and they have to be willing to invest to upgrade their systems to compete with (or complement) the Web.

On Christmas, TeleGrafix released the first multimedia Telnet browsers. RIPtel Visual Telnet is available now from our Web site at www.telegrafix.com. This is a huge step forward for the Internet, and it represents a salvation for BBS sysops by placing Telnet graphically on a higher level than the Web.

The serious professional operators will get on board the Visual Telnet train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 31 Dec 96 09:40:50 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com (NTMail 3.02.10) with ESMTP id aa000182 for <ham.space@n3baf.com>; Tue, 31 Dec 1996 04:37:47 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with ESMTP id AAA23003 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 00:04:25 -0800 (PST)
Received: by mail.ucsd.edu; id XAA28829
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:13 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU

Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id XAA28795
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:06 -0800 (PST)
Message-Id: <199612310744.XAA28795@mail.ucsd.edu>
Date: Mon, 30 Dec 96 23:44:04 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #460
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 460

Today's Topics:
Please Read!
Undeliverable mail (2 msgs)

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Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 30 Dec 96 14:05:29 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id ma000168 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
09:04:46 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA10137 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 04:38:29 -0800
(PST)
Received: by mail.ucsd.edu; id EAA03627
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:53 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA03609
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:49 -0800 (PST)
Message-Id: <199612301230.EAA03609@mail.ucsd.edu>
Date: Mon, 30 Dec 96 04:30:47 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #457
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 457

Today's Topics:
comunicato stampa
HAM TOOLKIT CD ROM..AWSOME!!!!
LOW LOW PRICE HAM RADIO
MIR
WinTrak Pro Release

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Dec 96 10:24:20 GMT
From: mose@tv.shineline.IT (Mose' Battocchio)
Subject: comunicato stampa

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

Date: Sun, 29 Dec 1996 14:36:53 GMT
From: aidan@ThePentagon.com
Subject: HAM TOOLKIT CD ROM..AWSOME!!!!

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

Date: 29 Dec 1996 18:42:49 GMT
From: hiway@delta1.deltanet.com ()
Subject: LOW LOW PRICE HAM RADIO

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon
through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

Date: Sun, 29 Dec 1996 18:07:37 GMT
From: dwittich@concentric.net (Doug Wittich)
Subject: MIR

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for
many, as well. Folks in Indianapolis want APRS to move from it's
coordinated frequency. Seems like MIR could have researched a bit
and tried to coordinate before they moved.

73

Doug

Date: 29 Dec 1996 23:37:56 GMT
From: "Paul E. Traufler" <wintrak@traveller.com>
Subject: WinTrak Pro Release

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program.
The Rendered views have been improved along with several new views
available also. This is just a small list of the many improvements made to
the program. Remember this program is a full 32-bit version, do not accept
any substitutions! Do not let those other programs fool you with the old,
"It works under Win95", but in reality it is a Windows 3.1 16-bit program.
Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of
elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS
Text conversion)

Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or
provided Wave files.
Greatly improved help file with printed manual options included in help
file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

End of Ham-Space Digest V96 #457
****

Date: 31 Dec 96 07:43:21 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id za000181 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
02:42:35 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id VAA07983 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 21:33:13 -0800
(PST)
Received: by mail.ucsd.edu; id VAA10772
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:41 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id VAA10732
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:36 -0800 (PST)
Message-Id: <199612310512.VAA10732@mail.ucsd.edu>
Date: Mon, 30 Dec 96 21:12:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>

Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #459
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 459

Today's Topics:
mir comms problems
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 31 Dec 1996 02:18:00 GMT
From: perkiert@nildram.co.uk (Paul Erkiert)
Subject: mir comms problems

I see on Hearsat mail list that there have been problems on the mir
communications, Has that effected Amateur Radio activities I wonder?

Date: 31 Dec 96 01:20:02 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU

Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)
Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..
new mir freq for 1997
NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug
Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.

>
>
>73
>
>
>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles
Mann WF1F were told well in advance that this was going to be a
problem with not only APRS, but also the Repeaters, they in turn I
would assume notified their contacts at AMSAT and ARRL and NASA and
SOUP, at any rate G3BGM also was told that especially here in the
states that pair would be a problem, and it was taken to the European
Amateur radio conference where the frequencies were decided upon. I
realized long ago that the doppler shift would bring it into
interference with both, and it does.. there is little hope. there is a
possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026
SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5

```
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547
2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
```

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Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
```

```
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
```

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1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
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UFO F2
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DMSP B5D2-7
1 23233U 94057A 96365.12129137 .00000172 00000-0 11605-3 0 552
2 23233 98.8024 60.7851 0012507 348.6711 11.4181 14.12766022120491
OKEAN 1-7
1 23317U 94066A 96361.20963927 .00000223 00000-0 30292-4 0 2084
2 23317 82.5432 242.3641 0025341 172.9993 187.1576 14.74067238118826
ELEKTRO (GOMS)
1 23327U 94069A 96360.78938466 -.00000103 00000-0 00000+0 0 2346
2 23327 0.4246 99.5817 0001314 112.6584 242.8720 1.00272001 7926
RESURS 1-3
1 23342U 94074A 96363.09154481 .00000099 00000-0 24429-4 0 6346
2 23342 97.9423 55.2676 0001831 74.4905 285.6521 14.69889598115297
Glonass 68
1 23396U 94076A 96364.44428970 -.00000024 00000-0 00000+0 0 3625
2 23396 65.1698 77.6543 0030084 192.4726 167.5068 2.13102555 16406
Glonass 69
1 23397U 94076B 96363.68222596 -.00000023 00000-0 00000+0 0 3503
2 23397 65.1534 77.6860 0012504 314.0194 45.9276 2.13102016 16385
Glonass 70
1 23398U 94076C 96364.50453212 -.00000024 00000-0 00000+0 0 3654
2 23398 65.1464 77.6283 0003888 271.9224 88.0939 2.13101938 16417
LUCH (Altair-2)
1 23426U 94082A 96362.55866303 -.00000268 00000-0 00000+0 0 4476
2 23426 1.0421 263.4498 0002921 19.9893 109.0292 1.00264838 7446
RS-15
1 23439U 94085A 96364.31340970 -.00000039 00000-0 10000-3 0 1878
2 23439 64.8169 67.5354 0154811 164.3258 196.2532 11.27528037 82785
NOAA 14
1 23455U 94089A 96365.05574856 .00000054 00000-0 54268-4 0 8805
2 23455 98.9698 310.1613 0010552 50.0437 310.1661 14.11635757103087
Glonass 71
1 23511U 95009A 96362.58492256 -.00000050 00000-0 00000+0 0 2798
2 23511 64.6009 317.4156 0007080 231.8928 128.0369 2.13104375 14093
Glonass 72
1 23512U 95009B 96363.64416953 -.00000044 00000-0 00000+0 0 2868
2 23512 64.5778 317.3877 0007947 313.5278 46.3975 2.13101422 14111
Glonass 73
1 23513U 95009C 96364.40447342 -.00000040 00000-0 00000+0 0 3069
2 23513 64.5860 317.3770 0013388 210.4613 149.4625 2.13102914 14136
GMS 5
1 23522U 95011B 96361.58284086 -.00000283 00000-0 10000-3 0 1907
2 23522 0.4857 28.8889 0000605 186.3669 229.8386 1.00278062 6384
DMSP B5D2-8
1 23533U 95015A 96365.04987224 .00000075 00000-0 64210-4 0 8067
2 23533 98.8432 5.0289 0006523 217.3964 142.6755 14.12769233 91282
OSC 1
1 23545U 95017A 96364.25067438 .00000249 00000-0 87713-4 0 1890
```

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2 23545 69.9706 77.4734 0016088 270.3363 89.5939 14.45460166 91849
OSC 2
1 23546U 95017B 96364.21559829 .00000271 00000-0 93790-4 0 2233
2 23546 69.9777 77.7595 0015867 261.3516 98.5818 14.45472111 91849
Microlab 1
1 23547U 95017C 96364.22069507 .00000122 00000-0 51572-4 0 1612
2 23547 69.9781 77.4325 0016213 263.4963 96.4310 14.45632485 91855
OFEQ 3
1 23549U 95018A 96364.87699976 .00017495 00000-0 40718-3 0 4089
2 23549 143.3636 344.8168 0208722 351.1132 8.5979 15.20338130 96090
GFZ-1
1 23558U 86017JE 96363.80532495 .00002124 00000-0 28255-4 0 1917
2 23558 51.6533 210.6935 0005565 223.1698 136.8872 15.63499278620441
ERS-2
1 23560U 95021A 96363.21264826 -.00000031 00000-0 46224-5 0 3151
2 23560 98.5512 74.4710 0000829 81.1463 278.9818 14.32247049 88345
Spektr
1 23579U 95024A 96364.95302371 .00011432 00000-0 13426-3 0 5327
2 23579 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 92035
GOES 9
1 23581U 95025A 96362.40889671 .00000089 00000-0 10000-3 0 2982
2 23581 0.0165 254.8857 0003991 28.0801 184.9833 1.00276324 5863
Helios 1A
1 23605U 95033A 96363.68180125 .00000104 00000-0 28907-4 0 3791
2 23605 98.1397 296.7506 0001503 55.3005 304.8364 14.63833937 79019
UPM SAT 1
1 23606U 95033B 96362.23778593 .00000230 00000-0 49320-4 0 2403
2 23606 98.1201 297.0105 0007274 305.4662 54.5866 14.67332614 79029
CERISE
1 23607U 95033C 96364.25472764 .00000141 00000-0 33773-4 0 1437
2 23607 98.1207 298.8029 0005521 298.2746 61.7920 14.66989512 79334
TDRS 7
1 23613U 95035B 96363.79409425 .00000102 00000-0 00000+0 0 2764
2 23613 1.0856 82.0409 0001962 192.9172 297.3340 1.00266553 5336
Glonass 74
1 23620U 95037A 96362.78051941 .00000063 00000-0 00000+0 0 2270
2 23620 64.8138 197.4969 0018665 162.8800 197.2305 2.13102985 11135
Glonass 75
1 23621U 95037B 96363.89689661 .00000069 00000-0 00000+0 0 2388
2 23621 64.8284 197.4642 0018004 173.2234 186.8434 2.13102165 11159
Glonass 76
1 23622U 95037C 96363.48565102 .00000066 00000-0 00000+0 0 2429
2 23622 64.8148 197.4823 0037159 163.2409 196.9279 2.13102499 11143
Prognoz-M2
1 23632U 95039A 96362.51482150 -.00000471 00000-0 00000+0 0 1000
2 23632 71.1630 248.1760 7732851 326.9610 350.0030 0.26346200 1368
SICH-1
1 23657U 95046A 96362.53152501 .00000192 00000-0 25968-4 0 1342
2 23657 82.5329 22.5977 0028510 138.5995 221.7392 14.73520703 71301
RADARSAT
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1 23710U 95059A 96364.90818249 .00000142 00000-0 72025-4 0 2226
2 23710 98.5810 8.8123 0001126 58.5629 301.5664 14.29988672 60213
Glonass 79
1 23734U 95068A 96364.07296375 .00000070 00000-0 00000+0 0 2151
2 23734 64.8260 197.3781 0017305 328.5125 31.4272 2.13102099 8122
Glonass 78
1 23735U 95068B 96363.32628408 .00000065 00000-0 00000+0 0 2070
2 23735 64.8236 197.3855 0005378 200.8843 159.1443 2.13125057 8109
Glonass 77
1 23736U 95068C 96362.89961877 .00000064 00000-0 00000+0 0 1889
2 23736 64.8141 197.4133 0007068 185.0879 174.9509 2.13102117 8094
XTE
1 23757U 95074A 96360.85345406 .00000716 00000-0 30691-4 0 1100
2 23757 22.9799 187.0114 0013801 192.1341 167.8812 14.97749861 54233
Polar
1 23802U 96013A 96360.95384396 .00000049 00000-0 00000+0 0 921
2 23802 86.3323 23.9889 6527806 276.7308 18.1855 1.36264148 4173
1996010E
1 23824U 96010E 96359.52765300 .00444128 00000-0 53211-1 0 1522
2 23824 47.4289 199.9140 7145591 76.0524 349.6752 2.47145198 6894
GPS BIIA-25
1 23833U 96019A 96361.35001648 -.00000087 00000-0 00000+0 0 1241
2 23833 54.6478 340.1903 0028404 145.6441 214.5433 2.00564915 5535
Priroda
1 23848U 96023A 96364.95302371 .00011432 00000-0 13426-3 0 2200
2 23848 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 39125
MSX
1 23851U 96024A 96364.47653378 -.00000047 00000-0 00000+0 0 1589
2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
SAX
1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
MSTI 3
1 23868U 96031A 96363.24119229 -.00000386 00000-0 -60197-5 0 979
2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
TOMS-EP
1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
2 23940 97.4336 266.8297 0014273 27.5212 332.6756 15.21760654 27220
GPS BIIA-26
1 23953U 96041A 96359.27090176 -.00000050 00000-0 00000+0 0 958
2 23953 55.1057 100.6566 0020598 358.5109 1.4602 2.00562484 3283
ADEOS
1 24277U 96046A 96363.80540922 -.00000044 00000-0 00000+0 0 1264
2 24277 98.6118 77.9459 0000790 163.0215 197.0111 14.27634832 19057
FO-29
1 24278U 96046B 96364.23223921 -.00000011 00000-0 28523-4 0 471
2 24278 98.5633 62.4492 0350774 266.6338 89.4603 13.52627680 18140
Soyuz TM-24
1 24280U 96047A 96364.95302371 .00011432 00000-0 13426-3 0 1240
2 24280 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 21026
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FAST
1 24285U 96049A 96365.25881303 .00000756 00000-0 77998-4 0 485
2 24285 82.9917 117.5809 2206325 291.1706 46.8382 10.81673477 14152
Microsat
1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
2 24291 62.7960 336.2075 0605290 125.1255 240.8108 14.68407669 17854
MO-30
1 24305U 96052B 96361.59304391 .00000204 00000-0 20364-3 0 552
2 24305 82.9321 122.1265 0030086 329.5013 30.4391 13.73087597 15376
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
SAC-B/HETE
1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
1 24663U 96066A 96364.95302371 .00011432 00000-0 13426-3 0 379
2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
1996068B
1 24668U 96068B 96365.02295234 .00240695 15329-5 54336-3 0 548
2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
1996069A
1 24670U 96069A 96365.11393753 -.00008726 00000-0 -13883-3 0 396
2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
INMARSAT III F3
1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
2 24674 2.6748 286.8762 0021193 122.5138 283.0068 1.00265982 100
1996070B
1 24675U 96070B 96361.84055799 -.00000150 00000-0 00000+0 0 119
2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
1 24701U 96073A 96364.02481603 .00049321 79639-5 77763-4 0 95
2 24701 62.8047 233.7443 0119590 108.3268 253.0915 15.91895966 714
1996073B
1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help
```

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

End of Ham-Space Digest V96 #458
****

End of Ham-Space Digest V96 #459
****

End of Ham-Space Digest V96 #460
****

End of Ham-Space Digest V96 #461
****

End of Ham-Space Digest V96 #462
****

2872. ICOM CT-17 (CI-V) Interface programs out there?

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: Tom Valenti <valenti@eskimo.com>
Message-ID: <32C95D6A.4EC@eskimo.com>
Source record: 20449
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.space

Happy New Year from Seattle,

I am looking for bare bones, or better, shareware programs used by us to tie our rigs to the PC. My shack will be automating an IC-R7000, IC-735, IC-275H, and a IC-475H. If you have a program (BOTH binary and source code) I would love to download it. Just let me know where to get it. Anybody really close by, I'll buy lunch for the first few! I work near Boeing Field. 73

--
Tom "Wunski" Valenti
KB7RSK
http://www.eskimo.com/~valenti/

2873. ARLK097 Keplerian data

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: w1aw@arrl.org
Message-ID: <$arlk097.1996@arrl.org>
Source record: 20450
Cross-posted to: rec.radio.info,rec.radio.amateur.space

```
SB KEP @ ARL $ARLK097
ARLK097 Keplerian data

ZCZC SK97
QST de W1AW
Keplerian Bulletin 97 ARLK097
From ARRL Headquarters
Newington, CT December 31, 1996
To all radio amateurs

SB KEP ARL ARLK097
ARLK097 Keplerian data

Thanks to Con, W5BWF, for the following Keplerian data.

Decode 2-line elsets with the following key:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
UO-11
1 14781U 84021B 96364.96630783 .00000071 00000-0 19851-4 0 09543
2 14781 97.8156 347.1626 0011035 179.2324 180.8903 14.69512489686408
RS-12/13
1 21089U 91007A 96365.13763955 .00000050 00000-0 36428-4 0 09649
2 21089 82.9221 44.0290 0030751 49.3645 311.0179 13.74076005295946
UO-14
1 20437U 90005B 96365.18520891 .00000032 00000-0 29375-4 0 02395
2 20437 98.5334 84.4194 0011276 349.9522 10.1438 14.29944235362068
RS-15
1 23439U 94085A 96365.11165315 -.00000039 00000-0 10000-3 0 01910
2 23439 64.8167 66.2446 0154785 164.1798 196.4034 11.27528009082876
AO-16
1 20439U 90005D 96365.13576490 .00000017 00000-0 23318-4 0 00435
2 20439 98.5489 86.9487 0011689 351.1810 8.9221 14.29994548362074
DO-17
1 20440U 90005E 96364.78872888 .00000031 00000-0 28831-4 0 00450
2 20440 98.5505 87.3563 0012745 350.1639 9.9293 14.30137315362058
```

```
WO-18
1 20441U 90005F 96364.99269554 -.00000009 00000-0 13420-4 0 00458
2 20441 98.5520 87.4786 0012378 351.6212 8.4762 14.30105019362083
LO-19
1 20442U 90005G 96365.18330293 .00000050 00000-0 35989-4 0 00459
2 20442 98.5548 88.2505 0013064 351.3288 8.7673 14.30217279362137
FO-20
1 20480U 90013C 96365.00249566 -.00000013 00000-0 39482-4 0 09409
2 20480 99.0225 352.5895 0541267 40.6829 323.3421 12.83236086323009
AO-21
1 21087U 91006A 96364.96224735 .00000094 00000-0 82657-4 0 07836
2 21087 82.9408 176.8172 0036461 21.9693 338.3016 13.74576353296907
UO-22
1 21575U 91050B 96365.12250587 .00000039 00000-0 27277-4 0 07465
2 21575 98.3277 65.4337 0008628 41.6780 318.5064 14.37051083286203
KO-23
1 22077U 92052B 96364.87138801 -.00000037 00000-0 10000-3 0 06363
2 22077 66.0774 139.7421 0014843 254.5295 105.4083 12.86300142205970
KO-25
1 22828U 93061F 96365.15311834 -.00000005 00000-0 15307-4 0 05066
2 22828 98.5610 77.2690 0011076 5.2480 354.8818 14.28163818138087
IO-26
1 22826U 93061D 96365.21853299 -.00000004 00000-0 15822-4 0 5248
2 22826 98.5658 77.2633 0010225 19.7179 340.4390 14.27822670169979
AO-27
1 22825U 93061C 96365.16708120 .00000006 00000-0 20046-4 0 05282
2 22825 98.5649 77.0060 0009691 19.2082 340.9465 14.27713692169952
FO-29
1 24278U 96046B 96365.19384463 .00000010 00000-0 49049-4 0 00548
2 24278 98.5631 63.2820 0350761 264.1510 91.9553 13.52627971018272
MO-30
1 24305U 96052B 96364.87216783 .00000204 00000-0 20364-3 0 00812
2 24305 82.9347 119.7055 0030776 320.2559 39.6340 13.73088514015827
Mir
1 16609U 86017A 96365.46485841 .00003355 00000-0 43775-4 0 9236
2 16609 51.6544 214.4000 0013679 182.2114 177.8729 15.61890800620686

Keplerian bulletins are transmitted twice weekly from W1AW. The
next scheduled transmission of these data will be Saturday, January
4, 1997, at 2330z on Baudot and AMTOR.
NNNN
/EX
```

2874. NORAD Two-Line Orbital Element Set Format

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: tkelso@afit.af.mil
Message-ID: <5abv68$f6l@blackbird.afit.af.mil>
Source record: 20451

As a service to the satellite user community, the following description of the NORAD two-line orbital element set format is uploaded to sci.space.news and rec.radio.amateur.space on a monthly basis. The most current orbital elements from the NORAD two-line element sets are carried on the *NEW* Celestial WWW,

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system. In addition, element sets (updated daily) and some documentation and software are also available via anonymous ftp from

archive.afit.af.mil (129.92.1.66)

in the directory pub/space.

==========

Data for each satellite consists of three lines in the following format:

```
AAAAAAAAAAAAAAAAAAAAA
1 NNNNNU NNNNNAAA NNNNN.NNNNNNNN +.NNNNNNNN +NNNNN-N +NNNNN-N N NNNNN
2 NNNNN NNN.NNNN NNN.NNNN NNNNNNN NNN.NNNN NNN.NNNN NN.NNNNNNNNNNNNN
```

Line 0 is a twenty-two-character name (this change is being made to be consistent with the name length in the NORAD SATCAT).

Lines 1 and 2 are the standard Two-Line Orbital Element Set Format identical to that used by NORAD and NASA. The format description is:

```
Line 1
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
10-11 International Designator (Last two digits of launch year)
12-14 International Designator (Launch number of the year)
15-17 International Designator (Piece of launch)
19-20 Epoch Year (Last two digits of year)
21-32 Epoch (Julian Day and fractional portion of the day)
34-43 First Time Derivative of the Mean Motion
or Ballistic Coefficient (Depending on ephemeris type)
45-52 Second Time Derivative of Mean Motion (decimal point assumed;
blank if N/A)
54-61 BSTAR drag term if GP4 general perturbation theory was used.
Otherwise, radiation pressure coefficient. (Decimal point assumed)
63-63 Ephemeris type
65-68 Element number
69-69 Check Sum (Modulo 10)
```

(Letters, blanks, periods, plus signs = 0; minus signs = 1)

Line 2
Column Description
01-01 Line Number of Element Data
03-07 Satellite Number
09-16 Inclination [Degrees]
18-25 Right Ascension of the Ascending Node [Degrees]
27-33 Eccentricity (decimal point assumed)
35-42 Argument of Perigee [Degrees]
44-51 Mean Anomaly [Degrees]
53-63 Mean Motion [Revs per day]
64-68 Revolution number at epoch [Revs]
69-69 Check Sum (Modulo 10)

All other columns are blank or fixed.

Example:

NOAA 6
1 11416U 86 50.28438588 0.00000140 67960-4 0 5293
2 11416 98.5105 69.3305 0012788 63.2828 296.9658 14.24899292346978
--
Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

2875. New Web Page

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: Brian Webb <102670.1206@CompuServe.COM>
Message-ID: <5ac1nonmj1@mhafc.production.compuserve.com>
Source record: 20452
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

If you're interested in amateur radio or space, visit my new web page at:

http://ourworld.compuserve.com/homepages/rawhide_home_page

Happy New Year,

Brian Webb, KD6NRP

2876. Undeliverable mail

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: mailer-daemon@n3baf.COM
Message-ID: <29095742308446368@n3baf.com>
Source record: 20453

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.12) with ESMTP id oa000196 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
12:14:09 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id HAA02864 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 07:35:13 -0800
(PST)
Received: by mail.ucsd.edu; id HAA13846
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 07:23:21 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id HAA13818
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 07:23:15 -0800 (PST)
Message-Id: <199612311523.HAA13818@mail.ucsd.edu>
Date: Tue, 31 Dec 96 07:23:13 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #463
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 463

Today's Topics:
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 31 Dec 96 15:21:39 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.12) with ESMTP id ga000188 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
10:21:05 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id EAA28620 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 04:55:44 -0800
(PST)
Received: by mail.ucsd.edu; id EAA25520
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 04:13:31 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA25498
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 04:13:26 -0800 (PST)
Message-Id: <199612311213.EAA25498@mail.ucsd.edu>
Date: Tue, 31 Dec 96 04:13:25 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #462
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 462

Today's Topics:
Kenwood TM-401B below 440 MHz?
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 31 Dec 1996 11:13:41 GMT
From: cathryn@junglevision.junglevision.com (cathryn)
Subject: Kenwood TM-401B below 440 MHz?

In article <01bbf548$3ad971c0$a01865ce@SNeedha.3lefties.com>, "Earl Needham" wrote:
>
> Having recently discovered FM activity through sattelites, I'd like to try
>my hand at getting through the FM repeater on the Mir space station.
>Unfortunately, my UHF rig (a Kenwood TM-401B) only covers 440-450 MHz. Is
>there a mod available to allow this rig to operate below 440 MHz?

Yeah, I have the same problem with my IC-T7a. I can receive below 440, but
there's no way to transmit below 440Mhz. Arrgh.

Date: 31 Dec 96 12:11:49 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id fa000187 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
07:10:48 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id CAA24878 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 02:03:08 -0800
(PST)
Received: by mail.ucsd.edu; id BAA12481
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:21 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id BAA12459
sendmail 8.8.3/UCSD8.2.2
Tue, 31 Dec 1996 01:42:14 -0800 (PST)
Message-Id: <199612310942.BAA12459@mail.ucsd.edu>
Date: Tue, 31 Dec 96 01:42:12 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #461
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Tue, 31 Dec 96 Volume 96 : Issue 461

Today's Topics:
Please Read!
Undeliverable mail

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Problems you can't solve otherwise to brian@ucsd.edu.

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 21:01:00 (PST)
From: george.tamayo@infosoftpub.com (George Tamayo)
Subject: Please Read!

Fellow Amateurs: Please read the first two paragraphs!

CLAWSON@TELEGRAFIX.COM (PAT CLAWSON) said to ALL in comp.bbs.misc:

Boardwatch may have abandoned the BBS sysop, but TeleGrafix is still standing
strong with them. However, we think that BBS systems must become
Internet-connected if they are to survive in a Webbed world.

First, we need to quit calling these online systems by the moniker "BBS."
The term has come to reflect something on the order of ham radio -- low-rent
communications run by amateurs. That may accurately reflect some BBS
systems, but we've found that many sysops run very professional online
businesses.

Second, we need to start emphasizing the Power of Telnet and talk about
Telnet Sites, not BBS systems. A telnettable BBS or legacy system can do
many things the Web can't. Most of the computer industry and public has
been Web-washed (brainwashed) by all the press hype. They think the Web
is all there is to the Internet/online experience. Just a couple of days
ago, I was talking to the Internet reporter for one of America's most
prestigious newspapers. He had never even heard of Telnet, didn't have a
clue what it was -- and his news reports influence literally millions of
Americans. BBS sysops and BBS system manufacturers need to refocus their
efforts, and begin producing tools and content that take advantage of the
Power of Telnet.

Third, Telnet Site operators (such as BBS sysops) must professionalize the
look and feel of their systems. Most sysops make little investment in
quality graphics for their systems. In a glitzy Web world, it is little
wonder that the public is turned off by ANSI BBS systems no matter how if
the content on them is of high quality. We constantly hear BBS sysops
complain about having to pay what are very modest sums of money for
RIPscrip graphics -- but the people running Web sites don't think twice

about investing thousands of dollars for a fabulous look.

Despite all the flack we take from BBS sysops, we continue to support
their efforts -- and we always will. But BBS sysops have to change with
the times, and they have to be willing to invest to upgrade their systems
to compete with (or complement) the Web.

On Christmas, TeleGrafix released the first multimedia Telnet browsers.
RIPtel Visual Telnet is available now from our Web site at
www.telegrafix.com. This is a huge step forward for the Internet, and it
represents a salvation for BBS sysops by placing Telnet graphically on a
higher level than the Web.

The serious professional operators will get on board the Visual Telnet
train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 31 Dec 96 09:40:50 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox.ucsd.edu (mailbox.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id aa000182 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
04:37:47 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id AAA23003 for <ham-space-list@mailbox.ucsd.edu>; Tue, 31 Dec 1996 00:04:25 -0800
(PST)
Received: by mail.ucsd.edu; id XAA28829
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:13 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id XAA28795

sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 23:44:06 -0800 (PST)
Message-Id: <199612310744.XAA28795@mail.ucsd.edu>
Date: Mon, 30 Dec 96 23:44:04 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #460
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 460

Today's Topics:
Please Read!
Undeliverable mail (2 msgs)

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Problems you can't solve otherwise to brian@ucsd.edu.

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From: george.tamayo@infosoftpub.com (George Tamayo)
Subject: Please Read!

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The serious professional operators will get on board the Visual Telnet train, and they will live to see a brighter day.

Pat Clawson
TeleGrafix Communications Inc.
Winchester, VA

Web: www.telegrafix.com

George M. Tamayo - WD6EJO
South Mountain Online
---
* PowerAccess 1.50 A flashlight is a case in which to carry dead batteries.

Date: 30 Dec 96 14:05:29 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com (NTMail 3.02.10) with ESMTP id ma000168 for <ham.space@n3baf.com>; Mon, 30 Dec 1996

09:04:46 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with ESMTP id EAA10137 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 04:38:29 -0800 (PST)
Received: by mail.ucsd.edu; id EAA03627
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:53 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id EAA03609
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 04:30:49 -0800 (PST)
Message-Id: <199612301230.EAA03609@mail.ucsd.edu>
Date: Mon, 30 Dec 96 04:30:47 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #457
To: Ham-Space@UCSD.EDU
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 457

Today's Topics:
comunicato stampa
HAM TOOLKIT CD ROM..AWSOME!!!!
LOW LOW PRICE HAM RADIO
MIR
WinTrak Pro Release

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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policies or positions of any party. Your mileage may vary. So there.

Date: 30 Dec 96 10:24:20 GMT
From: mose@tv.shineline.IT (Mose' Battocchio)
Subject: comunicato stampa

<encoded_portion_removed>
aW9uZWQgcXVhbGl0aWVzIHJlbmRlciBpdCBoaWdobHk=

Date: Sun, 29 Dec 1996 14:36:53 GMT
From: aidan@ThePentagon.com
Subject: HAM TOOLKIT CD ROM..AWSOME!!!!

Check out our Awsome CD ROM.."HAM TOOL KIT"..Its jam packed with over
600MEGS of Amateur Radio Related Software..its all here on one
disk..buy no other !!!.

Surf to us at http://sphynx.com/murphy

Owned by Hams..for Hams!!!
M U R P H Y E L E C T R O N I C S
GSM Mobile Phones & Accessories. Satellite TV and Decoding Systems
CD Rom Multimedia Computer Accessories
http://sphynx.com/murphy Email: murphy@sphynx.com

Why not send us an SMS to our GSM phone..Simply surf to
http://home.sn.no/~ahaltbak/engsms.htm and type in the number
+35387527182, write your message and fill in your Email address.all for FREE !!!

Date: 29 Dec 1996 18:42:49 GMT
From: hiway@delta1.deltanet.com ()
Subject: LOW LOW PRICE HAM RADIO

LOW LOW PRICE -- HAM RADIO STUFFS ON SALE!!!!!!!!!!

Please contact at 818-454-3333 10:00am to 4:00pm western time Mon
through Fri or e-mail hiway@pacificnet.net

Totally brand new:

1. c168a (VHF) $188.33 unit: 3 *full pack*
2. c528a (VHF & UHF) $236.25 unit: 5 *full pack*

3. c558a (VHF & UHF) $320.63 unit: 10 *full pack*
4. c5608da (VHF & UHF) $550.00 unit: 4 full *pack*

5. c5718da (VHF & UHF) $599.99 unit: 2

6. cbt160 battery case $2.50 unit: 8
telephone interconnects

1. cs-800 $169.50 unit: 2

2. cs-900 $169.50 unit: 4

antennas for base station

1. bsa 150 144mhz to 174mhz 2.5db $29.00 unit: 5

2. bsa 440 440mhz to 460mhz 4.5db $29.00 unit: 5

antennas for mobile

kg 2/70 144 - 148 mhz & 442 - 448 mhz 2.4db $33.96 unit: 3

charger

csa181a $58.50 unit: 1

Date: Sun, 29 Dec 1996 18:07:37 GMT
From: dwittich@concentric.net (Doug Wittich)
Subject: MIR

>Well Amsat Journal is RIGHT but the MIR station decided
>after the fact to change.
>
>We have two large repeaters in Dallas on 145.190 and 145.210
>and that makes it a problem to catch the voice downlink.

And with nationwide APRS activity on 145.79, that's a problem for
many, as well. Folks in Indianapolis want APRS to move from it's
coordinated frequency. Seems like MIR could have researched a bit
and tried to coordinate before they moved.

73

Doug

Date: 29 Dec 1996 23:37:56 GMT
From: "Paul E. Traufler" <wintrak@traveller.com>
Subject: WinTrak Pro Release

WinTrak Pro New Release!

WinTrak Pro Version 4.5 has added and improved many areas in the program.
The Rendered views have been improved along with several new views
available also. This is just a small list of the many improvements made to
the program. Remember this program is a full 32-bit version, do not accept
any substitutions! Do not let those other programs fool you with the old,
"It works under Win95", but in reality it is a Windows 3.1 16-bit program.
Its your money, demand the best!

New Items:

Visible now satellites can be any of the 4 satellite groups.
Satellite elements statistics, such as oldest, newest and average age of
elements.
Zoom in on the Render views.
Added plot the next 2 passes option to render views.
Automatic LF to CR-LF text file detection and correction. (UNIX to DOS
Text conversion)
Mercator map added to the Rendered maps options.
Added Multi-Satellite 3D and Mercator maps Rendered views.
Added satellite labels to Rendered views.
Added option to set Sun terminator on the Render views.
Added satellite Rise/Set alarms, can play user recorded Wave files or

provided Wave files.
Greatly improved help file with printed manual options included in help
file.
Lowered the minimum satellite altitude to 90 km from the past 160 km.
This version works with Windows NT 4.0 now also.

--
WinTrak Pro
Satellite Tracking Program For Win95/NT

http://www.hsv.tis.net/~wintrak
wintrak@traveller.com

End of Ham-Space Digest V96 #457
****

Date: 31 Dec 96 07:43:21 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox1.ucsd.edu (mailbox1.ucsd.edu [132.239.1.53]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id za000181 for <ham.space@n3baf.com>; Tue, 31 Dec 1996
02:42:35 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id VAA07983 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 21:33:13 -0800
(PST)
Received: by mail.ucsd.edu; id VAA10772
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:41 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id VAA10732
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 21:12:36 -0800 (PST)
Message-Id: <199612310512.VAA10732@mail.ucsd.edu>
Date: Mon, 30 Dec 96 21:12:33 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #459
To: Ham-Space@ucsd.edu

X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 459

Today's Topics:
mir comms problems
Undeliverable mail

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
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policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 31 Dec 1996 02:18:00 GMT
From: perkiert@nildram.co.uk (Paul Erkiert)
Subject: mir comms problems

I see on Hearsat mail list that there have been problems on the mir
communications, Has that effected Amateur Radio activities I wonder?

Date: 31 Dec 96 01:20:02 GMT
From: mailer-daemon@n3baf.COM
Subject: Undeliverable mail

This message was addressed to a user that does not exist at this address.
Please verify the name and domain in the original message that follows.
The message was addressed to: ham.space@N3BAF.COM

----- Original message follows -----
Received: from mailbox2.ucsd.edu (mailbox2.ucsd.edu [132.239.1.54]) by n3baf1.n3baf.com
(NTMail 3.02.10) with ESMTP id sa000174 for <ham.space@n3baf.com>; Mon, 30 Dec 1996
20:19:34 -0500
Received: from mail.ucsd.edu (mail.ucsd.edu [132.239.1.1]) by UCSD.EDU (8.8.3/8.6.9) with
ESMTP id QAA12915 for <ham-space-list@mailbox.ucsd.edu>; Mon, 30 Dec 1996 16:22:24 -0800
(PST)
Received: by mail.ucsd.edu; id PAA00997
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:27 -0800 (PST)
Errors-To: owner-ham-space@UCSD.EDU
Sender: owner-ham-space@UCSD.EDU
Precedence: List
X-Reminder: to unsubscribe, send UNSUB ham-space to LISTSERVER@UCSD.EDU
Received: by mail.ucsd.edu; id PAA00961
sendmail 8.8.3/UCSD8.2.2
Mon, 30 Dec 1996 15:52:23 -0800 (PST)

Message-Id: <199612302352.PAA00961@mail.ucsd.edu>
Date: Mon, 30 Dec 96 15:52:19 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@UCSD.EDU>
Errors-To: Owner-Ham-Space@UCSD.EDU
Reply-To: Ham-Space@UCSD.EDU
Precedence: List
Subject: Ham-Space Digest V96 #458
To: Ham-Space@ucsd.edu
X-Info: Evaluation version at n3baf1.n3baf.com

Ham-Space Digest Mon, 30 Dec 96 Volume 96 : Issue 458

Today's Topics:
MIR
MIR info..
new mir freq for 1997
NORAD Two-Line Orbital Element Sets (TLE922)
Total Newbie Looking for help

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 30 Dec 1996 11:50:47 GMT
From: dhend@cyberportal.net (Dave Hendrick)
Subject: MIR

On Sun, 29 Dec 1996 18:07:37 GMT, dwittich@concentric.net (Doug
Wittich) wrote:

>>Well Amsat Journal is RIGHT but the MIR station decided
>>after the fact to change.
>>
>>We have two large repeaters in Dallas on 145.190 and 145.210
>>and that makes it a problem to catch the voice downlink.
>
>And with nationwide APRS activity on 145.79, that's a problem for
>many, as well. Folks in Indianapolis want APRS to move from it's
>coordinated frequency. Seems like MIR could have researched a bit
>and tried to coordinate before they moved.
>
>
>73
>
>

>Doug
The "players" ie Dave Larson N6JLH alias N6CO alias K6MIR and Miles
Mann WF1F were told well in advance that this was going to be a
problem with not only APRS, but also the Repeaters, they in turn I
would assume notified their contacts at AMSAT and ARRL and NASA and
SOUP, at any rate G3BGM also was told that especially here in the
states that pair would be a problem, and it was taken to the European
Amateur radio conference where the frequencies were decided upon. I
realized long ago that the doppler shift would bring it into
interference with both, and it does.. there is little hope. there is a
possibility they may try another pair, but slim. 73 DAVE
dhend@cyberportal.net
http://www.cyberportal.net/dhend/dave1.html

Date: 30 Dec 1996 18:21:52 GMT
From: Jeff Griffin <griffinj@admin.tc.faa.gov>
Subject: MIR info..

Dave, try 145.200 + 600 voice, 145.800 simplex paket,
437950 - 2200 pl 141.3 repeater, and 437.925 for a recorded
greeting from Mir. Good luck, and have fun.
Jeff kb2wqm

Date: Mon, 30 Dec 1996 16:46:00 +0000
From: jim ryan <sigma4@iol.ie>
Subject: new mir freq for 1997

Hello all ,
Just had a nice short contact with John KC5TZQ at 16:07 30-12-96
. It must be said that John is a very good operator as he worked several
stations over Europe , He also informed us that as of the first of
January 1997 they will change freq on 2meters as follows .

mir tx 145.800
mir rx 145.200

ie the reverse of now !!.
73 de Dave EI4HT and Jim EI3DP .

Date: 30 Dec 1996 23:38:21 GMT
From: tkelso@afit.af.mil (TS Kelso)
Subject: NORAD Two-Line Orbital Element Sets (TLE922)

The most current orbital elements from the NORAD two-line element sets are
carried on the Celestial WWW:

http://www.grove.net/~tkelso/

and are updated daily (when possible). Documentation and tracking software are also available on this system.

Element sets (also updated daily) and some documentation and software are available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space.news and rec.radio.amateur.space. This week's elements are provided below.

****

- Current Two-Line Element Sets #922 -
Alouette 1
1 00424U 62049A 96363.78572947 .00000066 00000-0 67354-4 0 2564
2 00424 80.4660 91.7389 0022417 253.6086 106.2595 13.67884496708941
ATS 1
1 02608U 66110A 96357.28522603 -.00000164 00000-0 10000-3 0 9949
2 02608 14.5714 350.8002 0007178 101.9620 258.1137 1.00290646 26755
ATS 3
1 03029U 67111A 96362.07148111 -.00000114 00000-0 10000-3 0 5963
2 03029 14.9162 357.7182 0010717 267.6711 110.9249 1.00272778106702
Starlette
1 07646U 75010A 96364.68927694 -.00000160 00000-0 -13129-4 0 232
2 07646 49.8278 97.2277 0206484 156.2068 204.8538 13.82191883106000
LAGEOS
1 08820U 76039A 96364.65645091 .00000001 00000-0 00000+0 0 2530
2 08820 109.8486 92.9883 0043657 86.3716 274.2047 6.38664617226318
ETS-2
1 09852U 77014A 96353.26952944 .00000093 00000-0 10000-3 0 919
2 09852 13.4494 30.8201 0006106 154.2971 205.7133 1.00010627 19487
GOES 2
1 10061U 77048A 96364.22238557 .00000053 00000-0 10000-3 0 7817
2 10061 12.6258 34.8946 0010672 138.9117 187.3079 1.00280835 16395
IUE
1 10637U 78012A 96364.28727948 .00000003 00000-0 10000-3 0 3362
2 10637 35.7747 80.4409 1340818 62.9212 289.9138 1.00059083 21889
GOES 3
1 10953U 78062A 96365.20103067 -.00000105 00000-0 10000-3 0 7561
2 10953 11.6275 37.8052 0003665 201.9592 187.1536 1.00264354 21026
SeaSat 1
1 10967U 78064A 96363.22373529 -.00000007 00000-0 42170-4 0 5417
2 10967 107.9910 216.2497 0001408 265.3142 94.7858 14.38142886969346
Nimbus 7
1 11080U 78098A 96363.57409109 -.00000104 00000-0 -56881-4 0 6383
2 11080 98.9195 216.0866 0008715 159.2997 200.8515 13.83687496918054
GOES 5
1 12472U 81049A 96364.24976996 .00000094 00000-0 10000-3 0 9759
2 12472 8.5030 48.2212 0003965 81.6505 278.3897 1.00294831 15054
Cosmos 1383
1 13301U 82066A 96363.57590090 .00000056 00000-0 48128-4 0 5547

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2 13301 82.9279 351.2643 0029188 64.3427 296.0732 13.68080598723958
LandSat 4
1 13367U 82072A 96362.18712399 -.00000385 00000-0 -75471-4 0 329
2 13367 98.0520 46.9771 0005707 258.2528 101.8030 14.57193310768649
DMSP B5D2-1
1 13736U 82118A 96364.10444308 .00000016 00000-0 25193-4 0 1467
2 13736 98.6217 189.3462 0008219 175.7884 184.3364 14.25816177728848
IRAS
1 13777U 83004A 96364.57126230 -.00000073 00000-0 -20508-4 0 5340
2 13777 98.9658 185.9459 0012059 276.6224 83.3571 13.99258083380690
Cosmos 1447
1 13916U 83021A 96363.53020204 .00000049 00000-0 35561-4 0 6463
2 13916 82.9458 47.3042 0037763 332.9624 26.9565 13.74350267690436
TDRS 1
1 13969U 83026B 96364.15731586 -.00000290 00000-0 00000+0 0 6832
2 13969 9.2613 41.7680 0002640 234.4276 189.4390 1.00275538 23344
GOES 6
1 14050U 83041A 96365.21196740 -.00000070 00000-0 10000-3 0 5960
2 14050 7.3525 51.7970 0004375 99.4148 276.4706 1.00217134108164
AO-10
1 14129U 83058B 96299.11613815 -.00000305 00000-0 10000-3 0 4631
2 14129 25.8792 182.5891 6052907 60.2572 346.3435 2.05882271 72548
LandSat 5
1 14780U 84021A 96364.72915709 -.00000085 00000-0 -84923-5 0 5793
2 14780 98.3092 62.2871 0003620 47.9968 312.1539 14.57059843682436
UO-11
1 14781U 84021B 96362.92357629 .00000134 00000-0 30439-4 0 9390
2 14781 97.8157 345.2080 0010693 187.1445 172.9616 14.69512287686109
Cosmos 1574
1 15055U 84062A 96359.36516985 .00000040 00000-0 26573-4 0 8452
2 15055 82.9572 105.6921 0027417 169.3659 190.8079 13.73642742627092
Cosmos 1602
1 15331U 84105A 96363.20595500 .00000245 00000-0 25921-4 0 5286
2 15331 82.5351 291.2403 0021626 30.1527 330.0929 14.84823756661765
ERBS
1 15354U 84108B 96363.11441142 -.00000176 00000-0 56619-5 0 2455
2 15354 56.9960 323.2320 0006200 148.3952 211.7448 14.95005960665845
NOAA 9
1 15427U 84123A 96365.10146020 .00000049 00000-0 49179-4 0 9762
2 15427 98.9261 69.9091 0015689 116.3620 243.9169 14.13827248621315
Mir
1 16609U 86017A 96365.14494780 .00003246 00000-0 42561-4 0 9223
2 16609 51.6516 216.0106 0013862 182.3095 177.7859 15.61887847620638
SPOT 1
1 16613U 86019A 96362.56676891 -.00000045 00000-0 00000+0 0 186
2 16613 98.8164 70.0392 0001767 78.5562 281.5815 14.19993548247758
Cosmos 1766
1 16881U 86055A 96364.82796576 .00000307 00000-0 34043-4 0 4438
2 16881 82.5172 347.3768 0021355 52.5515 307.7640 14.83795833562852
EGP
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1 16908U 86061A 96363.53126835 -.00000083 00000-0 10000-3 0 1421
2 16908 50.0072 119.5025 0011580 148.9779 211.1737 12.44415813140609
NOAA 10
1 16969U 86073A 96365.10064932 .00000017 00000-0 25459-4 0 9064
2 16969 98.5322 356.6512 0013497 137.6163 222.6060 14.25015191534505
MOS-1
1 17527U 87018A 96363.55901250 -.00000043 00000-0 00000+0 0 4981
2 17527 98.9127 61.0906 0018874 144.1448 216.0936 14.00445298502197
GOES 7
1 17561U 87022A 96365.20220328 -.00000155 00000-0 10000-3 0 2097
2 17561 3.4509 68.0603 0002260 280.4002 89.0115 1.00276435 19273
Kvant-1
1 17845U 87030A 96364.95300168 .00011431 00000-0 13426-3 0 8553
2 17845 51.6512 216.9850 0013702 180.7851 179.3123 15.61894366554718
DMSP B5D2-3
1 18123U 87053A 96365.11340088 .00000029 00000-0 37000-4 0 7412
2 18123 98.7652 192.1641 0015131 56.3728 303.8884 14.15463012492219
RS-10/11
1 18129U 87054A 96365.09931830 .00000010 00000-0 -51941-5 0 3044
2 18129 82.9241 3.7231 0011802 339.6863 20.3788 13.72372947477040
Meteor 2-16
1 18312U 87068A 96363.85445239 .00000049 00000-0 30546-4 0 5330
2 18312 82.5560 197.6730 0013795 36.7786 323.4325 13.84089832473101
Meteor 2-17
1 18820U 88005A 96364.78092156 .00000053 00000-0 33306-4 0 1377
2 18820 82.5413 251.4971 0017909 94.2828 266.0379 13.84767346450597
DMSP B5D2-4
1 18822U 88006A 96365.12323716 .00000002 00000-0 18919-4 0 4266
2 18822 98.3794 187.8258 0006384 145.4369 214.7224 14.23212204462448
Glonass 34
1 19163U 88043A 96363.33104624 -.00000021 00000-0 10000-3 0 1432
2 19163 65.3437 79.3008 0008646 135.4984 224.6222 2.13102347 66370
Glonass 36
1 19165U 88043C 96363.38814308 -.00000021 00000-0 10000-3 0 5531
2 19165 65.3098 79.2469 0004492 347.1980 12.8388 2.13102099 66990
METEOSAT 3
1 19215U 88051A 96363.47599704 -.00000156 00000-0 10000-3 0 2981
2 19215 3.6520 66.6866 0006016 131.0881 228.7236 0.96948920 19062
OKEAN 1
1 19274U 88056A 96363.77415021 .00000257 00000-0 28905-4 0 1437
2 19274 82.5137 89.4539 0018869 199.4246 160.6251 14.82557792458206
Meteor 3-2
1 19336U 88064A 96362.51067307 .00000051 00000-0 10000-3 0 5382
2 19336 82.5396 29.6282 0017796 109.8282 250.4766 13.16980248404927
Glonass 39
1 19503U 88085C 96361.07248165 -.00000059 00000-0 10000-3 0 4359
2 19503 65.5099 318.2393 0004884 147.4365 212.5800 2.13101717 64435
NOAA 11
1 19531U 88089A 96365.08038894 .00000014 00000-0 32287-4 0 7989
2 19531 99.1711 28.1601 0012634 52.5870 307.6449 14.13116440426112
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TDRS 3
1 19548U 88091B 96354.80270913 -.00000193 00000-0 10000-3 0 2621
2 19548 2.8661 71.0055 0008644 207.0461 184.3786 1.00273888 17396
Glonass 40
1 19749U 89001A 96361.10984472 -.00000026 00000-0 10000-3 0 6482
2 19749 65.2923 78.8836 0007432 252.6009 107.3695 2.13101465 61943
Glonass 41
1 19750U 89001B 96364.44947528 -.00000023 00000-0 10000-3 0 5537
2 19750 65.3021 78.8464 0009003 221.7135 138.2707 2.13101768 62039
GPS BII-01
1 19802U 89013A 96360.60087025 -.00000037 00000-0 00000+0 0 3379
2 19802 55.4254 103.0067 0027109 174.0254 185.9915 2.00558921 57558
Akebono
1 19822U 89016A 96364.05953145 .00010693 00000-0 54727-3 0 8374
2 19822 75.1011 10.4477 3729681 318.7863 18.3635 7.95405797182150
Meteor 2-18
1 19851U 89018A 96363.83969211 .00000042 00000-0 23778-4 0 5326
2 19851 82.5199 125.8799 0014634 145.2401 214.9722 13.84422712395767
MOP-1
1 19876U 89020B 96358.95576504 -.00000145 00000-0 00000+0 0 2388
2 19876 2.3752 71.1746 0017119 279.8433 79.4077 0.97110789 8467
TDRS 4
1 19883U 89021B 96362.37574638 -.00000263 00000-0 00000+0 0 2914
2 19883 0.2647 87.5514 0005178 181.9706 280.9482 1.00274318201049
GPS BII-02
1 20061U 89044A 96363.93153361 -.00000037 00000-0 10000-3 0 3328
2 20061 54.0718 278.3517 0164605 223.6030 135.1352 2.00563013 55366
Nadezhda 1
1 20103U 89050A 96364.97334781 .00000009 00000-0 -65224-5 0 195
2 20103 82.9596 324.2786 0036059 227.5373 132.2732 13.73871989375563
GPS BII-03
1 20185U 89064A 96354.16391793 -.00000029 00000-0 10000-3 0 3764
2 20185 55.0462 103.5488 0181881 305.6068 52.6953 2.00807546 53745
GMS 4
1 20217U 89070A 96364.28277778 -.00000361 00000-0 10000-3 0 5117
2 20217 2.1848 73.9935 0000457 334.2922 271.5433 1.00268849 27376
INTERCOSMOS 24
1 20261U 89080A 96362.87110769 .00000100 00000-0 29502-4 0 5541
2 20261 82.5911 147.0235 1241378 321.3001 30.5150 12.47372156330050
GPS BII-04
1 20302U 89085A 96360.80780733 .00000044 00000-0 10000-3 0 3566
2 20302 53.1957 218.2214 0024556 190.0611 169.9799 2.00571010 52675
Meteor 3-3
1 20305U 89086A 96363.03095941 .00000044 00000-0 10000-3 0 7214
2 20305 82.5311 350.5327 0004158 201.0222 159.0695 13.04419759343473
COBE
1 20322U 89089A 96364.50365831 -.00000259 00000-0 -13749-3 0 2710
2 20322 98.9340 16.3974 0008115 209.8648 150.2056 14.03461035364320
Kvant-2
1 20335U 89093A 96364.95302371 .00011432 00000-0 13426-3 0 7796
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2 20335 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366403724
GPS BII-05
1 20361U 89097A 96362.32232386 -.00000062 00000-0 10000-3 0 1580
2 20361 56.1079 45.6462 0094374 140.5981 220.1528 2.00565251 42185
COSMOS 2054 (Altair-1)
1 20391U 89101A 96364.82969829 -.00000128 00000-0 00000+0 0 4834
2 20391 4.2180 62.2030 0003361 176.6109 142.2528 1.00275094 25951
SPOT 2
1 20436U 90005A 96363.75244592 -.00000044 00000-0 00000+0 0 1679
2 20436 98.7463 74.6767 0001619 93.0931 267.0415 14.20017908359456
UO-14
1 20437U 90005B 96364.27556361 .00000024 00000-0 26190-4 0 2365
2 20437 98.5335 83.5280 0011265 352.6013 7.4998 14.29944025361931
AO-16
1 20439U 90005D 96363.24656844 -.00000041 00000-0 83825-6 0 346
2 20439 98.5490 85.0934 0011729 357.0387 3.0725 14.29993943361805
DO-17
1 20440U 90005E 96363.38946554 .00000056 00000-0 38505-4 0 352
2 20440 98.5506 85.9814 0012894 354.0834 6.0290 14.30137389361850
WO-18
1 20441U 90005F 96363.73332933 -.00000029 00000-0 54220-5 0 389
2 20441 98.5520 86.2408 0012432 355.3509 4.7561 14.30104776361907
LO-19
1 20442U 90005G 96363.29440200 -.00000005 00000-0 14885-4 0 340
2 20442 98.5554 86.3954 0013259 356.8533 3.2567 14.30216416361863
GPS BII-06
1 20452U 90008A 96359.72677644 .00000025 00000-0 10000-3 0 2562
2 20452 54.0425 159.0066 0069939 90.3808 270.6229 2.00551999 50638
MOS-1B
1 20478U 90013A 96362.21015652 .00000307 00000-0 26531-3 0 106
2 20478 99.1081 69.1507 0006322 79.0628 281.1249 13.93971212271447
DEBUT
1 20479U 90013B 96365.02749046 .00000004 00000-0 76347-4 0 352
2 20479 99.0240 352.8466 0541231 39.9770 323.9897 12.83347960323027
FO-20
1 20480U 90013C 96363.91101197 -.00000040 00000-0 -21925-4 0 9318
2 20480 99.0226 351.7062 0541303 43.1492 321.0740 12.83235801322868
MOS-1B R/B
1 20491U 90013D 96362.17806360 -.00000033 00000-0 38089-5 0 3057
2 20491 99.0613 61.5895 0469458 202.5646 155.4205 13.02987887326995
LACE
1 20496U 90015A 96362.89101436 .00001249 00000-0 42717-4 0 7162
2 20496 43.1013 177.2030 0011268 241.3487 118.6233 15.36231845383615
Nadezhda 2
1 20508U 90017A 96364.79245973 .00000033 00000-0 19380-4 0 189
2 20508 82.9533 98.8944 0043911 179.7075 180.4115 13.73516156342741
OKEAN 2
1 20510U 90018A 96363.66562371 .00000155 00000-0 17996-4 0 5510
2 20510 82.5240 45.1246 0020503 44.9065 315.3801 14.78654500368414
GPS BII-07
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1 20533U 90025A 96344.15313412 -.00000033 00000-0 00000+0 0 2938
2 20533 54.4399 279.9734 0040350 77.4335 283.2059 2.00570186 49091
PegSat
1 20546U 90028A 96364.81658177 .00005196 00000-0 88866-4 0 124
2 20546 94.1270 104.0607 0055155 329.8738 29.9347 15.49642349375276
HST
1 20580U 90037B 96364.29867543 .00000459 00000-0 30082-4 0 9058
2 20580 28.4691 44.2856 0006305 57.6666 302.4505 14.91150929167730
MACSAT 2
1 20608U 90043B 96363.89144134 .00000143 00000-0 21371-4 0 2363
2 20608 89.9255 171.7184 0108165 94.6015 266.7566 14.64966862354799
Glonass 44
1 20619U 90045A 96361.00760275 -.00000060 00000-0 10000-3 0 3511
2 20619 65.1039 317.3905 0024872 211.2145 148.6271 2.13102456 51392
Glonass 45
1 20620U 90045B 96363.94188852 -.00000041 00000-0 10000-3 0 3400
2 20620 65.0992 317.2699 0009911 39.0085 321.0552 2.13102495 51499
Glonass 46
1 20621U 90045C 96364.00941844 -.00000041 00000-0 10000-3 0 9504
2 20621 65.1150 317.3253 0012712 197.7144 162.2598 2.13102530 51490
Kristall
1 20635U 90048A 96364.95302371 .00011432 00000-0 13426-3 0 5711
2 20635 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366374555
ROSAT
1 20638U 90049A 96360.84454523 -.00000155 00000-0 87507-5 0 6216
2 20638 52.9919 155.8906 0011513 357.3295 2.7641 15.07520799361224
Meteor 2-19
1 20670U 90057A 96364.80604045 .00000037 00000-0 19504-4 0 1693
2 20670 82.5466 192.5008 0017109 66.2168 294.0783 13.84131356328809
CRRES
1 20712U 90065A 96364.91425450 .00000146 00000-0 26545-3 0 3798
2 20712 17.6849 170.1675 7175535 166.1367 236.1363 2.35819812 47733
GPS BII-08
1 20724U 90068A 96364.43979467 -.00000015 00000-0 00000+0 0 1566
2 20724 55.0610 100.8114 0132520 187.1050 172.7224 2.00564435 45366
Feng Yun1-2
1 20788U 90081A 96364.86770033 .00000262 00000-0 20170-3 0 2126
2 20788 98.8100 3.6070 0014589 318.2048 41.8004 14.01382899323507
Meteor 2-20
1 20826U 90086A 96359.24292314 .00000068 00000-0 48098-4 0 426
2 20826 82.5250 133.1017 0013698 351.6581 8.4353 13.83642218315127
GPS BII-09
1 20830U 90088A 96362.00132499 -.00000063 00000-0 00000+0 0 1319
2 20830 56.0464 43.5701 0066094 95.2019 265.6220 2.00568418 45951
GPS BIIA-10
1 20959U 90103A 96364.39893566 -.00000012 00000-0 10000-3 0 1164
2 20959 55.2477 102.9210 0113475 237.5904 121.3248 2.00556597 44595
DMSP B5D2-5
1 20978U 90105A 96365.13694532 .00000098 00000-0 50717-4 0 9006
2 20978 98.5785 74.4694 0078727 312.4931 46.9623 14.32707786317778
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Glonass 47
1 21006U 90110A 96363.56357224 -.00000022 00000-0 10000-3 0 9103
2 21006 65.2807 78.1379 0056768 187.1576 172.8135 2.13102722 47155
Glonass 48
1 21007U 90110B 96363.28687250 -.00000022 00000-0 10000-3 0 480
2 21007 65.2915 78.2297 0032947 178.5838 181.4777 2.13101135 47137
Glonass 49
1 21008U 90110C 96364.59150651 -.00000024 00000-0 00000+0 0 3149
2 21008 65.2693 78.1216 0008910 268.4666 91.4863 2.13098724 47159
AO-21
1 21087U 91006A 96363.57922890 .00000094 00000-0 82657-4 0 7738
2 21087 82.9407 177.8406 0036462 25.9802 334.3174 13.74576182296714
RS-12/13
1 21089U 91007A 96362.22495890 .00000040 00000-0 26507-4 0 9440
2 21089 82.9221 46.1892 0030808 57.0427 303.3683 13.74075804295540
MOP-2
1 21140U 91015B 96362.08442575 -.00000008 00000-0 00000+0 0 3100
2 21140 0.9377 77.8151 0002374 169.1324 238.9678 1.00272786 23547
Nadezhda 3
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2 21232 82.5390 235.2570 0014433 39.6677 320.5498 13.16474029273130
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2 21552 56.3360 41.3281 0077813 262.3916 96.7738 2.00573156 40209
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2 21578 98.3581 71.5226 0005988 48.9859 311.1846 14.39303547286240
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1 21798U 91082A 96365.11202960 .00000022 00000-0 34971-4 0 5704
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2 21930 55.6662 340.8358 0030151 195.2412 164.5791 2.00556033 34488
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2 21987 28.4329 317.9541 0009304 20.4981 339.5985 15.20047246253235
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GPS BIIA-17
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Glonass 60
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RADCAL
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Meteor 2-21
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UFO F2
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SPOT 3
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Nadezhda 4
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TDRS 7
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Glonass 79
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2 23851 99.3986 348.0132 0006781 347.8720 12.2256 13.97475511 34771
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1 23857U 96027A 96362.74155285 .00000922 00000-0 16503-4 0 467
2 23857 3.9543 142.6384 0013239 275.8350 85.0812 14.91685898 36098
MSTI 3
1 23868U 96031A 96363.24119229 -.00000386 00000-0 -60197-5 0 979
2 23868 97.1175 190.3413 0009463 182.3452 177.7758 15.46682235 34806
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1 23940U 96037A 96363.78939788 .00002502 00000-0 11318-3 0 716
2 23940 97.4336 266.8297 0014273 27.5212 332.6756 15.21760654 27220
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2 23953 55.1057 100.6566 0020598 358.5109 1.4602 2.00562484 3283
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2 24277 98.6118 77.9459 0000790 163.0215 197.0111 14.27634832 19057
FO-29
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2 24278 98.5633 62.4492 0350774 266.6338 89.4603 13.52627680 18140
Soyuz TM-24
1 24280U 96047A 96364.95302371 .00011432 00000-0 13426-3 0 1240
2 24280 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 21026
FAST
1 24285U 96049A 96365.25881303 .00000756 00000-0 77998-4 0 485
2 24285 82.9917 117.5809 2206325 291.1706 46.8382 10.81673477 14152
Microsat
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1 24291U 96050A 96364.23712763 .00026766 61402-5 18405-3 0 994
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MO-30
1 24305U 96052B 96361.59304391 .00000204 00000-0 20364-3 0 552
2 24305 82.9321 122.1265 0030086 329.5013 30.4391 13.73087597 15376
GPS BIIA-27
1 24320U 96056A 96357.14058803 -.00000066 00000-0 00000+0 0 517
2 24320 54.6895 280.8441 0052349 108.6207 252.0932 2.00570173 1902
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1 24645U 96061A 96362.56605077 .00000522 00000-0 33355-4 0 336
2 24645 37.9775 167.7622 0049501 2.1347 357.9618 15.14812993 8020
Progress M-33
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2 24663 51.6512 216.9849 0013701 180.7852 179.4362 15.61894366 6260
1996068B
1 24668U 96068B 96365.02295234 .00240695 15329-5 54336-3 0 548
2 24668 36.3887 236.9062 1756463 159.5540 208.5314 12.24057816 3138
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2 24670 65.0415 232.5798 0009903 271.9306 88.0654 15.52047278 2887
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1 24674U 96070A 96364.21298193 -.00000129 00000-0 00000+0 0 137
2 24674 2.6748 286.8762 0021193 122.5138 283.0068 1.00265982 100
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2 24675 22.7065 282.4578 7017907 185.5778 157.8790 2.22345318 193
Cosmos 2336
1 24677U 96071A 96364.53484998 .00000015 00000-0 00000+0 0 61
2 24677 82.9389 211.4133 0022230 237.1643 122.7369 13.71046889 1263
1996071B
1 24678U 96071B 96364.01391560 .00000015 00000-0 00000+0 0 179
2 24678 82.9307 211.7845 0020332 214.1160 145.8785 13.72692567 1198
BION 11
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1 24702U 96073B 96364.89776319 .00238674 80229-5 33300-3 0 188
2 24702 62.7923 230.3309 0108469 106.3946 254.9172 15.94977757 857
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Dr TS Kelso Adjunct Professor of Space Operations
tkelso@afit.af.mil Air Force Institute of Technology

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Date: Mon, 30 Dec 1996 18:37:00 -0500
From: Susan Driggers <Insight@cris.com>
Subject: Total Newbie Looking for help

I am totally new to satellite communications and am looking for some
advice on the bare minimum needed to get started. I am operating on a very
restricted budget so anything that could be homebrewed would be
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appreciated.
I currently have a HT 202 that I am dedicating to sattelite. Everything
else I will need advice on. THanks !
--- 73
Susan Driggers
KF4OBL
Real Radios Glow in the Dark !

End of Ham-Space Digest V96 #458
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End of Ham-Space Digest V96 #459
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End of Ham-Space Digest V96 #460
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End of Ham-Space Digest V96 #461
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End of Ham-Space Digest V96 #462
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End of Ham-Space Digest V96 #463
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2877. Long Delayed Echo mysteries...

Newsgroup: rec.radio.amateur.space
Date: 1996-12-31 00:00:00 UTC
From: pbs@iaccess.za
Message-ID: <5ac3uj$n4s_018@196-7-116-226.iafrica.com>
Source record: 20454

Long Delayed Echo mysteries...

Hi,
I'm doing some research for a documentary about anomalies. One of the subjects I'm interested in is that of LDE's. I have done some reading on the subject and noted a few experiments - however, I'm looking for new information & experiences which may help to throw more light on the matter.

Of especial interest is the geographic "preferences" of LDEs. I noted for example that some evidence pointed to LDEs being more prevalent in the Polar regions. Do LDE's have any other preferences? Also, I'm interested in the various characteristics of the LDEs. I noted some saying that it tends to occur when "opening up" a frequency.

If you have had any experiences, or know of further literature or people I can consult - I would very much appreciate it.

I have posted this in several newsgroups since I wasn't quite sure which is the best place to go, so if this is out of place - I apologise.

If you can help in any way, kindly reply by e-mail. Thanks.

Cheers, Jan...
* Ignorant people think it's the noise which fighting cats make that is aggravating, but it ain't so; it's the sickening grammar they use. (Mark Twain)
* No one's life, liberty or property is safe while the legislature is in session. (Mark Twain)
* What do politicians and porn stars have in common? They're both experts at changing positions in front of the camera.